



How do mission-driven ventures emerge? an investigation of startup activities and the achievement of regular sales among early-stage everyday entrepreneurs

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Abstract Mission-driven entrepreneurs can only create an impact if they are able to advance their venture beyond the gestation phase to an operating firm with regular sales. We focus on what entrepreneurs do in the process of setting up business and draw on social identity theory to acknowledge differences between venturing efforts. Specifically, we investigate in what way the strength of founders' missionary identity affects the relationship between two types of activities in the startup process (discovery-related, exploitation-related) and firm emergence. We test our hypotheses on a longitudinal sample of 135 nascent entrepreneurs, encompassing all kinds of startup attempts. Our results suggest that discovery-related startup activities aimed at identifying, evaluating, and developing a business idea are critical for mission-driven entrepreneurs while exploitation-related activities are also important and may require greater effort. We find indications that founders with a strong missionary identity are likely to exhibit commitment escalating behavior.

Plain English Summary Mission-driven entrepreneurs should validate the viability and market potential of their idea before becoming too passionate about their venture. This study explores how founders' "missionary identity" – their commitment to addressing social or environmental issues – relates to the effectiveness of different startup activities. Specifically, it examines the effectiveness of discovery (e.g., market testing) and exploitation (e.g., sales-building) startup activities for reaching regular sales with their new venture. Mission-driven founders typically need to identify and create a viable business idea first, as they cannot rely on proven models, which is why discovery activities are critical for them. Exploitation activities are also required which might, however, require a greater effort compared to other ventures. Because of their high prosocial motivation, they are more likely to escalate their commitment despite dwindling chances of establishing an operating firm. Mission-driven entrepreneurs should validate market demand early, stay persistent when implementing the business idea, while being cautious about an excessive commitment to unviable ideas.

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1 Introduction

Mission-driven entrepreneurs try to contribute to a more sustainable way of doing business by starting new businesses that advance a particular cause and act as ‘agents of change’ (Fauchart & Gruber, 2011, p. 944). Yet, establishing sustainable business practices is challenging and mission-driven entrepreneurs frequently struggle to achieve regular sales with their venture. While there is a broad literature on individuals’ intentions to engage in forms of entrepreneurship that do not purely serve self-interest but have a broader, prosocial orientation (Bacq & Alt, 2018; Mair & Noboa, 2006; Muñoz & Cohen, 2018) we know less about the factors that contribute to the actual emergence of such firms (Saebi et al., 2019). While there are indications that mission-driven entrepreneurs develop the sustainability aspects of their solutions successively rather than simultaneously (Belz & Binder, 2017), there is a need to better understand the early phase of the startup process of entrepreneurs that aim at contributing to society at large.

Entrepreneurs need to take action and engage in startup activities in order to successfully create a new business (Müller et al., 2023). Hence, research has put some emphasis on analyzing which type and sequence of startup activities foster venture emergence (Carter et al., 1996; Kim et al., 2015; Liao et al., 2005). It can be distinguished between two major types of entrepreneurial activities, one reflecting the discovery,¹ the other the exploitation of business ideas (Davidsson, 2003, 2016; Shane & Venkataraman, 2000). The conduct of both, discovery as well as exploitation-related startup activities, is typically necessary to establish a firm (Eckhardt & Shane, 2003; Gordon, 2012; Liao & Welsch, 2008). Further, we know that the chances for a firm to come into existence are highest early in the process of creating a new venture and diminish over time (Lichtenstein et al., 2007; Shim & Davidsson, 2018). Overall, however, extant research on the venture creation process

has remained not fully conclusive as there appear to be varieties of pathways to firm emergence (Arenius et al., 2017; Gordon, 2012; Liao & Welsch, 2008). A possible reason for this might be that entrepreneurs’ different goals and motivations in creating new ventures have not been sufficiently taken into account (Gartner & Shaver, 2012; Koumbarakis et al., 2021). In fact, several scholars have called for distinguishing between founders of different types as different types of ventures may require different sets of activities to emerge (Fauchart & Gruber, 2011; Gruber & Mac-Millan, 2017; Pan et al., 2019).

In this study, we draw on founder social identity theory. Specifically, we focus on mission-driven ventures whose founders are motivated by advancing a social or environmental cause. Missionary founders want to contribute to solving overarching, societal problems and have an impact beyond their own peer group which is likely to impact the type of envisioned venture with implications for the venture creation process and the effectiveness of specific activities (Fauchart & Gruber, 2011). We study how the extent to which an entrepreneur identifies with a ‘missionary’ founder identity interacts with the conduct of discovery and exploitation-related startup activities in contributing to firm emergence. So far, there is only limited research that empirically – as opposed to conceptually (Cardon et al., 2009; Hoang & Gimeno, 2010; Shepherd & Haynie, 2009) – examines founders’ identity in relation to their entrepreneurial activities (Braun et al., 2023; Farmer et al., 2011; Murnieks et al., 2014; Sieger et al., 2016).

By focusing on mission-driven entrepreneurship, our research addresses venturing efforts which primarily aim at societal value creation by addressing social or ecological challenges. To describe such ventures, different concepts are used, including social and environmental entrepreneurship (Chell, 2007; Muñoz & Cohen, 2018; Saebi et al., 2019) and sustainable entrepreneurship, which refers to businesses that aim to balance and integrate social, environmental, and economic considerations at the same time, while also taking into account future generations (Schaltegger & Wagner, 2011; Shepherd & Patzelt, 2011). We suggest a less strict definition in this paper. Following calls of Shepherd (2015, p. 499) and Welter et al. (2017) to embrace the heterogeneity of entrepreneurship and not to restrict ourselves to narrow definitions, we propose to use the term ‘*everyday*

¹ The term discovery-related startup activities refers to activities aimed at the conceptual side of venturing efforts, including such activities as discussing the product or business idea with customers or working on a business plan. By using the term ‘discovery’ we do not wish to imply that we follow the discovery view of entrepreneurial opportunities, as outlined by Alvarez & Barney (2007).

sustainable entrepreneurship’ for all efforts of entrepreneurs to create a business which positively impacts society at large.² We equate mission-driven entrepreneurship with everyday sustainable entrepreneurship as both concepts stress the prominence of addressing social and/or environmental problems next to economic value creation. We refer to previous literature for a deeper discussion of definitional similarities and differences between the different concepts (Belz & Binder, 2017; Muñoz & Cohen, 2018; Shepherd & Patzelt, 2011; Vedula et al., 2022).

Our study is set in the context of Switzerland, which is a high-income country in the middle of Europe, characterized by an intermediate level of entrepreneurial activity that is most frequently driven by a desire “to make a difference in the world” and other self-realization motives, followed by financial aspirations (Baldegger et al., 2024, p. 12). In general, sustainability is high on the agenda of entrepreneurs: about two thirds of entrepreneurs in Switzerland report that they had taken steps to minimize the environmental impact of their business in the past year, one of the highest values among high-income economies (GEM (Global Entrepreneurship Monitor), 2025). Still, typical for a high-income country, it has a high rate of consumption with a high material footprint, stressing the need for more sustainable solutions (Circle Economy, 2023). Thus, Switzerland appears as an ideal context to study everyday sustainable entrepreneurship. We test our hypotheses on a sample of 135 nascent entrepreneurs and find that those with a strong missionary founder identity benefit more from discovery-related startup activities in reaching firm emergence than those with a weak one. Also, our findings suggest that such mission-driven entrepreneurs encounter more difficulties in establishing their business and may be especially likely to

escalate their commitment – that is, keep venturing without ever establishing a financially viable firm.

Our research makes at least two contributions. First, we contribute to a better understanding to what degree discovery and exploitation activities are needed to establish a mission-driven business. By including observable actions (i.e., different types of startup activities) and outcome (i.e., firm emergence), we add to the literature on mission-driven entrepreneurship that has thus far mostly focused on self-reported intentions (Saebi et al., 2019). By considering all types of startup efforts, we contribute to a better understanding of the emergence of ventures that want to contribute to society at large among the large number of what might be called ‘everyday’ startups, broadening the perspective of sustainable entrepreneurship research. Secondly, we add to the developing stream of founder social identity literature by informing about how an entrepreneur’s identity can have different effects and implications on entrepreneurial behavior and outcomes – this has thus far remained widely unexplored (Alsos et al., 2016; Farmer et al., 2011; Ireland & Webb, 2007). In examining how the strength of a missionary founder identity relates to engaging in discovery and exploitation-related startup activities and firm emergence, we account for the ‘social dimension’ of nascent entrepreneurship, shaping behaviors and actions (Gruber & MacMillan, 2017).

Subsequently, we first present the theoretical background of our study before explaining the hypotheses. Then, we describe the data and methodology of our study. We present the results concerning our hypotheses and discuss our findings in a broader context. Our study concludes with a discussion of limitations and recommendations for policy and future research.

2 Theoretical background

2.1 Missionary founder identity and sustainable entrepreneurship

As individuals endeavor to behave in accordance with their inherent sense of themselves, identity theories are particularly useful when aiming to create new understanding of the venture creation process, the underlying actions taken by entrepreneurs, and its possible outcomes (Gruber & MacMillan, 2017;

² Note Shepherd’s (2015, p. 499) comment: “[...] I submit that even if discussions of definitions of ‘social entrepreneurship,’ ‘sustainable entrepreneurship,’ and ‘environmental entrepreneurship’ are interesting, it is important that these discussions not turn into an endless debate that constrains or kills interesting research because a specific study does not fit into a pre-determined category of ‘sustainable’ or ‘social’ or ‘environmental’ entrepreneurship. That is, by remaining open minded about boundaries, especially boundaries of topics within the field of entrepreneurship, we provide the conditions for contributions that can expand our understanding of entrepreneurial phenomena.”

Pan et al., 2019; Powell & Baker, 2017). From the various identity theories that have been developed in the past, social identity theory and role identity theory have emerged as the two major ones (Stets & Burke, 2000). Role identity theory centers its attention around role-based relationships (Stryker & Burke, 2000; Tajfel, 1982) and allows to investigate how strongly an individual identifies as entrepreneur and what effects this has on entrepreneurial intentions and behaviors (Cardon et al., 2009; Farmer et al., 2011; Hoang & Gimeno, 2010; Murnieks et al., 2014; Shepherd & Haynie, 2009). Social identity theory, on the other side, focuses on behavior that is determined by identification with a more or less comprehensive collective and therefore allows to account for the meanings founders associate with their entrepreneurial efforts – thus, to learn about the ideas entrepreneurs follow, how they behave in doing so, and the sort of venture they develop (Gruber & MacMillan, 2017; Powell & Baker, 2017).

In this study we draw on founder social identity as informed by Fauchart and Gruber (2011) who put forward the existence of three types of founder social identities: darwinians, communitarians, and missionaries. They argue that these social founder identities manifest themselves in three underlying dimensions, that are, basic social motivation, basis of self-evaluation, and frame of reference (Fauchart & Gruber, 2011). Specifically, we focus on founders with a missionary identity who “believe that firms can be powerful agents of change in society and engage in new firm creation to establish a platform from which they can pursue their political visions and advance particular causes, generally of a social or environmental nature” (Fauchart & Gruber, 2011, p. 944). Missionaries are driven by the idea of advancing a cause and providing support beyond their own peer group, they use the level of social responsibility as basis for self-evaluation and society at large as frame of reference (Fauchart & Gruber, 2011; Gruber & MacMillan, 2017; Sieger et al., 2016).³ Missionary

founders pursue a ‘dual mission’ of establishing a financially viable firm that allows them to follow and address their social and/or environmental causes they are driven by in the first place (Doherty et al., 2014; Fauchart & Gruber, 2011; Grimes et al., 2013). In our understanding, mission-driven entrepreneurship encompasses a broad spectrum of venturing efforts that does not purely serve self-interest but has a broader, prosocial orientation, including social and environmental entrepreneurship. As outlined in the introduction, although such venturing efforts might not fulfil all the far-reaching criteria of sustainable entrepreneurship yet, we propose to describe them as everyday sustainable entrepreneurship, acknowledging the high prevalence of entrepreneurs who want to contribute to society at large with their new venture (GEM (Global Entrepreneurship Monitor), 2025).

Entrepreneurship research that draws upon social identity theory is still developing (Gruber & MacMillan, 2017). For example, Alsos et al. (2016) show that entrepreneurial identity affects the extent to which entrepreneurs adopt effectual or causal behavior, more specifically, missionary founders tend to employ causal principles in their venture creation endeavors. Similarly, Sieger et al. (2016) suggest that the preference for a causal approach rises for missionary founder while at the same time being positively related to effectual behavioral logics, i.e., causation does not exclude effectual logics such as experimental approaches (see e.g., Chandler et al., 2011). Using a grounded theory approach and blending role identity and social identity logics, Powell and Baker (2014) show how and why variances in founder identity’s structure result in differences in the strategic responses of firms. In a more recent study, again drawing on both major identity theories, Powell and Baker (2017) examine the process of collective identity creation in multi-founder nascent ventures and show how different role identities are affected within the social group affiliations of missionaries and communitarians. Braun et al. (2023) suggest that founder social identity affects likelihood of the transition from nascent to active entrepreneurship without, however, considering differences in startup activities and with mixed results concerning missionary founders.

³ Darwinians are oriented towards self-interested accomplishments like private economic goals; they use the level of professionalism as basis for self-evaluation and their competitors as frame of reference. Communitarians aim at supporting and getting supported by a social group they identify with (i.e., the community), they use the level of authenticity as basis for self-evaluation and their community as frame of reference.

2.2 Entrepreneurial action: discovery and exploitation-related startup activities

Venture creation demands human agency, as “*no opportunity is exploited nor does any venture come to exist, survive, or grow without entrepreneurs taking action*” (Bird et al., 2012, p. 889). In fact, a broad literature has stressed the necessity for founders to take action when trying to establish their business in the market, which is why engaging in startup activities is central for new venture creation (see Müller et al., 2023 for a detailed literature review). Generally, a distinction between two major types of entrepreneurial activities within the venture creation process can be made – namely, between discovery and exploitation-related startup activities (Davidsson, 2003, 2016; Shane & Venkataraman, 2000). Discovery-related startup activities refer to the conceptual side of venturing efforts and, as such, encompass entrepreneurial behavior involved in identifying, evaluating, and developing business ideas (Davidsson, 2016). Talking to potential customers, performing competition analyses, or working on a business plan, for example, can be attributed to this group of activities, also including planning-based tasks that are reflected in “the processes of gathering and analyzing information” (Delmar & Shane, 2003, p. 1165). Exploitation-related startup activities, on the other side, refer to behaviors exhibited by entrepreneurs when attempting to establish their venture as a tangible entity – thus, they relate to entrepreneurs actually enacting their business idea (Davidsson & Honig, 2003; Gordon, 2012; Wiklund et al., 2018). As such, typical activities include trying to raise funds, purchasing material or equipment, or engaging in marketing efforts (Davidsson, 2016; Kuckertz et al., 2017). With the aim of getting a deeper understanding of the venture creation process of nascent entrepreneurs, longitudinal data collection efforts such as the Panel Study of Entrepreneurial Dynamics (PSED) have been established in the past (Davidsson & Reynolds, 2009; Reynolds, 2007). One of the main goals of such large-scale research programs was to better understand the relationship between entrepreneurs’ activities and venture success, measured in terms of firm emergence or performance (Müller et al., 2023). Studies based on such data suggest that the two mentioned types of entrepreneurial activities often occur in a specific chronological order that determines the sequence of the venture

creation process: while discovery-related activities are commonly conducted in an early phase, exploitation-related activities are predominantly carried out in later stages along the entrepreneurial launch path (Delmar & Shane, 2004; Eckhardt & Shane, 2003; Gordon, 2012; Liao & Welsch, 2008). Overall, however, we still have a limited understanding concerning the importance of discovery and exploitation activities for firm emergence, which might be because the type of venturing effort is typically not taken into account (Müller et al., 2023).

3 Hypotheses development on firm emergence

3.1 Startup activities

Our hypothesizing starts with two baseline hypotheses which form the foundation for our subsequent interaction effects. By explicating the baseline hypotheses, we can later on better specify how missionary founders differ from these general relationships.

As outlined above, discovery-related activities are about the identification and conceptual development of an idea for a venture (Davidsson, 2016), including activities such as talking to customers, doing market research, and writing a business plan. Such activities provide entrepreneurs with guidance on customer needs and the structuring of offerings, as also stressed in the Lean Startup Approach (Blank & Eckhardt, 2024), what resources and activities are needed (Delmar & Shane, 2004), as facilitator of goal attainment (Locke & Latham, 2002) or as promoter of learning (Chwolka & Raith, 2012). The majority of studies point to a positive relationship between conducting discovery-related startup activities and venture success (Brinckmann et al., 2010). For example, looking at one important discovery activity, Delmar and Shane (2003), provide empirical evidence for business planning to reduce the hazard of new venture disbanding as well as to facilitate product development and venture organizing activity in new ventures. Other research also indicates a positive relationship between discovery-related startup activities and venture success (Delmar & Shane, 2004; Gibson & Cas-sar, 2005; Greene & Hopp, 2017). Overall, our first baseline hypothesis is as follows:

Hypothesis 1a. *The number of conducted discovery-related startup activities has a positive effect on firm emergence.*

While a new venture must be advanced conceptually, businesses cannot come into existence if entrepreneurs do not act upon their ideas and plans (Eckhardt & Shane, 2003; Gordon, 2012; Liao & Welsch, 2008). In other words, exploitation-related startup activities aimed at acquiring resources, setting up operations, and creating demand are also required to materialize an idea, and to accomplish the actual establishment of the firm in the market (Davidsson, 2016; Wiklund et al., 2018). One of the earliest examples of research that established such a relationship is provided by Carter et al. (1996): Based on an analysis of longitudinal data, they found that entrepreneurs who made their venturing tangible to others (e.g. by seeking financial support, forming a legal entity, organizing a team, or purchasing facilities and equipment) were more likely to reach initial profits. More recently, Koumbarakis et al. (2021) showed that the number of conducted exploitation-related startup activities has a positive effect on firm emergence. Other studies also suggest a positive relationship between entrepreneurs' exploitation activities and subsequent venture emergence in the form of reaching regular sales or initial profits (Parker & Belghitar, 2006; Tornikoski & Newbert, 2007; Tornikoski & Puhakka, 2009). Thus, our second baseline hypothesis is as follows:

Hypothesis 1b. *The number of conducted exploitation-related startup activities has a positive effect on firm emergence.*

3.2 Temporal distance from the first startup activity

While we theorize that entrepreneurial activity is important for a venture to come into existence, we also assume that the likelihood of firm emergence decreases with the length of the venture creation process. When there is a good fit between what entrepreneurs offer and what customers demand, entrepreneurs will find it easy to generate sales quickly. On the contrary, when entrepreneurs still have to adapt their offerings to what customers really want, it will take longer until sales can be generated and the likelihood increases that product-market fit can never be achieved (Davidsson, 2021). In descriptively

analyzing five cohorts of representative samples of venture creations (i.e., 3'910 nascent ventures with 2'541 documented outcome statuses from Australia, China, Sweden, and USA), Reynolds et al. (2018) show that the likelihood of new ventures reaching profitability decreases over time. This descriptive result resonates with the study of Shim and Davidsson (2018), in which they empirically examined the duration of ventures in a nascent status (i.e., pre-profit phase), finding that the probability of venture emergence is maximized at relatively early stages, whereas the chances for venture disbandment increase later on in the process. This suggested relationship is also reflected in previous empirical studies that controlled for the time span in between a founder's start of entrepreneurial efforts, and their respective outcome reached – such as achieved profitability or venture disbandment (Hopp & Greene, 2018; Koumbarakis et al., 2021; Lichtenstein et al., 2007). Overall, we theorize that the longer a founder's first conducted startup activity lies in the past, the less likely it is that their new venture will achieve regular sales. More formally, our third and final baseline hypothesis reads as follows:

Hypothesis 2. *The temporal distance from the first conducted startup related activity has a negative effect on firm emergence.*

3.3 Missionary founders and startup activities

Founder social identity literature posits that missionary founders strive to act responsibly (i.e., basis of self-evaluation) and consider it important to contribute to a better world (Fauchart & Gruber, 2011). Departing from here, we theorize in the following that for missionary founders, discovery-related startup activities are of greater importance in reaching firm emergence than for other types of founders: Grounded in their basic social motivation, missionaries are driven by the advancement of a particular cause and use society at large as their frame of reference. Thus, they primarily aim at social or environmental benefits with their venturing rather than being exclusively focused on self-interested achievements, such as monetary gains (Fauchart & Gruber, 2011; Sieger et al., 2016; Wilson & Post, 2013). It can be argued that missionaries pursue a dual mission of societal and economic value creation (Fauchart & Gruber,

2011; Grimes et al., 2013; Pache & Santos, 2013; Santos, 2012), according to which they have to consider both, the non-financial but also financial aspects of their entrepreneurial efforts: If their business is not viable over the long haul, missionaries cannot attain their social and environmental objectives they are primarily driven by (Chell, 2007; Fauchart & Gruber, 2011). A key challenge for missionary founders is therefore to balance out their twofold aims, meaning that they have to identify a suitable business model that allows the accomplishment of both their objectives (Gruber & MacMillan, 2017; Pache & Santos, 2013; Santos, 2012; Zahra et al., 2009). In other words, while the key challenge of traditional startups typically is to identify customer needs and offer products that meet these demands, mission-driven entrepreneurs face more complex challenges as they aim at establishing viable business models that create value for customers and potentially further stakeholders without causing negative externalities for others (Hummels & Argyrou, 2021). Illustrative of this logic, social identity literature submits, for example, that as missionary founders seek to launch alternative methods towards more socially or environmentally responsible practices, they typically put much more effort into identifying suppliers that share their own vision, compared to those for whom such a mission-driven cause is less relevant (Fauchart & Gruber, 2011). Building on this, we theorize that devising a business model which genuinely matches the missionary purpose is frequently not straightforward, associated with a higher degree of uncertainty, and requires comprehensive discovery efforts. Thus, we argue that discovery-related startup activities are of particular value to missionary founders to help them identify viable solutions and anticipate the activities and resources needed to accomplish their 'dual' goals (Delmar & Shane, 2004; Locke & Latham, 2002). In contrast, founders with a weak missionary identity are more likely to cater to existing markets or use established business models where founders can draw on previous experience or knowledge, which might render discovery activities less important.

Overall, we posit that discovery-related startup activities are particularly beneficial to founders with a missionary identity because of their potential to provide them the necessary guidance in designing and further developing a business model that is well-aligned with their intended missionary purpose and

subsequently achieving regular sales (Alsos et al., 2016; Fauchart & Gruber, 2011; Sieger et al., 2016). More formally, we hypothesize:

Hypothesis 3a. *For entrepreneurs with a strong missionary founder identity, there is a more pronounced positive relationship between the number of conducted discovery-related startup activities and firm emergence.*

Without any exploitation-related startup activities a business cannot come into existence, as already theorized in hypothesis 1b (Eckhardt & Shane, 2003; Gordon, 2012; Liao & Welsch, 2008). Yet, we argue that for missionary founders, exploitation-related startup activities are likely to be less effective compared to other types of founders. Given that they strive for the implementation of socially or environmentally beneficial practices that are aimed at changing the status quo, missionaries are likely to enter uncharted waters (Fauchart & Gruber, 2011; Sieger et al., 2016) – thus, possibly rendering the effective exploitation of the venture idea more demanding. In fact, prior research has suggested that entrepreneurs whose business model is centered around addressing social or environmental matters often “operate in resource-scarce environments” (Doherty et al., 2014, p. 429). Di Domenico et al., (2010, p. 683) noted, for example: “while commercial entrepreneurs seek markets with sufficient carrying capacity to support growth, social entrepreneurs actually seek markets characterized by a paucity of resources.” Respectively, research also suggests that socially or environmentally oriented entrepreneurs often encounter more constraints in their actions compared to other types of founders – such as in accessing best talent (Austin et al., 2006; Dees & Elias, 1998; Zahra et al., 2009) or financial resources (Battilana & Dorado, 2010; Brandsen & Karré, 2011; VanSandt et al., 2009). As a consequence, they are also frequently restrained in the possibilities to mobilize and deploy resources for the accomplishment of their highly aimed objectives (Austin et al., 2006; Desa & Basu, 2013). They may also have to actively recruit and establish collaborations with stakeholders for being able to establish a sustainable value chain (Kanda et al., 2024) or exploit a perceived opportunity (Schaltegger et al., 2018). In some cases, they might even have to alter or create the institutions that allows a profitable exploitation of a business idea (Pacheco et al., 2010). In this sense,

exploitation has more the character of ‘creating an opportunity’ for a mission-driven venture (Alvarez & Barney, 2007). In contrast, founders with a weak missionary identity are more likely to use established sources and practices for resource acquisition, operations, and customer acquisition, which might increase the effectiveness of individual exploitation activities.

Building on this, we theorize that it is relatively more challenging for founders with a salient missionary identity to impactfully acquire and employ their means and resources – such as critical relationships, know-how or tangible assets (Braun et al., 2023) – and thus, to effectively exploit their business idea. In other words, we expect the conduct of missionaries’ exploitation-related startup activities to prove less effective compared to other types of founders. Taken together, though necessary to establish an operating venture, we expect individual exploitation-related startup activities to have a smaller impact on firm emergence for strongly mission-driven founders than for those who identify weakly with a missionary founder identity. In other words, mission-driven entrepreneurs need to conduct more of these activities compared to other founders to achieve the same result. In more formal terms, we postulate:

Hypothesis 3b. *For entrepreneurs with a strong missionary founder identity, there is a less pronounced positive relationship between the number of conducted exploitation-related startup activities and firm emergence.*

3.4 Missionary founders and the temporal distance from the first startup activity

Since promoting a particular cause represents their basic social motivation, founders with a salient missionary identity are predominantly driven by the perception of pressing environmental or social challenges (Fauchart & Gruber, 2011) – such as, for instance, addressing environmental sustainability matters (York et al., 2016) or tackling the empowerment of women (Datta & Gailey, 2012). Indeed, entrepreneurs who strongly identify with a missionary founder identity regard it key to demonstrate the outside world that alternative, social value creating practices exist and can be implemented (Fauchart & Gruber, 2011). In view of this accentuated sense of mission to resolve a particular social or

environmental issue, missionaries are also described as extremely determined to present their proposed solutions to the wider society (Fauchart & Gruber, 2011; Gruber & MacMillan, 2017; Santos, 2012) – and, as part of their mission, to get others to behave in a more responsible manner (Fauchart & Gruber, 2011). This, in turn, indicates that missionary founders are also likely to try everything in their power to establish their firm in order to fulfill their aspired function as role model in society – and thus, to demonstrate that their approach of doing things is better than that of existing, more conventional products and services on the market (Braun et al., 2023; Fauchart & Gruber, 2011; Gruber & MacMillan, 2017). Following on from this, we propose that missionary founders are more likely to continue investing effort and time in their endeavors, even when the venture is not generating regular sales, yet. In fact, we argue that this is – in contrast to other types of founders – even more probable, as missionaries are likely to have a higher tolerance for lacking financial success given that making money is often only a secondary (even if not irrelevant) concern in their entrepreneurial efforts (Fauchart & Gruber, 2011). Supportive of these arguments, Gruber & MacMillan, p. (2017, p. 280) argued, for instance: “[V]entures that underperform on a financial dimension may stay operational, as their founders derive significant benefits in other performance dimensions”, thereby referring to the realization of missionary founders’ social aims. In a similar vein, Zuzul and Tripsas (2020) recently suggested that founders who regard themselves to be revolutionaries – thus, as nascent entrepreneurs who are primarily driven by advocating novelty with considerable impact on the status quo of doing things, rather than by making money – are likely to keep reinvesting in their entrepreneurial commitments in spite of low firm performance. However, from literature we know that sustained efforts in a chosen course of action – in spite of negative feedback, for instance, when falling short of the nascent venture’s progress expectation – bears the risk of path-dependent behaviors, and as such, also the continuation of investments in failing courses of action (see Brockner, 1992; Staw, 1981, for instance). Taken together, we more formally posit:

Hypothesis 4. *For entrepreneurs with a strong missionary founder identity, there is a more pronounced negative relationship between temporal*

distance from the first startup activity and firm emergence.

Our suggested model for this study is presented in Fig. 1.

4 Methods

4.1 Data and sampling procedure

We test our hypotheses using data from the Swiss Panel of Emerging Businesses (SwissPEB), a comprehensive longitudinal study of nascent entrepreneurs, which were defined as individuals who had been actively trying to start a new business which they would own or co-own, and which had still been in the pre-profit stage at the time of surveying them (Reynolds, 2017; Reynolds et al., 2018). While following the established methodology of PSED (Davidsson & Reynolds, 2009; Reynolds, 2007), SwissPEB also included new theoretical concepts, such as founder social identity (Fauchart & Gruber, 2011). Based on a large, representative telephone survey of the adult population in 2015 (N=28,599), a sample of nascent entrepreneurs was identified and interviewed by

phone (n=298 in first wave). The follow-up telephone interviews were carried out one year later in summer/autumn 2016 (second wave, n=225). With its representative nature, including all types of startup attempts, our data can be seen as typical example of everyday entrepreneurship (Welter et al., 2017).

In this study we use a subset of the data. Specifically, we include respondents who stated in the first wave that they had *not* generated any regular sales and who also participated in the second wave of interviews. Excluding cases with missing values, this leads to a sample of 135 nascent entrepreneurs for the present study. The individuals in our sample are between 19 and 65 years old (mean 41.7 years). 63% of them were male, 37% female, respectively.

4.2 Measures

4.2.1 Dependent variable

Our dependent variable is the status of the venture one year after the first data collection (wave 2). Specifically, we distinguish between founders who were still active but had *not* achieved regular sales

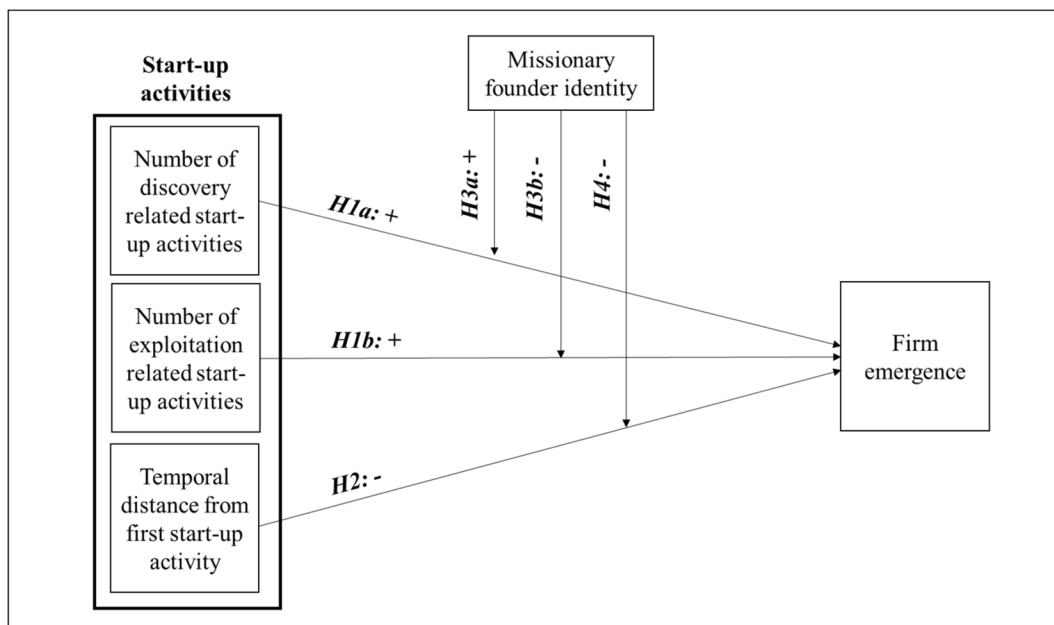


Fig. 1 Hypothesized model

(reference category, 33.3%),⁴ founders who were still active and *had* achieved regular sales (43.0%) and founders who had abandoned their venture (23.7%). While longitudinal panel studies of new ventures often use the achievement of initial profits as indication of firm emergence (Arenius et al., 2017; Davidsson & Gordon, 2012; Koumbarakis et al., 2021), we follow prior studies and use regular sales as indication (Carter et al., 1996; Davidsson & Honig, 2003; Reynolds & Miller, 1992; see Reynolds, 2017 for a detailed discussion on firm emergence). We do so because for mission-driven entrepreneurs it cannot be assumed that achieving profits is the primary goal to be attained, while it can be assumed that they aim at achieving regular sales (M. T. Dacin et al., 2011; Wilson & Post, 2013).⁵

4.2.2 Independent variables

All independent and control variables are taken from the first wave of data collection. The strength of the missionary founder identity was assessed with an early version of the measurement instrument developed and validated by Sieger et al. (2016); Table 6 (Appendix) reports the measurement items and Cronbach's alpha for all possible founder social identities.⁶

We measure the number of conducted discovery-related startup activities by calculating the sum of six binary items (1=yes; 0=no), that are: "Discussed business idea with potential customers"; "Conducted research on market potential of your business idea"; "Started to collect information about competitors"; "Started to work on a business plan"; "Business plan in fully formulated form"; "Started to develop a prototype for the product or service".⁷ Likewise, we measure the number of conducted exploitation-related startup activities by calculating the sum of

nine binary items (1=yes; 0=no): "Started marketing or promotion efforts"; "Created a business website"; "Acquired or leased material, equipment or machinery for the business"; "Acquired or leased facility"; "Sought external funding"; "Applied for a patent, copyright or trademark"; "Registered the company/Established the legal form"; "Hired first interns or employees"; "Participated in a support program". In subsuming the different startup activities into the two groups of discovery and exploitation-related startup activities, we followed the categorization of previous work (Gordon, 2012; Koumbarakis et al., 2021).⁸ In a follow-up question, founders were asked how many hours they have so far spent on the respective groups of activities. The results for these alternative independent variables are reported in chapter 5.2.

Temporal distance from the first startup activity was measured as the time difference between the first startup related activity registered and the interview date of the second wave (where the outcome variable of our study is measured). To reflect the diminishing contribution of each additional year to the total time in the venture creation process, we log-transformed this variable.

4.2.3 Control variables

We include important control variables such as age (in years) and gender (male coded as 1; female coded as 0) of the surveyed founder. Further, we include tertiary education (coded as 1 if the founder had a tertiary education; otherwise coded as 0) because people with higher education typically have higher opportunity costs and aim for larger, more complex businesses which take longer to get established (Casar, 2006). Further, we considered two components of human capital that are central to new venture creation (Dimov, 2010): years of experience in the sector (ln) and the number of previous startup attempts (ln). Capturing characteristics of the venture, we control for team startup (1=yes), service industry (1=yes), and innovativeness, measured in terms of perceived newness of the offered product or service for customers. The descriptive statistics and Pearson correlations of all variables used in our models are shown in Table 1.

⁴ For capturing regular sales, respondents were asked: "Has your business generated any returns or revenues from the sale of goods or services for more than six of the past twelve months?"

⁵ However, note that those who report regular sales with their venture may have also attained profitability.

⁶ Importantly, while we focus on the salience of the missionary founder identity, the studied entrepreneurs may have combined identities, thus high scores on all three founder identities (i.e., missionary, communitarian, and darwinian).

⁷ In a robustness test (see Model 7), we use a version of the variable where we exclude the two activities relating to business planning.

⁸ As 'regular sales' is our dependent variable, it is not included in the exploitation related startup activities.

4.3 Analyses

We calculate multinomial logistic regressions with the status of the venture in wave 2 as dependent variable. Following scholarly recommendations, we mean center the variables to ensure an accurate analysis and interpretation of the interaction effects (Aiken & West, 1991; Dawson, 2014). To get a good understanding of the interaction effects, we draw the interaction plots for meaningful values of the moderator, as suggested by Dawson (2014). Measured on an 1 to 5 scale, the average strength of the missionary identity in our sample is 3.27 (see Table 1). We use the value of 4.27 (i.e. mean value + 1) as indicative of a *strong* missionary founder identity and the value of 2.27 (i.e. mean value - 1) as indicative of a *weak* missionary founder identity (see Fig. 2). Also, we show the interaction plot for different values of the independent variables, which is especially helpful for interpreting the effects of startup activities.

5 Results

5.1 Hypotheses testing

Table 2 shows the results of our multinomial logistic regressions on firm emergence; we specifically focus on the antecedents of firm emergence, measured in terms of achieving regular sales. We find no support for our baseline hypothesis 1a concerning discovery activities (Coeff.=0.263; $p=0.103$; Model 2) but support for hypothesis 1b (Coeff.=0.370; $p=0.014$; Model 2) that there is a positive relationship between the number of conducted exploitation-related startup activities and firm emergence. We also find strong support for our third baseline hypothesis 1c (Coeff.=−1.337; $p<0.001$; Model 2): the likelihood that ventures emerge decreases with increasing temporal distance from the first conducted startup activity.

Concerning the hypothesized interaction effects, we find support for all our hypotheses, albeit sometimes only marginally. First, we find strong support for hypothesis 3a (Coeff.=0.449; $p=0.005$; Model 3): Having a pronounced missionary founder identity significantly strengthens the relationship between conducted discovery-related startup activities and firm emergence. The first row of interaction plots

visualizes the relationship (see Fig. 2): On the left we show the interaction plot for a narrow range of activities (from 2.75 to 4.75 discovery activities, i.e. mean $-/+1$ activity); on the right we show the interaction plot for a wider range (from 1.75 to 5.75 activities, i.e. mean $-/+2$ activities). For both plots, when a founder has a strong missionary identity, the relationship between conducting discovery-related startup activities and firm emergence is positive, as indicated by the upward pointing slope. This relationship appears to be negative for founders with a weak missionary identity, as indicated by the downward pointing slope. Put differently, for entrepreneurs with a pronounced missionary founder identity, conducting discovery-related startup activities fosters the achievement of regular sales which is not the case for founders with a weak missionary identity.

We find support for hypothesis 3b (Coeff.=−0.290; $p=0.025$; Model 3). The strength of the missionary founder identity weakens the relationship between conducted exploitation-related startup activities and firm emergence. The second row of interaction plots in Fig. 2 visualizes the relationship: On the left we show the interaction plot for a narrow range of exploitation activities (from 2.2 to 4.2; i.e. mean $-/+1$ activity); on the right we show the interaction plot for a wider range from 0.2 to 6.2 exploitation activities (i.e. mean $-/+3$ activities). In both plots, there is a positive relationship between conducting exploitation activities and firm emergence for both, founder with a strong and with a weak missionary founder identity. Yet, the relationship is less pronounced for founders with a strong missionary founder identity, suggesting that exploitation activities are less effective for these founders, as hypothesized.

Finally, we find marginal support for our hypothesis 4 (Coeff.=−0.623; $p=0.051$; Model 3); the strength of a missionary founder identity reinforces the negative relationship between the temporal distance from the first conducted startup activity and firm emergence. As indicated in the last row of interaction plots (Fig. 2), there is a strong negative relationship between temporal distance and firm emergence for founders with a strong missionary founder identity and a less pronounced negative relationship for founders with a weak missionary founder identity. As the significance is close to 5% and there is no objective justification for using this significance threshold (Rosnow & Rosenthal, 1989), we still treat

Table 1 Descriptive Statistics and Pearson Correlations of all Variables in the Models

	Min.	Max.	Mean	Std. dev.	Pearson Correlations												
					(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
(1) Age (in years)	19.00	65.00	41.73	10.79	--												
(2) Gender (1=male)	0.00	1.00	0.63	0.48	-0.09	--											
(3) Tertiary education (1=yes)	0.00	1.00	0.53	0.50	0.21*	0.08	--										
(4) Years of experience in sector (ln)	0.00	3.78	1.93	1.26	0.41**	-0.04	0.16	--									
(5) # of previous startup attempts (ln)	0.00	2.77	0.48	0.59	0.16	0.19*	0.04	0.14	--								
(6) Team startup (1=yes)	0.00	1.00	0.57	0.50	-0.07	0.33**	0.00	-0.11	0.20*	--							
(7) Service industry (1=yes)	0.00	1.00	0.71	0.46	0.14	-0.22*	0.19*	0.17*	-0.05	-0.09	--						
(8) Innovativeness (1-3 scale)	1.00	3.00	1.99	0.74	-0.01	0.01	0.08	-0.04	0.03	0.04	0.05	--					
(9) # discovery related start-up activities	0.00	6.00	3.75	1.68	-0.02	0.16	0.16	0.00	0.11	0.05	0.01	0.16	--				
(10) # exploitation related start-up activities	0.00	9.00	3.20	1.99	0.12	0.05	0.10	-0.04	0.11	0.10	-0.10	0.28**	0.40**	--			
(11) Temporal dist. from first start-up activity (ln)	-0.07	3.43	0.98	0.70	0.05	0.07	0.09	0.23**	0.12	-0.06	-0.12	-0.01	0.18*	0.21*	--		
(12) Missionary founder identity	1.00	5.00	3.27	1.30	0.02	-0.16	0.01	0.03	0.01	-0.09	0.00	0.21*	0.03	0.23**	-0.03	--	

Table 1 (continued)

	Min.	Max.	Mean	Std. dev.	Pearson Correlations											
					(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Separate binary variables for dep. variable:</i>																
(13) Turnover (=1) vs. active, no turnover (=0)	0.00	1.00	0.56	0.50	-0.01	-0.05	-0.17	0.04	0.13	0.18	-0.09	-0.18	0.13	0.13	-0.21*	-0.17
(14) Abandoned (=1) vs. active, no turnover (=0)	0.00	1.00	0.42	0.50	-0.14	0.13	0.03	-0.13	0.19	0.21	-0.04	-0.14	0.11	-0.22	-0.28*	-0.26*

N= 135 (except for (13): N=103 and (14): N=77). Significance levels: * $p < 0.05$, ** $p < 0.01$ (two-sided)

The mean values for (13) and (14) do not represent the prevalence of the 'turnover' status (43.0%) and the 'abandoned' status (23.7%) in the overall population of 135 cases

this effect as significant in the following, considering our small sample size.

5.2 Robustness tests

To add to the robustness of our findings we ran additional multinomial logistic regressions. First, we ran an alternative model by excluding all control variables used in our models (Becker, 2005) (See Table 3, Model 4). Secondly, we ran a model by constraining the sample to cases where the surveyed respondent was in charge of day-to-day operations or spent equal or more hours per week on startup related activities than any co-founder (if there was any) (see Table 3; Model 5). Even if it is not uncommon that researchers relate individual level variables to venture outcomes, while including solo and team start-ups in the analysis, we could limit the "source of unobserved heterogeneity" (Davidsson & Gordon, 2012, p. 859) with this additional test. For both robustness tests, the effects are almost identical concerning the hypothesized effects, supporting the robustness of our findings.

Third, we ran the model with an alternative dependent variable. As explained above, we used regular sales in our main models because mission-driven entrepreneurs cannot be assumed to always strive for profit. In this robustness tests, we nonetheless worked with profit as the dependent variable to be able to compare the findings with this alternative, frequently used outcome variable (see Table 3; Model 6). Here, the results concerning our hypotheses are slightly different which show the limits of our model; the comparatively low explanatory power suggests that our model indeed performs worse in predicting venture profitability. Interestingly, the interaction effect between temporal distance and missionary founder identity is negative and significant, suggesting that for founders with a pronounced missionary identity, it becomes less likely to achieve profitability with increasing time lag from the first start-up activity than for other founders.

Fourth, we ran the model with a slightly different variable for discovery-related startup activities that only includes the four activities relating to identifying, evaluating, and developing the business idea but excluding business planning (see Table 4; Model 7). The results are almost identical to the main model 3, suggesting that it is indeed discovery-related

activities in a narrower sense that are important for mission-driven ventures to emerge.

Finally, we ran the whole analysis again with two alternative independent variables that do not measure the number of conducted discovery and exploitation activities but how many hours founders have spent on these activities, respectively.⁹ Because respondents frequently reported difficulties in estimating the number of hours and, correspondingly, the proportion of missing values is high, we report the findings based on these variables as robustness test only (See Table 5). Concerning our hypotheses, the results for these models 8–10 are again very similar to the results of the main models 1–3; which suggest that not only how many activities but also intensity of engagement with these activities is related to firm emergence. The only difference to the main models is that the interaction between hours invested in exploitation related startup activities and missionary is not significant.

6 Discussion

For mission-driven entrepreneurs to achieve the desired environmental or social impact, they must be able to advance their venture beyond the gestation phase to an operating firm with regular sales. Thus, it is of great importance to understand how such new businesses emerge (Gruber & MacMillan, 2017; Pan et al., 2019; Saebi et al., 2019) and to learn about the effectiveness of different types of startup activities on the path towards achieving regular sales (Autio et al., 2013; Koumbarakis et al., 2021; Liao & Welsch, 2008). This paper investigates theoretically and empirically in what way the strength of a missionary founder identity relates to the impact of discovery and exploitation-related startup activities as well as to the duration of the startup process on achieving regular sales. Doing so, our study contributes to a better understanding of the emergence of mission-driven new ventures (Alsos et al., 2016; Farmer et al., 2011; Ireland & Webb, 2007; Saebi et al., 2019), taking into

account the high prevalence of entrepreneurs who want to contribute to society at large with their new venture, which we refer to as everyday sustainable entrepreneurship (Welter et al., 2017). In the next sections we discuss the results of our study and their implications in more detail.

6.1 The significance of startup activities in mission-driven entrepreneurship

Consistent with previous research, we find support for exploitation-related startup activities to be positively associated with firm emergence (Carter et al., 1996; Koumbarakis et al., 2021). Yet, for discovery-related startup activities, the picture is less clear-cut as the respective coefficient is only on the verge of being weakly significant. A possible explanation for this finding seems to be that discovery-related startup activities do not per se have a positive effect on venture emergence but that different types of startup attempts require such activities to a different degree (Castrogiovanni, 1996; Greene & Hopp, 2017; van Gelderen et al., 2006). Indeed, our interaction results indicate that discovery-related startup activities are essential for founders who identify strongly with a missionary founder identity. Possibly, because missionary founders are primarily driven to change the status quo towards new social or environmental practices – which leaves them with only limited possibilities to revert to well-established business models and increases the uncertainty about the viability of their ideas (Fauchart & Gruber, 2011; Sieger et al., 2016) – conducting discovery-related startup activities is particularly important in developing the business idea and the employed business model. Missionary founders typically start their venture because they recognize a social or ecological problem which they are motivated to address, and it takes efforts to develop a suitable business model that can contribute to solving this problem (Belz & Binder, 2017). In this context, Schaltegger et al. (2018) speak of ‘dis-opportunities’ as starting point for such mission-driven ventures. Founders “act upon their values even though a clear market demand may not be evident” at the outset (Maaßen & Urbano, 2024, p. 461). In contrast, for other types of founders the entrepreneurial process is more likely to start with becoming aware of an opportunity for a new business where founders might be

⁹ The exact questions were: “You mentioned that you already carried out the following activities: (...)”; “How many hours – in total – did you (and the other founders) spend on these activities until now?”.

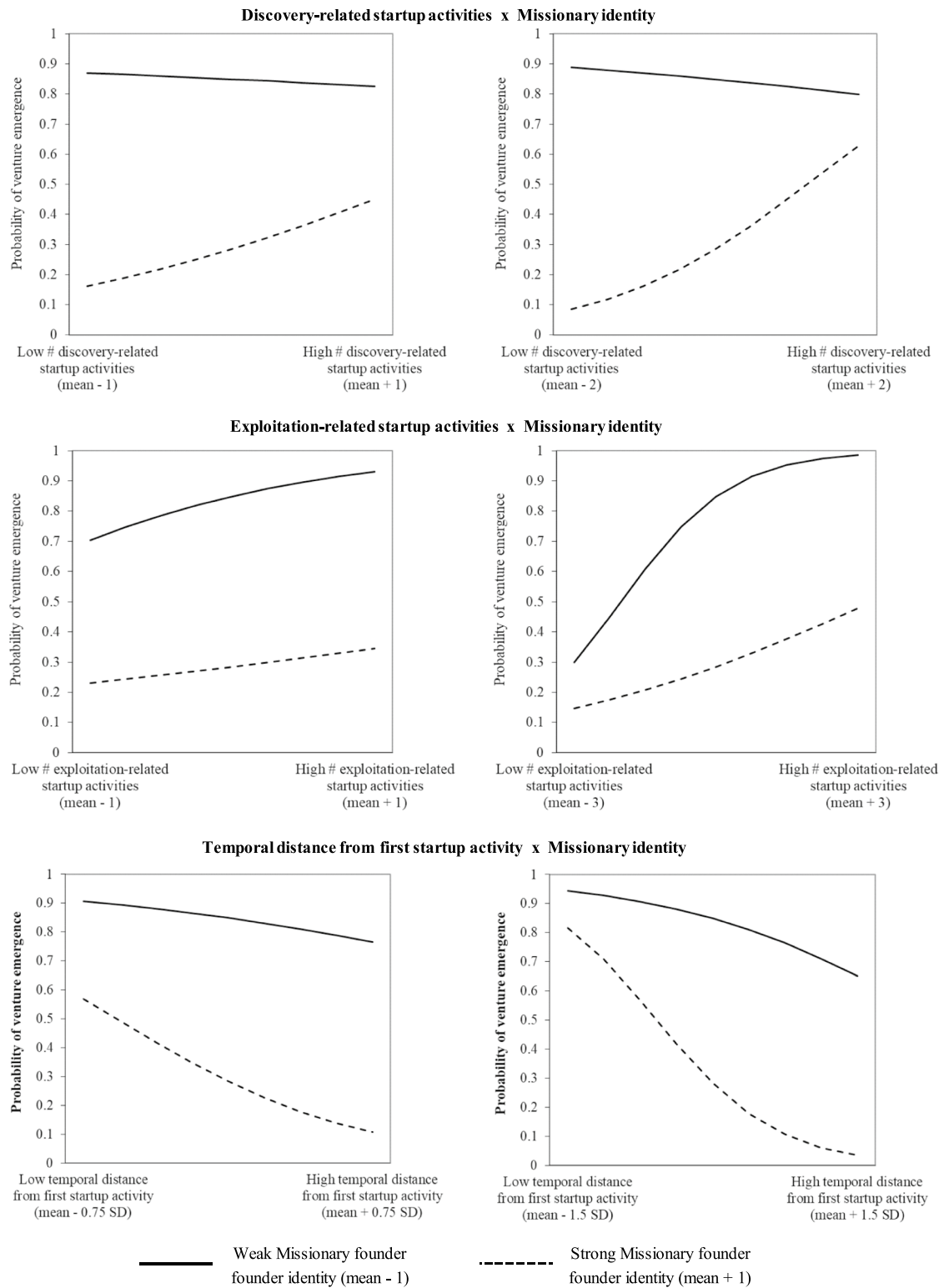


Fig. 2 Interaction plots

Table 2 Results of multinomial logistic regressions

	Model 1			Model 2			Model 3		
	Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Firm emergence									
Age	-0.002	0.022	0.927	-0.022	0.025	0.385	-0.030	0.028	0.278
Gender (=male)	-0.682	0.481	0.156	-1.074	0.552	0.052 ⁺	-1.383	0.608	0.023 [*]
Tertiary education	-0.616	0.440	0.162	-0.752	0.501	0.133	-0.692	0.542	0.202
Years of experience in sector (ln)	0.132	0.192	0.493	0.436	0.227	0.055 ⁺	0.426	0.254	0.093 ⁺
# of previous startup attempts (ln)	0.477	0.406	0.240	0.632	0.449	0.159	0.608	0.500	0.224
Team startup	0.912	0.460	0.047 [*]	0.815	0.510	0.110	0.993	0.561	0.077 ⁺
Service industry	-0.380	0.499	0.446	-0.692	0.566	0.222	-0.991	0.610	0.104
Innovativeness	-0.516	0.289	0.073 ⁺	-0.801	0.345	0.020 [*]	-1.243	0.405	0.002 ^{**}
# of conducted discovery related start-up activities				0.263	0.162	0.103	0.275	0.189	0.145
# of conducted exploitation related start-up activities				0.370	0.151	0.014 [*]	0.570	0.183	0.002 ^{**}
Temporal distance from first start-up activity (ln)				-1.337	0.398	<.001 ^{***}	-1.676	0.508	<.001 ^{***}
Missionary founder identity				-0.520	0.208	0.012 [*]	-1.326	0.627	0.034 [*]
Missionary x Discovery related startup activities							0.449	0.161	0.005 ^{**}
Missionary x Exploitation related startup activities							-0.290	0.130	0.025 [*]
Missionary x Temp. dist. from first startup activ. (ln)							-0.623	0.319	0.051 ⁺
Abandonment									
Constant	0.284	0.215	0.187	0.315	0.244	0.197	0.403	0.299	0.178
Age	-0.025	0.026	0.321	-0.025	0.028	0.368	-0.025	0.028	0.369
Gender (=male)	0.143	0.573	0.803	0.105	0.620	0.865	-0.077	0.631	0.903
Tertiary education	0.276	0.526	0.600	0.533	0.578	0.356	0.488	0.591	0.409
Years of experience in sector (ln)	-0.185	0.211	0.381	-0.083	0.238	0.727	-0.115	0.245	0.639
# of previous startup attempts (ln)	0.683	0.455	0.134	1.066	0.508	0.036 ⁺	0.918	0.534	0.086 ⁺
Team startup	0.642	0.532	0.227	0.521	0.568	0.359	0.543	0.567	0.338
Service industry	0.004	0.571	0.995	-0.435	0.618	0.481	-0.489	0.640	0.445
Innovativeness	-0.493	0.333	0.139	-0.227	0.396	0.566	-0.470	0.431	0.275
# of conducted discovery related start-up activities				0.135	0.175	0.442	0.062	0.187	0.741
# of conducted exploitation related start-up activities				-0.218	0.179	0.222	-0.072	0.197	0.716
Temporal distance from first start-up activity (ln)				-1.175	0.467	0.012 [*]	-1.055	0.507	0.037 [*]
Missionary founder identity				-0.498	0.232	0.031 [*]	-0.441	0.625	0.481

Table 2 (continued)

	Model 1			Model 2			Model 3		
	Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Missionary x Discovery related startup activities							0.196	0.162	0.227
Missionary x Exploitation related startup activities							-0.255	0.145	0.079 ⁺
Missionary x Temp. dist. from first startup activ. (ln)							0.039	0.367	0.916
Constant	-0.364	0.257	0.156	-0.448	0.308	0.146	-0.189	0.340	0.578
Cases (n)	135			135			135		
Chi-square	23.207***			60.577***			78.295***		
-2 Log Likelihood	265.799			228.429			210.711		
Nagelkerke R Square	0.179			0.410			0.499		

Reference category: Still active but no regular turnover. Significance levels: ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

able to rely on more established practices (Fauchart & Gruber, 2011) that, in turn, seems to lessen the benefits of conducting discovery-related startup activities (Bhide, 2000). Using the distinction of Alvarez and Barney (2007) one might argue that mission-driven entrepreneurs need to ‘create the opportunity’ by conducting what we term discovery activities while other entrepreneurs need these activities to a lesser degree because they discover the idea for a new business in a more ‘ready-made way’ where it is more obvious how the business model will look like.

While previous research has frequently focused on business planning (Delmar & Shane, 2003; Hopp & Greene, 2018), our results suggest that it is discovery related startup activities in a narrower sense that are important for mission-driven entrepreneurs, similar to recommendations in the widely-used Lean Startup approach which focuses on reducing the uncertainty concerning customer preferences (Blank & Eckhardt, 2024). However, it is important to note that key uncertainties for mission-driven entrepreneurs often pertain to other parts of the business model, such as the supply side, stakeholder engagement, or resource providers (Kanda et al., 2024; Ryan et al., 2023). In this context, the so-called ‘scientific approach to entrepreneurship’, which is currently widely discussed in entrepreneurship research, appears to be highly fruitful (Agarwal et al., 2025; Zellweger & Zenger, 2021). The general idea of this approach is to iteratively reduce the uncertainty about the viability of a business idea by taking a structured theory-and-evidence-based approach, involving the following steps: “(a) forming beliefs about the business idea, (b) taking action to test those beliefs, and (c) updating beliefs based on new information emerging from experimentation.” (Agarwal et al., 2025, p. 603). So far, this approach has mainly been discussed in the context of traditional startups. Given that mission-driven venture ideas are frequently complex and involve assumptions on various aspects of the business models, the scientific approach might also be highly valuable in reducing the uncertainty around such business models before making a full commitment. Also, Agarwal et al (2025) demonstrate the applicability of this approach in the context of everyday entrepreneurship.

We also find evidence for an interaction effect of a pronounced missionary founder identity and

Table 3 Results of multinomial logistic regressions (Robustness tests 1)

	Model 4 (<i>no controls</i>)			Model 5 (<i>only 'main driver'</i>)			Model 6 (<i>venture emerg. = profit.</i>)		
	Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Firm emergence									
Age				-0.042	0.031	0.176	-0.042	0.035	0.225
Gender (=male)				-1.109	0.655	0.090	0.388	0.703	0.581
Tertiary education				-0.984	0.607	0.105	0.340	0.669	0.611
Years of experience in sector (ln)				0.633	0.308	0.040*	0.491	0.348	0.159
# of previous startup attempts (ln)				0.621	0.528	0.239	1.126	0.546	0.039*
Team startup				1.237	0.648	0.056+	-0.324	0.674	0.631
Service industry				-0.834	0.663	0.208	-0.259	0.726	0.722
Innovativeness				-1.108	0.445	0.013*	-1.410	0.479	0.003**
# of conducted discovery related start-up activities	0.084	0.157	0.593	0.247	0.217	0.255	0.060	0.227	0.792
# of conducted exploitation related start-up activities	0.332	0.143	0.020*	0.559	0.209	0.007**	0.109	0.206	0.596
Temporal distance from first start-up activity (ln)	-1.034	0.396	0.009**	-1.827	0.562	0.001**	-1.062	0.687	0.122
Missionary founder identity	-0.923	0.555	0.096+	-1.490	0.706	0.035*	-0.624	0.720	0.386
Missionary x Discovery related startup activities	0.344	0.141	0.015*	0.475	0.186	0.011*	0.366	0.195	0.060+
Missionary x Exploitation related startup activities	-0.251	0.115	0.028*	-0.313	0.142	0.028*	-0.230	0.161	0.153
Missionary x Temp. dist. from first startup activ. (ln)	-0.373	0.274	0.174	-0.575	0.335	0.086+	-0.977	0.418	0.019*
Constant	0.392	0.251	0.119	0.579	0.361	0.109	-2.194	0.434	<.001***
Abandonment									
Age				-0.042	0.033	0.207	-0.021	0.024	0.397
Gender (=male)				-0.313	0.686	0.649	0.685	0.541	0.206
Tertiary education				0.017	0.676	0.980	0.880	0.516	0.088+
Years of experience in sector (ln)				0.050	0.300	0.867	-0.235	0.208	0.259
# of previous startup attempts (ln)				0.770	0.591	0.193	0.822	0.435	0.059+
Team startup				1.122	0.659	0.089+	0.071	0.516	0.891
Service industry				0.022	0.749	0.976	-0.018	0.546	0.973
Innovativeness				-0.710	0.487	0.145	-0.048	0.370	0.897
# of conducted discovery related start-up activities	0.109	0.170	0.522	-0.026	0.213	0.904	0.019	0.155	0.901
# of conducted exploitation related start-up activities	-0.131	0.168	0.435	-0.033	0.229	0.886	-0.423	0.164	0.010*
Temporal distance from first start-up activity (ln)	-0.766	0.433	0.077+	-1.084	0.554	0.050*	-0.489	0.452	0.279

Table 3 (continued)

	Model 4 (no controls)			Model 5 (only 'main driver')			Model 6 (venture emerg. = profit.)		
	Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Missionary founder identity	-0.404	0.564	0.474	-0.069	0.698	0.922	-0.013	0.508	0.980
Missionary x Discovery related startup activities	0.184	0.146	0.207	0.118	0.180	0.514	0.031	0.127	0.804
Missionary x Exploitation related startup activities	-0.241	0.132	0.068 ⁺	-0.318	0.166	0.055 ⁺	-0.098	0.121	0.416
Missionary x Temp. dist. from first startup activ. (ln)	0.165	0.317	0.603	-0.023	0.378	0.952	0.023	0.335	0.946
Constant	-0.228	0.288	0.429	-0.034	0.401	0.932	-1.244	0.273	<.001***
Model summary	135			112			135		
Cases (n)									
Chi-square	42.377***			66.703***			53.353**		
-2 Log Likelihood	246.629			173.474			192.998		
Nagelkerke R Square	0.305			0.508			0.389		

Reference category: Still active but no regular turnover. Significance levels: ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

conducting exploitation activities, suggesting that such activities are important for missionary founders, albeit pay off to a lesser extent as they have a smaller effect on achieving regular sales than for non-mission-driven entrepreneurs. As mentioned before, because missionary entrepreneurs are predominantly driven by the perception of social or environmental problems and they want to change the status quo, they may also be less likely to use more conventional, proven business models (Fauchart & Gruber, 2011; Sieger et al., 2016). The fruitful exploitation of their venture idea is therefore likely to be more challenging, and in some cases it might also turn out that the business idea is not feasible as anticipated. For example, identifying and accessing the right partners and resources along the way through which the business idea could be effectively exploited (e.g., adequate investors, suppliers, employees, or supporters/advisors), might prove to be more difficult for missionary founders as implementing a sustainable business model is likely to require cooperations with a much broader set of stakeholders than in the case of a traditional business (Hummels & Argyrou, 2021; Kanda et al., 2024; Schaltegger et al., 2018). With this, our study points in the same direction as Muñoz and Dimov (2015) who suggest that new ventures focused on sustainability matters may be running against “an establishment that is [...] dominated by the absence of supportive social context in the deliberation of actions, and by intention and the absence of supporting context in the pursuit of exchange relationships” (p. 633). Missionary founders may therefore be especially likely to be constrained in their possibility to make effective use of their means and resources (Austin et al., 2006), which, however, are needed to effectively exploit their venture idea and reach firm emergence.

6.2 The (Potential) shadow side of mission-driven entrepreneurship

Resonating previous research and empirical observations, our results provide evidence for a negative relationship between temporal distance from the first conducted startup activity and firm emergence (Reynolds et al., 2018; Shim & Davidsson, 2018). In addition, our study suggests that identifying strongly with a missionary identity strengthens this negative relationship. Missionary founders commit themselves to

Table 4 Results of multinomial logistic regressions (robustness tests 2)

		Model 7 (<i>max. 4 discov. act.</i>)		
		Coeff	S.E	Sig
Firm emergence	Age	−0.025	0.027	0.356
	Gender (= male)	−1.178	0.578	0.041*
	Tertiary education	−0.627	0.531	0.237
	Years of experience in sector (ln)	0.378	0.250	0.130
	# of previous startup attempts (ln)	0.515	0.485	0.288
	Team startup	0.910	0.536	0.089 ⁺
	Service industry	−0.807	0.590	0.171
	Innovativeness	−1.029	0.379	0.007**
	# of conducted discovery related start-up activities (max. 4; excl. bus. planning)	0.031	0.272	0.908
	# of conducted exploitation related start-up activities	0.576	0.177	0.001**
	Temporal distance from first start-up activity (ln)	−1.446	0.482	0.003**
	Missionary founder identity	−0.569	0.237	0.016*
	Missionary x Discovery related startup activities (max. 4; excl. bus. planning)	0.547	0.238	0.021*
	Missionary x Exploitation related startup activities	−0.255	0.123	0.038*
	Missionary x Temp. dist. from first startup activ. (ln)	−0.523	0.300	0.081 ⁺
	Constant	0.445	0.293	0.129
Abandonment	Age	−0.024	0.028	0.395
	Gender (= male)	−0.039	0.624	0.950
	Tertiary education	0.497	0.583	0.394
	Years of experience in sector (ln)	−0.133	0.248	0.591
	# of previous startup attempts (ln)	0.895	0.527	0.089 ⁺
	Team startup	0.542	0.562	0.335
	Service industry	−0.404	0.644	0.530
	Innovativeness	−0.342	0.415	0.410
	# of conducted discovery related start-up activities (max. 4; excl. bus. planning)	−0.065	0.281	0.818
	# of conducted exploitation related start-up activities	−0.085	0.193	0.659
	Temporal distance from first start-up activity (ln)	−0.985	0.502	0.050 ⁺
	Missionary founder identity	−0.560	0.260	0.031*
	Missionary x Discovery related startup activities (max. 4; excl. bus. planning)	0.318	0.260	0.222
	Missionary x Exploitation related startup activities	−0.248	0.144	0.084 ⁺
	Missionary x Temp. dist. from first startup activ. (ln)	0.050	0.362	0.889
	Constant	−0.221	0.340	0.515
Model summary	Cases (n)	135		
	Chi-square	72.870***		
	−2 Log Likelihood	216.136		
	Nagelkerke R Square	0.473		

Reference category: Still active but no regular turnover. Significance levels: ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5 Results of multinomial logistic regressions (Robustness tests 3; startup activities measured in hours)

		Model 8			Model 9			Model 10		
		Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Firm emergence	Age	-0.007	0.024	0.765	-0.019	0.026	0.458	-0.018	0.028	0.517
	Gender (=male)	-0.529	0.528	0.316	-0.665	0.565	0.239	-1.046	0.615	0.089 ⁺
	Tertiary education	-0.709	0.505	0.160	-0.740	0.559	0.186	-0.495	0.601	0.409
	Years of experience in sector (ln)	0.216	0.220	0.326	0.461	0.251	0.066 ⁺	0.463	0.281	0.099 ⁺
	# of previous startup attempts (ln)	0.208	0.431	0.629	0.236	0.448	0.598	0.219	0.495	0.658
	Team startup	0.771	0.492	0.117	0.756	0.524	0.149	1.100	0.578	0.057 ⁺
	Service industry	-0.348	0.541	0.520	-0.686	0.604	0.256	-1.036	0.691	0.134
	Innovativeness	-0.466	0.322	0.148	-0.563	0.354	0.111	-0.661	0.398	0.096 ⁺
	hours for discovery related start-up activities (ln)				-0.125	0.161	0.437	-0.270	0.192	0.159
	hours for exploitation related start-up activities (ln)				0.303	0.152	0.046 [*]	0.353	0.160	0.027 [*]
	Temporal distance from first start-up activity (ln)				-1.008	0.438	0.021 [*]	-1.372	0.547	0.012 [*]
	Missionary founder identity				-0.239	0.217	0.271	-2.078	0.711	0.003 ^{**}
	Missionary x Discovery related startup activities (ln)							0.440	0.170	0.010 [*]
Abandonment	Missionary x Exploitation related startup act. (ln)							0.014	0.120	0.905
	Missionary x Temp. dist. from first startup activ. (ln)							-0.815	0.405	0.044 [*]
	Constant	0.279	0.238	0.242	0.251	0.263	0.341	-2.194	0.434	<.001 ^{***}
	Age	-0.018	0.026	0.484	-0.026	0.029	0.362	-0.023	0.029	0.433
	Gender (=male)	0.132	0.593	0.823	0.262	0.647	0.685	0.033	0.663	0.960
	Tertiary education	0.140	0.563	0.803	0.462	0.594	0.436	0.631	0.609	0.300
	Years of experience in sector (ln)	-0.161	0.227	0.478	-0.034	0.253	0.892	-0.020	0.261	0.938
	# of previous startup attempts (ln)	0.540	0.461	0.241	0.749	0.505	0.138	0.683	0.531	0.198
	Team startup	0.637	0.540	0.238	0.434	0.574	0.450 ⁺	0.561	0.583	0.336
	Service industry	0.171	0.600	0.775	-0.264	0.658	0.688	-0.547	0.722	0.449
	Innovativeness	-0.500	0.348	0.151	-0.270	0.398	0.497	-0.334	0.421	0.428
	hours for discovery related start-up activities (ln)				0.123	0.180	0.495	0.012	0.194	0.951
	hours for exploitation related start-up activities (ln)				-0.263	0.158	0.096 ⁺	-0.251	0.158	0.113
	Temporal distance from first start-up activity (ln)				-0.937	0.459	0.041 [*]	-1.034	0.526	0.049 [*]

Table 5 (continued)

	Model 8			Model 9			Model 10		
	Coeff	S.E	Sig	Coeff	S.E	Sig	Coeff	S.E	Sig
Missionary founder identity									
Missionary x Discovery related startup activities (ln)				-0.450	0.238	0.058 ⁺	-1.507	0.726	0.038*
Missionary x Exploitation related startup act. (ln)							0.286	0.170	0.093 ⁺
Missionary x Temp. dist. from first startup activ. (ln)							-0.050	0.129	0.699
Constant	-0.128	0.264	0.628	-0.234	0.300	0.435	-0.246	0.408	0.546
Model summary							-1.244	0.273	<.001***
Cases (n)	115			115			115		
Chi-square	17.689			43.971	**		57.445	**	
-2 Log Likelihood	231.911			205.629			192.155		
Nagelkerke R Square	0.161			0.359			0.444		

Reference category: Still active but no regular turnover. Significance levels: ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

a particular cause of social or environmental significance; they strive for more socially responsible practices, and in doing so, endeavor to lead by example – thus, to fulfill a role model function in society (Fauchart & Gruber, 2011; Gruber & MacMillan, 2017). To achieve their objectives, they aim at establishing a financially viable venture, considering that their business represents the main vehicle for them to be and drive the change in society (Fauchart & Gruber, 2011). We argue that missionary founders are likely to be more resilient despite lacking financial payoffs as this type of founder is determined to fulfill a mission, in which financial considerations are often not of primary concern but rather represent a means to an end (Fauchart & Gruber, 2011). Missionaries are thus particularly likely to sustain their entrepreneurial efforts despite financial adversities, as nonfinancial goals might be considered more important than financial ones (Austin et al., 2006; Gruber & MacMillan, 2017; Moss et al., 2011). Because of their strong perception of having to accomplish an important mission, missionary founders may therefore continue endowing time and efforts into their venture, even if the odds of establishing a financially viable business are doubtful. From literature we know, however, that individuals who sustain their efforts despite adversities along the way are prone to escalate their commitment to a failing course of action (Staw, 1981). In fact, overly persistent entrepreneurs have been shown to engage in path-dependent behaviors because they feel they have invested too much time or money to back away from their originally taken avenue (Cabral & Ross, 2008). For these entrepreneurs, the willingness to accept a higher expenditure of time can therefore be heightened, as they expect higher benefits in the event of success with their entrepreneurial efforts (Shim & Davidsson, 2018). Our results suggest that launching novel types of ventures – such as in the case of missionary founders who seek to endorse new methods intended to change existing practices (Fauchart & Gruber, 2011) – may not only extend the duration of the venture creation process but also increase the hazard that an operating firm with regular sales will never be reached (Hyytinen et al., 2015; Shim & Davidsson, 2018).

With these findings our study resonates with research that emphasizes the potential shadow side that a prosocial motivation may have in entrepreneurship (Kibler et al., 2019). Prior entrepreneurship

research has primarily highlighted the positive effects of ‘venturing for others’, such as the possibility for the respective entrepreneurs to derive “pro-self benefits” (Miller et al., 2012, p. 631) as part of their efforts. Although our research does not allow to make predictions on the level of individual well-being, it provides some indication that prosocially motivated entrepreneurs may be especially prone to reach a dead end in their entrepreneurial endeavors, where good financial (and nonfinancial) resources are thrown after bad (Sleesman et al., 2012). Specifically, our study provides evidence that missionaries’ efforts are ultimately more probable to merely remain a well-intentioned attempt to make the world “a better place” (Fauchart & Gruber, 2011, p. 952), given that the actual social or environmental impact of the entrepreneurs’ mission is most likely to unfold meaningfully and sustainably only if the venture is successfully established in the market (Dacin et al., 2011; Dacin et al., 2010; Wilson & Post, 2013). While Belz and Binder (2017) point out that sustainable entrepreneurs typically develop their triple bottom line solution successively rather than simultaneously to reduce the complexity of the challenging task, our results highlight that the challenges of establishing a mission-driven venture also entail a high likelihood of no market entry at all.

6.3 Limitations and future research

As all empirical research, this study comes with limitations. First, our study looks at founder social identity. While it seems reasonable that missionary founders also start a mission-driven venture, we do not have any detailed information about the specific mission people want to address with their venture. Secondly, the effects of startup activities on firm emergence were measured by counting the total number of different activities nascent entrepreneurs conducted. While this is common practice in previous entrepreneurship research (Liao et al., 2005; Reynolds & Miller, 1992), it limits the extent to which our results are generalizable as it does not allow for any insights on the quality of conduct (Arenius et al., 2017; Liao & Welsch, 2008). In a robustness test, we consider the time invested in different types of startup activities. Thirdly, in our paper we focus on the strength of

the missionary founder identity on the relationship between startup activities and venture emergence without considering the relative strength of the darwinian and the communitarian founder identity. More specifically, even if scoring high on the missionary founder identity scale, an entrepreneur may also identify with other types of founder identities, leading to a hybrid identity (Sieger et al., 2016). Founders may thus be driven by the perception of social or environmental matters while, at the same time, self-interested objectives or their community might also be important to them when starting their business. It is important to mention that – in a previous version of the paper – we included the strength of the darwinian and the communitarian founder identity as control variables in our models,¹⁰ and received very similar results. We encourage future research with larger samples and refined measurement instruments to take the precise type of business into account and to investigate its effects on the venture creation process of founders with different pure as well as hybrid founder social identities.

7 Implications for founders and policy

Our study has important practical implications. While a broad literature has stressed the importance of taking action and conducting startup activities for ventures to emerge (Müller et al., 2023), our study presents more nuanced insights and recommendations for mission-driven entrepreneurs. First, at the outset, mission-driven entrepreneurs should try to reduce the uncertainty of the viability of their business idea by approaching customers, collecting information about the market potential and about competitors and ideally by testing their idea with a prototype of their product or service. While this recommendation might appear self-evident, mission-driven entrepreneurs are typically driven by the motivation to solve a social or environmental problem (Belz & Binder, 2017; Fauchart & Gruber, 2011; Maaßen & Urbano, 2024), and they should not forget

¹⁰ We removed these variables from the final models because of their low scale reliability (see Table 6).

that they can only create an impact if they find customers for their solution. While it is generally known what customers want in the case of established products and services, mission-driven entrepreneurs first need to verify what exactly customer needs are and how their envisioned product or service should look like, as for example outlined in the Lean Startup approach (Blank & Eckhardt, 2024). In cases where entrepreneurs want to introduce an innovative business model where customer demand is latent or where not demand but other parts of the business model are the key uncertainty, as is frequently the case for mission-driven new ventures, entrepreneurs should try to identify key assumptions underlying their idea and test them early on, as outlined in the theory-and-evidence-based approach (Agarwal et al., 2025). Then, when starting to form the business and convince customers, mission-driven entrepreneurs should be aware that more effort might be required compared to traditional ventures, as stakeholders have to be integrated, and new solutions have to be established. Here, persistence will be required which already links to the third recommendation: mission-driven entrepreneurs should be aware of their higher likelihood to ‘fall in love’ with their idea and to escalate their commitment despite dwindling chances of establishing an operating firm (Staw, 1981). Building on this, policy initiatives that want to foster mission-driven entrepreneurship should, first, support but also require entrepreneurs to provide initial evidence on product-market fit or other key assumptions of their envisioned solution, secondly, support entrepreneurs in the possible lengthy process of setting up operations and convincing customers, but, thirdly, also set clear deadlines to avoid funding projects that might never be able to achieve regular sales. While supporting mission-driven ventures requires a more

long-term perspective than in the case of traditional ventures, milestones should be developed that can demonstrate the progress towards achieving sustained turnover or impact.

8 Conclusion

In this study we use the theoretical lens offered by founder social identity (Fauchart & Gruber, 2011) to gain a better understanding in what way discovery- and exploitation-related startup activities are effective for mission-driven ventures. Our study suggests that mission-driven founders need to prioritize other types of startup activities than founders which a less pronounced missionary identity. While persistence is required for establishing a mission-driven venture, founders should be cautious about an excessive commitment to unviable ideas. Our research contributes to sustainable entrepreneurship as well as nascent entrepreneurship literature. Specifically, by focusing on the very early-stage of a broad spectrum of venturing efforts, our research contributes to a better understanding of the everyday aspects of mission-driven entrepreneurship.

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Declarations

Competing interests The authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix

Table 6 The construct of founder social identity, corresponding measurement items and Cronbach's alpha

Founder social identity construct	Items	Cronbach's alpha
	<i>Please indicate your level of agreement with the following statements (1 = strongly disagree, 5 = strongly agree):</i>	
Missionary	I am creating my firm in order to play a proactive role in changing how the world operates	0.86
	As a firm founder, it is very important to me to contribute to make the world a better place	
	When managing my firm, it will be very important to me to focus on what the firm is able to achieve for society at large	
Communitarian	I am creating my firm in order to solve a special problem of a group of people that I strongly identify with	0.67
	As a firm founder, it is very important to me to provide a product/service that is useful to a group of people I strongly identify with	
	When managing my firm, it will be very important to me to have a strong focus on the group of people that I strongly identify with	
Darwinian	As a firm founder, it is very important to me to operate my firm on the basis of solid management practice	0.26*
	When managing my firm, it will be very important to me to perform better than the competitors	

*Since only two items were used to measure the Darwinian founder identity, reverting to Cronbach's alpha is not very informative. Note that the Communitarian and Darwinian founder identity are not used in our models. Excluding these two variables from the model(s) gives the same results as including them. Finally, from the three social founder identities proposed by Fauchart and Gruber (2011), the Missionary founder identity is the central moderating variable in our models; its respective Cronbach's alpha suggests high reliability

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