

# MISSIONARIES OUTPERFORM IN VENTURE FUNDING

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## ABSTRACT

*While prior research has evidenced the impact of founder social identities on new venture creation, our understanding of how founder identity affects funding performance as a critical determinant for venture success is limited. Given that different identities define various motivational concepts—that is, missionaries increasing benefits for society at large, as opposed to darwinians maximizing economic self-interest and communitarians supporting a particular community—we propose a model for how such founder identity differences relate to ambiguous funding outcomes. Our findings reveal that the missionary founder social identity has a significantly positive impact on funding performance. We discuss our contributions to founder social identity theory and its intersection with behavioral finance.*

## INTRODUCTION

A startup's ability to raise funding is a crucial determinant of success and at the same time reflects the estimated probability of venture success from the perspective of an external party (Davila et al., 2003). The factors that influence funding performance are manifold, with the founder being the central element both in a direct way when raising funds, as well as indirectly in creating operational processes (Baum & Silverman, 2004). Understanding the connection between the founder, with their unique set of motivations to create a venture, and funding performance is critical, as basic motivations capture both the direct founder-related and the indirect business-related characteristics that would suggest different funding outcomes. A robust and well-proven framework in the field of entrepreneurship research that builds upon these basic motivations for founding a venture is the founder social identity.

The concept of founder social identity is based on social identity theory, which was originally developed as a discipline of social psychology (Tajfel, 1972; Tajfel & Turner, 1979; Fauchart and Gruber, 2011). Founder social identities explain the processes of social identification on a personal, institutional, and interactional level in the entrepreneurial context (Fauchart & Gruber, 2011). Prior research has shown how founder social identities affect entrepreneurs' venture strategy (Powell & Baker, 2014), opportunity identification and evaluation (Hoang & Gimeno, 2010), decision-making (Mathias & Williams, 2018), and motivations (e.g., Mmbaga et al., 2020; Sieger et al., 2016; Fauchart & Gruber, 2011; Cardon et al., 2009). Fauchart and Gruber (2011) introduced three clusters of founder social identities: the predominantly profit-driven Darwinian, the peer-group focused communitarian, and the value-oriented missionary identity type (Sieger et al., 2016).

While such prior work has significantly contributed to our understanding of how social identity is related to elements of the venturing process, the effects of identity on funding performance as a major determinant for venture growth has been left unattended (Mmbaga et al., 2020). Although prior studies have shown how a founder's personality and competencies are

Critical elements evaluated by investors such as business angels or venture capitalists (VCs) (Miloud et al., 2012; Huang, 2018), these studies have mainly focused on individual items, leaving out the theoretically overarching perspective of social identity. Prior research has discovered the concept of identities to be more structured and determinate in their relation to venturing than a summation of other characteristics (Fauchart & Gruber, 2011; Ko & Kim, 2020), however, there is a gap in our understanding of the relationship between entrepreneurial identities and funding performance. Hence, we assume that funding performance is determined by certain founder identities that provide a good match to what is expected from an investor's perspective.

In this study, we investigate the impact of founder social identities, as classified by Fauchart and Gruber (2011), on funding performance, following a call for research by Fauchart et al. (2019); De la Cruz et al. (2018); Sieger et al. (2016). By bringing together the theory of social identification with funding outcomes and exploring the impact of the prior on the latter, the goal of this study is to contribute to entrepreneurial research by expanding our understanding of the impact of founder identity on venture funding. We tested the underlying assumption that a founder's social identity is an integral determinant of a startup's funding performance with regard to total volume of funding raised and the number of successfully completed financing rounds on a unique sample collected for the purpose of this study. Our results suggest that missionary identities have an advantage in fundraising, which we explain by the higher innovativeness of their business concepts that oftentimes incorporate a multi-stakeholder approach. Our study makes two important contributions:

First, our results contribute to the theory of founder social identities. According to Fauchart and Gruber's (2011) classifications, darwinians, based on their entrepreneurial logic, are primarily self-oriented and try to maximize economic outcomes for themselves. Acting in professional ways, outperforming competitors, increasing efficiency, and safeguarding financial gains are of high priority for this social identity type (Fauchart & Gruber, 2011; Sieger et al., 2016). Contrary to the implication of the theory that darwinians should achieve superior funding performance to maximize their venture value, our findings suggest that missionaries, driven by the desire to disrupt processes and market logics and the creation of added value to contribute to society in the long-term, seem to encompass extraordinarily comprehensive business concepts, achieving equal levels of funding. Yet, communitarians lag behind according to our results, which we attribute to focusing too strongly on the initial market represented by their peer group instead of incorporating a broader view into the configuration of business models, as missionaries do.

Second, while some researchers highlight the impact of certain behavioral patterns on external financing outcomes (Balachandra et al., 2019), insights into the relationship between founder identities and the acquisition of funding are absent. However, the willingness of investors to allocate resources to a startup is indicative of their perception of the probability of success (Navis & Glynn, 2011). Bearing in mind that the founder constitutes the most formative power in the development of a new venture and represents the factor most critical to success (Miettinen & Littunen, 2013), the personality and capability of the founder constitute some of the most important determinants of a third party's decision to invest (Bernstein et al., 2017; Clark, 2008; Baum & Silverman, 2004; Zacharakis & Meyer, 2000). We increase our understanding of the impact of founder characteristics and basic motivations from an overarching standpoint at the intersection of behavioral finance in entrepreneurship by investigating how founder identities are a determinant of success and how they relate to different funding performances.

## THEORY AND HYPOTHESES

When investors assess and select startups, the characteristics and personality of a founder are important decision criteria, especially because investors associate different probabilities of venture prosperity with different motives, behaviors, and attitudes—thereby implicitly building a bridge toward social identities (Bernstein et al., 2017). Investors prefer certain startups over others based on their chances of success (Groh, 2012). The amount of capital they are willing to invest reflects their level of belief in success. The better the prospects of success of a start-up seem to be to an investor, the more lucrative the business case appears to him/her and the more money in an extended number of funding rounds he/she is willing to invest. The personality of a founder is a crucial factor from an investor's perspective when assessing the prospect of success (Yung, 2012). This holds true for traditional, pure profit-oriented investors, as well as impact investors who focus on purpose-driven investment opportunities (Murnieks et al., 2015).

Research has shown that darwinians are the most prevalent identity group among founders (Gruber & Fauchart, 2006). Acknowledging that professional investors, such as business angels and VCs, in many cases have an entrepreneurial background as well (Prowse, 1998; Morrissette, 2007), it can be expected that the darwinian identity is the most common identity among investors. Research from psychology has shown that a person attributes a higher degree of competency to another individual whenever the two are more alike (Byrne et al., 1986; Byrne, 1971). According to similarity attraction theory by Byrne (1971), darwinians might perform better in attracting investors and on average receive better ratings, as they show certain similarities to the investors who are assessing them, resulting in higher success rates in raising external capital, as investors would automatically ascribe more competency and higher performance outcomes to them. Independently of outcomes caused by mechanisms related to the similarity attraction paradigm, darwinians are likely to be the preferred choice of investors because of their pronounced profit and growth orientation.

Darwinians make decisions based on the classic business approach, which involves the conscious choice of markets based on their competitive characteristics and, within a market, the aim to differentiate from competitors and to maximize profit (Sieger et al., 2016; Parker, 2009). Furthermore, founders who follow an expected business strategy are likely to foster growth in profitability by a strategically intended and oftentimes well-coordinated growth in revenue, resulting in economies of scale (Roth, 1992; Markman & Gartner, 2002). Investors who are seeking ambitious growth rates, scalability, and sound prospects for profitability are more likely to prefer founders that share these competitive ambitions and similar motivations (Smith, 2012; Brettel, 2003; Paul et al., 2003), in comparison with other entrepreneurs who may only have the aim to contribute to an ex-ante limited group of peers. Prior research has proven a significant effect of the darwinian founder social identity on overall business performance (De la Cruz et al., 2018). Moreover, in addition to effectively setting more ambitious goals, these are also communicated more competitively by darwinians, and this is assumed to have an additional positive effect on investors. As the completion of financing rounds has been commonly coupled with the achievement of specific benchmarks in the past, the strict business -approach pursued by darwinians is likely to positively influence both the overall funding volume as well as the absolute number of funding rounds completed.

While communitarians do not attach the highest priority to economic motives, they focus on the needs of a clearly defined community and aim at delivering a maximum amount of value to this target group (De la Cruz et al., 2018). Prior research has shown that the prototypical

communitarian business strategy is strongly associated with increased levels of innovativeness (Fauchart & Gruber, 2011; Sieger et al., 2016). It has been proven that greater degrees of innovation drive both risk and profitability (Sapienza & Grimm, 1997; Cho & Pucik, 2005). This pronounced orientation towards innovation could also attract traditional, non-industry-affiliated investors who express a lower risk aversion and focus their attention on the related upside potential, e.g., rolling out an innovation to additional target markets beyond the initial scale (Nanda & Rhodes-Kropf, 2013). The high level of innovation likely makes ventures founded by communitarians an attractive investment object for less risk-averse traditional investors. Additionally, communitarians may be the preferred choice of investors with a connection to their specific industry of operation. When doing fundraising, communitarian founders may pursue a niche strategy by addressing investors with this kind of industry connection. Missionaries are more likely to engage in socially motivated businesses than darwinians or communitarians (Ko & Kim, 2020).

A missionary's primary goal is not to maximize his/her own wealth but to have a positive impact on his/her environment or society as a whole (Fauchart & Gruber, 2011). Even though the overall business might be run for profit, a pure profit orientation becomes less important. Moreover, missionaries do not profit from large community benefits as do communitarians, and therefore they need to pursue marketing activities to compensate for the lack of demand that naturally exists for communitarians (Sieger et al. 2016; Fauchart & Gruber, 2011). With their marketing spending being far below the Darwinian average, as shown by Fauchart and Gruber (2016), however, it is unlikely for missionaries to achieve sufficiently rapid growth rates to attain significant economies of scale. As the vast majority of investors seek to realize substantial financial gains (Brettel, 2003; Paul et al., 2003), founders with a different set of priorities may face hardship in convincing traditional investors of the merit of their socially oriented business approach.

Especially for institutional investors such as venture capital firms who, in terms of the total annual funding volume, provide the largest amount of investment to the overall funding market (Wijngaarde et al., 2018; EBAN, 2019), the prospective internal rate of return of the investment ranks highest, whereas altruistic or purely socially oriented considerations only play a subordinate role in the decision-making process. It can be assumed that this results in a reduced attractiveness of startups founded by missionaries to the majority of investors, which in turn has a negative impact on the overall financing volume raised by missionaries.

*H<sub>1</sub>: Founders with a darwinian social identity exhibit better funding performance than founders with a missionary social identity.*

*H<sub>2</sub>: Founders with a communitarian social identity exhibit better funding performance than founders with a missionary social identity.*

## METHOD

### Data Collection

The sample for the purpose of this study was created based on a filtered company search of the database Crunchbase. Referring to prior studies, Crunchbase provides consolidated and industry-agnostic company data from both self-reporting and publicly available sources, and it has been used as a reliable source of new venture performance data and for funding data in particular

(Kanze et al., 2018; Croce et al., 2018; Alexy et al., 2012; Jin et al., 2017; Block & Sandner, 2009). The companies captured in our study were founded between 2015 and 2020 and had their headquarters in Germany, Austria, or Switzerland. We included ventures from all industries captured by Crunchbase, incl. tech- and non-tech companies, to prevent for selection-based industry biases and obtain a cross-industry data set with a high degree of generalizability. We created four randomly selected and equally distributed samples with a Mersenne Twister algorithm (MT19937), resulting in a pre-sample cluster of 940 startups from Crunchbase, which were contacted by us. For each of these ventures, we identified the respective founders based on the data available in Crunchbase, LinkedIn, press articles, and the startups' own online presences. The information was cross-validated to identify the relevant contact persons with certainty.

In a next step, we sent out a survey (see our Appendix) via mail to the founders in a clustered structure: founders of our pre-sample 1 received our mail in August 2020, of pre-sample 2 in September 2020, of pre-sample 3 in October 2020, and of pre-sample 4 in December 2020 to correct for date-dependent factors. All entrepreneurs who did not respond to the first request received a follow-up mail. In total, 1,987 individual founders were contacted. All ventures with at least one completed founder survey were included in our final sample. Furthermore, only those responses were counted for which all the questions relating to control variables were fully answered. Following this approach, the final sample of this study consisted of 121 founders from 115 startups.

To correct for and prevent a non-response bias, we compared the proportions of the identity groups between early, middle, and late respondents of our survey, as late respondents show greater similarity to non-responders than did early participants (Kypri et al., 2011). We could not identify a significant difference between these respondent clusters, and therefore we concluded that non-response bias did not affect our results. Further, as performance data were assessed with the individual founder identity group in mind, the effective proportion of the identity groups relative to the sample size is not likely to impact the outcome of the hypotheses to be tested. Hence, our sample size of 121 participants with a representative spread of multiple industries and technological development stages meets the requirements to run an OLS regression analysis based on cross-sectional data (Kennedy, 2008; Asteriou & Hall, 2016).

Concerning the collection of data on startup funding performance, the preliminary data set was retrieved from Crunchbase and the corporate performance database Orbis in July 2020; both databases are trustful and suitable sources for scientific purposes, as their widespread use in previous studies indicates (Kanze et al., 2018; Croce et al., 2018; Alexy et al., 2012; Block & Wagner, 2010). In September and November 2020, the basic data set was updated for all firm profiles for which financing transactions had taken place in the meantime. The total sample of our study comprised 306 separate funding rounds and a total funding volume of USD 815.89 million. The time frame for the recorded financing rounds is between 2015 and 2020. This long-term perspective enables us to level out economic fluctuations that might have had an impact on the capital market and the availability of external funding over the course of time, as well as to track financing rounds for different startup development stages.

The industry tendencies for higher or lower funding volumes that could skew the analysis of the primary identity-funding performance relationship in this study were managed using two measures: first, the startups for the data set were selected industry-agnostically from a general company database. This minimizes the potentially disturbing effects of a sample-related selection bias. Another measure for circumventing the latter was to intentionally not include any additional filters in our initial startup search. The final set of startups reflects a distribution across different

industries representing the overall startup ecosystem in the three German-speaking countries (Steigertahl & Mauer, 2018). Second, in accordance with the approach of several recent papers that focused on startup performance, we included an industry focus as a control variable in our models (Brändle et al., 2018; Bradley et al., 2011). As the three social identity groups in our sample express a similar spread concerning venture age and industry focus, the total amount of capital raised and the total number of successfully completed financing rounds is suitable for a cross-sectional examination.

## Measures

### Independent variables:

Founder social identity was applied as the independent variable. To determine the respective identity type on a personal level, we used the 15-item scale developed and evaluated by Sieger et al. (2016). To operationalize these qualitative clusters for our model, we translated the founder social identity variable into an ordinal independent variable with one value for every identity type and another value indicating the equally distributed mixed type. That is, whenever a founder expressed an identity in a pure format or in cases where a specific identity was expressed by more than 66 % based on the decoded answers, the founder was labeled to be predominantly a representative of the respective identity. Respondents who showed elements of all three identities in equal parts were labeled as “MIX” types.

We additionally operationalized the founder social identity as a system of binary variables. For every identity type, founder profiles were coded with either “1” (if the blended identity corresponded to the examined identity type) or “0” (if the blended identity corresponded to any of the clusters except the identity type examined). This allowed us to observe the individual identities both together in a merged analysis as well as independently of each other in relation to the two dependent variables.

### Dependent variables:

Fundraising performance was captured with two items that both measured in absolute values: total amount of capital raised and total number of funding rounds completed. In prior studies, these two measures have been widely applied (Kanze et al., 2018; Nanda & Rhodes-Kropf, 2013; Alexy et al., 2012; Davila et al., 2003). The dependent variable total amount of capital raised describes the cumulative volume of external financing that has been acquired by the startup over its lifetime. In our sample, the total amount of capital raised was listed in USD. The dependent variable total number of funding rounds completed captures the number of individual funding rounds that have been closed by the startup.

To determine a company’s fundraising performance, the simultaneous examination of these two variables is suitable, as they encompass both the frequency of financing activities (number of successfully completed financing rounds, standardized over the lifetime of the venture) as well as the total volume of these funding endeavors (Nanda & Rhodes-Kropf, 2013). In addition, the amount of capital invested by external investors not only reflects their expectation of success (Brandner et al., 2002), but at the same time has a positive effect on the venture’s probability of success and above-average business performance (Cooper et al., 1994; Song et al., 2008; Lussier & Halabi, 2010).

### Control variables:

We controlled for several factors in our models. We applied industry focus to represent the market segment the startup is operating in as a control variable to adjust for industry-specific factors that have an influence on overall funding performance (Brändle et al., 2018; Bradley et al., 2011). Industry focus was coded as an ordinal independent variable. The eight most represented industries were clustered in separate groups: FinTech/InsurTech, HealthCare/MedTech, Data Security, Energy and CleanTech, Recruiting, Robotics, Information Technology, FoodTech. The remaining industries were aggregated in an additional group, others.

Furthermore, we utilized company age in line with prior studies because more mature ventures tend to have easier and more extensive access to financial resources than younger ones (Kanze et al., 2018; Bradley et al., 2011; Baum and Locke, 2004; Venkataraman et al., 1990). We included founder age as a metrically scaled control variable at the individual level, which is in line with prior research (Brändle et al., 2018; Mueller et al., 2017). By controlling for age, we also included the implicit attribution effects of prior industry and entrepreneurial experiences (Mueller et al., 2017). Nationality, coded as a nominal item, was used to control for factors that could be caused by founders not being native in the country of observation.

## RESULTS

### Descriptive Statistics

To assess whether the values of the two dependent variables followed a normally distributed function, a Shapiro–Wilk test was conducted (Kennedy, 2008). For both variables, the p-values were lower than 0.05, which implies that the assumption of a normal distribution does not hold. To approximate normality, we applied a square root transformation to the variable for total number of financing rounds, as well as a logarithmic transformation to the total amount of capital raised.

To examine the potential correlations between the dependent variables and the respective control variables, we ran a Spearman's Rho test to identify potential linear relationships. The strongest degree of correlation could be detected between the number of financing rounds and the age of the startup ( $\rho = 0.2754$ ), and founder nationality ( $\rho = 0.1398$ ). For the total amount of capital raised, the strongest linkage was to company age ( $\rho = 0.2568$ ), as well as to the level of founder education ( $\rho = 0.1064$ ). When considering the control variables in relation to each other, the strongest correlations occurred between founder age and the startup's industry focus ( $\rho = -0.1972$ ) and between founder age and their level of education ( $\rho = 0.2417$ ). These results are similar to the outcomes of a Pearson's R test. For the independent variable and the control variables, the results of the correlation analysis did not indicate any potentially distorting relationship.

Further, we conducted a Wilcoxon-rank sum test to examine the differences in the dependent variable between two sample groups (Asteriou & Hall, 2016). Except for the darwinian type ( $p_{\text{Darwinian}} = 0.7331$ ), all identities range in a 90 % confidence interval with regard to the total number of funding rounds ( $p_{\text{Missionary}} = 0.0819$ ,  $p_{\text{Communitarian}} = 0.0798$ ,  $p_{\text{Mixed}} = 0.0818$ ). For the total amount of capital, only the communitarian type indicates a significant difference ( $p_{\text{Communitarian}} = 0.0554$ ,  $p_{\text{Missionary}} = 0.2924$ ,  $p_{\text{Darwinian}} = 0.9527$ ,  $p_{\text{Mixed}} = 0.2924$ ). Table 1 presents our descriptive analysis.

Table 1 DESCRIPTIVE STATISTICS											
Variables	Operationalization	Descriptive statistics									
		Mean	SD	Min	Max	p-value (ANOVA)*					
<b>Dependent variables</b>											
Total amount of capital raised	Natural logarithm of the aggregated funding volume measured in USD raised by the respective venture over its so far lifetime	13.58	2.17	8.68	19.59	0.0021					
Total number of funding rounds completed	Square root transformation of the absolute number of funding rounds successfully closed by the respective venture over its so far lifetime	1.49	0.56	1	3.61	0.0112					
<b>Independent variables</b>											
Founder social identity	Darwinian identity: profit driven entrepreneurial type	0.17	0.37	0	1						
	Communitarian identity: peer group driven entrepreneurial type	0.31	0.46	0	1						
	Missionary identity: impact and value driven entrepreneurial type	0.41	0.49	0	1						
<b>Control variables</b>											
Company age	Age of the respective venture at the time of sample completion (February 2021)	3.94	1.49	1	6	0.0152					
Industry sector	Industry sector with the main operational focus					0.0017					
Founder age	Age of the founder at the time of sample completion (February 2021)	39.2	10.24	24	71	0.0028					
Nationality of founder	Nationality of the founder					0.0108					
*ANOVA was performed based on total amount of capital raised as the dependent variable to assess the overall impact of the factor Founder Social Identity in its aggregated format (the independent variable) on funding volumes. It has been included the global set of control variables (company age, industry focus, nationality of founder, founder age) following Model I and II.											
<b>DESCRIPTIVE STATISTICS</b>											
		1	2	3	4	5	6	7	9	10	11
<b>Dependent variables</b>											
1	Total amount of funding raised	1									
2	Total number of funding rounds completed	0	1								
<b>Independent variable: Founder social identity</b>											
3	Darwinian identity	-0	0.01	1							
4	Communitarian identity	-0	-0.17	-0.3	1						
5	Missionary identity	0	0.1	-0.4	-0.57	1					
<b>Control variables</b>											
6	Company age	0	0.26	-0	-0.07	0.04	1				



7	Industry sector	0	-0.09	0.12	-0.07	0.1		1		
8	Founder age	-0	0.1	-0.1	0.11	-0.07	0	-0		
9	Nationality of founder	0	-0.09	-0.2	-0.07	0.12	0	-0	1	
10	Gender of founder	-0	0	0.07	-0.01	-0.11	0	0	-0.1	1
11	Education of founder	0	0.11	-0.1	0.03	0.05		0	0.17	0.04

## Impact of Founder Social Identities on Number of Funding Rounds

To analyze the impact of founder social identity on the total number of funding rounds, a linear OLS regression was conducted (Kennedy, 2008). Every individual founder observed was matched with the corresponding data set of his/her venture. We tested the impact of founder social identities on the total number of funding rounds by running a linear OLS regression with the inclusion of robust standard error estimates and by controlling for company age (logarithmic transformation), industry focus, founder nationality, and the age of the founder ( $p_{\text{Model I}} = 0.000$ ;  $R^2_{\text{Model I}} = 0.2825$ ). Testing for collinearity, the variable inflation factors of the independent variable ranged from 1.25 to 1.38. For the control variables, similar ranges between 1.13 and 4.14 resulted in a mean variance inflation factor of 1.86. With averaged variance inflation factor and all individual absolute values being far below an accepted maximum value of 10, the assumption of collinearity between the variables can be rejected (Belsley et al., 1980; Robinson & Schumacker, 2009).

Our model shows evidence of a significant effect of the communitarian identity of closing fewer financing rounds on average than the missionary identity type ( $b_{\text{Communitarian}} = -0.2217$ ,  $SE_{\text{Communitarian}} = 0.1092$ ,  $p_{\text{Communitarian}} = 0.045$ ). No significant effect is indicated for the darwinian or mixed identity compared with the missionary identity ( $p_{\text{Darwinian}} = 0.975$ ,  $p_{\text{Mixed}} = 0.248$ ). However, our model indicates negative tendencies in the model coefficients, although insignificant. Table 2 illustrates our results.

	Total number of funding rounds completed			Total amount of capital raised	
Model	I			II	
Description	OLS regression analysis, based on the square root transformation of the DV.			OLS regression analysis, based on the natural logarithm of the DV	
Variables	Coeff.	(SE, p-value)	Coeff.	(SE, p-value)	
<b>Founder social identities</b>					
Missionary	0	(base)	0	(base)	
Communitarian	-0.222	(0.109, 0.045)	-1.075	(0.461, 0.022)	
Darwinian	-0.005	(0.170, 0.975)	-0.517	(0.599, 0.390)	
Mixed	-0.2	(0.172, 0.248)	0.296	(0.557, 0.596)	
<b>Controls</b>					
Company age	0.292	(0.099, 0.004)	0.814	(0.452, 0.074)	
Age of founder	-0.001	(0.006, 0.818)	0.057	(0.023, 0.014)	
<b>Industry focus</b>					
FinTech, InsurTech	0	(base)	0	(base)	
Health Care, MedTech	0.096	(0.179, 0.592)	-1.973	(1.002, 0.052)	
Data Security	-0.473	(0.185, 0.012)	-2.146	(1.065, 0.047)	
Energy and CleanTech	0.144	(0.318, 0.652)	-2.475	(1.071, 0.023)	

Recruiting	-0.119	(0.155, 0.446)	-3.967	(1.041, 0.000)
Robotics	0.305	(0.217, 0.164)	-1.723	(1.199, 0.154)
Information Technology	0.067	(0.232, 0.772)	-1.677	(1.017, 0.102)
FoodTech	0.051	(0.218, 0.815)	-1.824	(1.363, 0.184)
Other	0.009	(0.151, 0.953)	-2.219	(0.913, 0.017)
<b>Nationality of founder</b>				
German	0	(base)	0	(base)
Swiss	0.235	(0.133, 0.079)	-1.264	(0.524, 0.018)
Italian	0.663	(0.282, 0.021)	-1.995	(0.852, 0.021)
French	-0.072	(0.142, 0.611)	-1.338	(0.624, 0.034)
Austrian	0.09	(0.113, 0.427)	-0.764	(0.567, 0.181)
Other	-0.248	(0.184, 0.180)	-0.324	(0.699, 0.644)
N		121		121
R2		0.2825		0.267
Root MSE		0.512		2.013
F-statistic (p-value)		8.04 (0.000)		6.30 (0.000)

### Impact of Founder Social Identities on Total Amount Raised

To test the impact of founder social identities on the total amount of capital raised we performed a linear OLS regression ( $p_{\text{Model II}} = 0.000$ ;  $R^2_{\text{Model II}} = 0.2669$ ) based on a logarithmic transformation of the dependent variable, and we included robust standard error estimates. Testing for multicollinearity, the variable inflation factors of the independent variables range between 1.18 and 1.37, and for the control variables range between 1.13 and 4.14, with an overall mean inflation factor of 1.86. We conclude that there is no concern about collinearity between the variables.

Our model outlines a significant effect of the communitarian identity of raising less capital on average than the missionary identity type ( $b_{\text{Communitarian}} = -1.0746$ ,  $SE_{\text{Communitarian}} = 0.4605$ ,  $p_{\text{Communitarian}} = 0.022$ ). The darwinian as well as the mixed identity group have an insignificant effect on total amount raised compared with the missionary identity ( $p_{\text{Darwinian}} = 0.390$ ,  $p_{\text{Mixed}} = 0.596$ ).

After consolidating these results with regard to our hypotheses, we can conclude the following: First, hypothesis 1 stated that founders with a predominantly darwinian social identity exhibit better funding performance than missionaries. Based on the results of model 1 and model 2, hypothesis 1 needs to be rejected. We do not find a significant effect of darwinians showing better funding performance than missionaries. Second, hypothesis 2 stated that founders with a predominantly communitarian social identity exhibit better funding performance than founders with a predominant missionary identity. As the results of model 1 and model 2 indicate, we find that the relationship between communitarian identity and funding performance significantly differs from the relationship between missionary identity and funding performance, but in the direction opposite to that hypothesized. According to our results, communitarians underperform in raising funds as compared with missionaries. Therefore, hypothesis 2 needs to be rejected.

### Additional Analysis

For additional insights, an ANOVA was performed based on the total amount of capital raised, examining statistically significant differences in the means (Rutherford, 2001). Before including the control variables, we conducted Bartlett's test for equal variance. Bartlett's test, based on a logarithmic transformation of the dependent variable, shows a non-significant result, which indicates that there are equal variances between the subgroups of the independent variable, such that conducting an ANOVA is reasonable.

In the ANOVA, we controlled for the same set of control variables as in model 1 and model

2: company age, industry focus, the nationality of the founder, and founder age. After the overall impact of founder social identity on the total amount of capital raised was examined, a significant relationship was proven ( $p_{\text{identity}} = 0.0112$ ;  $p_{\text{Model}} = 0.0021$ ), underscoring the significances observed in the previous OLS regression analyses and the overarching importance and impact of the identity factor on funding performance.

To verify that the control variables included in our final models are the most robust and relevant to the purpose of our study, we tested model 1 and model 2 with alternative sets of control variables. We extended our main set of control variables by two more founder-related variables: gender of founder, and highest degree of education of the founder. In doing so, the overall explanatory power of the model decreases whereas no significant new insights can be generated for both dependent variables examined.

## DISCUSSION

Our study shows that there is a significant effect of founder social identity on their venture's performance in raising external financial resources. This significant relationship can be proven for the overall framework of founder social identity as well as for the communitarian founder social identity group vis-a-vis missionaries. Prior studies have tested the effect of founder social identities on general venture performance moderated by entrepreneurial orientation (Brändel et al., 2018), as well as by effectuation (De la Cruz et al., 2017), building upon an emerging stream of research about founder social identities (Mmbaga et al., 2020; Ko & Kim, 2020; Sieger et al., 2016; Fauchart & Gruber, 2011). Collaterally, there is an intensified focus in research on understanding the determinants of startup funding performance (Balachandra et al., 2019; Kanze et al., 2018; Islam et al., 2018; Alexy et al., 2012), notwithstanding the widely demonstrated importance of startup funding on subsequent venture development paths (Cooper et al., 1994; Song et al., 2008; Lussier & Halabi, 2010). Our study identifies that with regard to the total amount of successfully completed funding rounds as well as the total amount of capital raised, founders with a predominantly missionary identity perform significantly better than communitarian founders, which is counterintuitive to the initially developed hypotheses. This may imply that either the organizational setup of missionary ventures is different from what has been derived from the existing literature so far, so that investors could consider factors going beyond the aspects included in the existing empirically acknowledged assumptions that they base their investment decisions on, or that both factors have an influence on the final result.

It has been argued that communitarians create added value by focusing on a clearly defined target group, and thereby attain above-average levels of innovation (Fauchart & Gruber, 2011; Sieger et al., 2016; De la Cruz et al., 2018). Furthermore, it has been reasoned that the social motives ingrained by missionaries in their venture discourage profit-driven investors from investing and therefore have a negative effect on funding performance (Brettel, 2003; Paul et al., 2003).

Based on the empirical evidence, we conclude that fewer professional investors than expected are discouraged by the social motives of a missionary founder and may, in addition to seeking financial return, also acknowledge the added value of having a social or ecological impact, appreciating this can be a strong driver in the process of creating novel and disruptive solutions (Altuna et al., 2015). Furthermore, innovation created by a missionary founded venture is probable to incorporate a multi-stakeholder perspective as this corresponds to the logic of missionaries who target not only a specific peer group, but society as a whole (Murphy et al., 2012; Sieger et al., 2016). This multi-stakeholder perspective is assumed to result in thought-through

business models that not only succeed in delivering value in the short-term as it may be in a primarily profit-driven case, but also entail a long-term multidimensional value perspective which constitutes the source of profit generation in larger time frames. This resonates with evidence that engaging in socially oriented innovation processes has a positive impact on profit expectations (Shaw & De Bruin, 2013), which corresponds to the profit motive of conventionally profit-oriented investors. Even though the absolute level of innovation among missionary-founded ventures in comparison with the communitarian counterpart may be lower (Fauchart & Gruber, 2011; Sieger et al., 2016), it could be regarded as more appealing by investors, because innovation is understood as a socially motivated means to contribute to society as a whole, has been created ex ante for a broader market, and therefore could be likely to address a more extensive market segment. Based on the findings of our study, we identify that, on average, missionaries' exhibit better funding performance than communitarians. It might be the case that due to their holistic perspective—including not only economic aspects, but also the desire to disrupt processes and market logics, and the creation of added value in the long-term—ventures founded by missionaries encompasses extraordinarily sustainable business concepts.

Our results join a growing body of literature that indicates the impact of founder social identities on multiple business processes, strategic decisions, and subsequent outcomes (Brändle et al., 2018; De la Cruz et al., 2018; Fauchart et al., 2019). Founder social identities, with a special emphasis on the missionary group, have a significant impact on the funding performance of newly founded ventures. Considering our findings, it seems necessary to contemplate socially oriented motives in the entrepreneurial context in a different light. In our study, however, we strictly differentiate between ventures founded by missionary entrepreneurs and other identities, and social vs. businesses; with our focus being on the first-mentioned. Ventures founded by a missionary entrepreneur do not equal social businesses per se (Cacciolatti et al., 2020). Missionaries are entrepreneurs running for-profit ventures in the majority of cases: it can be assumed that the financial business success of their startup is seen as a tool to achieve an overarching societal or ecological goal. Our study gives evidence that this approach is perceived by investors as lucrative and value-adding.

## LIMITATIONS AND FURTHER RESEARCH

There are several limitations to this study, which at the same time highlight important opportunities for future research. Firstly, as in prior studies, all information about respective founders' social identities was provided in the form of self-reporting (Brändle et al., 2018; De la Cruz et al., 2018; Sieger et al. 2016). To consolidate our findings, future studies could integrate a survey of core employees or other closely linked stakeholders to verify the social identity extracted from a founder's self-assessment.

Secondly, our study focuses on the level of the individual founder and analyzes teams only as a conglomerate of multiple individual entrepreneurs which constitutes a limitation inherent to the study design. Future research building upon the findings of our recent study could integrate a team-focused perspective to understand how different identity constellation in a venture's core team may further explain funding trajectories.

Thirdly, another limitation in this study that appears to be a fruitful direction for future research is the understanding of the social identity of the investor who commits to the venture. The similarity attraction theorem states that people prefer being surrounded by individuals having characteristics that are similar to their own, and that people who score high on similarity benefit from a tendency towards a more positive evaluation when they are rated (Byrne et al., 1986; Byrne,

1971). The match between values and motivations expressed by the founder and corresponding investor could be another relevant factor influencing the effective funding outcome. Against the neo-classical assumption of the primarily profit-driven investor, analyses of investment motives of startup capital providers reveal that socially and ecologically oriented motives rank higher than initially assumed (Clarkin & Cangioni, 2016). Future studies could build upon this finding by connecting it to the insights of this study to assess whether missionary founders receive more funding because there is the preferential target for investors in general, or in specific for investors with similar social motivations that might be more prevalent as supposed.

Lastly, this study builds upon a limited sample size. Even though our sample size is large enough to meet relevant criteria of validity and generalizability (cf. Bartlett et al., 2001), it could be a future direction for research to expand the data set in order to strengthen our findings, especially in the light of their counterintuitive nature.

## CONCLUSION

Founder social identities have been identified and conceptualized as personality-related patterns that substantiate the underlying motivations of entrepreneurs. This study focused on the impact of founder social identities on funding performance to contribute to a more elaborate understanding of such relationships. In particular, a founder's altruistic motives may not be a disadvantage, which may be contrary to common beliefs about founder-investor expectations. As such, we hope our study sparks more interest in understanding founder-investor expectations from a behavioral finance perspective.

## APPENDIX

### Founder Survey Questionnaire Demographics

1. What is the name of your startup? [open response, alphabetic characters]
2. What is your nationality? (Swiss / German / Austrian / French / Italian / Other (please indicate))[single choice]
3. What is your gender? (Female / Male / Other) [single choice]
4. How old are you? [open response, numeric characters]
5. What is the highest level of education you have completed? (Less than high school degree / High school degree or equivalent / Attended university or college but no degree / Bachelor's degree or equivalent / Master's degree or equivalent / Doctorial (PhD), MBA, or equivalent) [single choice]

### Founder Social Identity (Sieger et al., 2016)

1. I created my firm in order to...(advance my career in the business world/solve a specific problem for a group of people that I strongly identify with (e.g. friends, colleagues, club,community)/play a proactive role in changing how the world operates/play a proactive role in shaping the activities of a group of people I strongly identify with) [single choice]
2. As a firm founder, it is very important to me to... (make the world a "better place" (e.g.by pursuing social justice, protecting the environment)/provide a product/service that is useful to a group of people that I strongly identify with (e.g. friends, colleagues, club, community)/operate my firm on the basis of solid management practices / be a highly responsible citizen of our world/ I have thoroughly analyzed the financial prospects of my business). [Single choice]
3. When managing my firm, it is very important to me to...(support and advance a group of people that I strongly identify with / have a strong focus on what my firm can achieve vis-à-vis the competition / have a strong focus on what the firm is able to achieve for society-at-large/convince others that private firms are indeed able to address the type of societal challenges that my firm addresses (e.g. social justice, environmental protection)/establish a strong competitive advantage and significantly outperform other firms

in my domain/have a strong focus on a group of people that I strongly identify with (e.g. friends, colleagues, club, community). [single choice].

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