

Does writing a business plan still matter for searching and obtaining external equity finance?

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ABSTRACT

This study analyses the importance of business plans for founders and professional equity investors in the process of acquiring venture capital. How do the founders' efforts spent on writing a business plan relate to obtaining the equity funding asked for? Based on a sample of 301 nascent ventures, we first ran a two-step selection model. This quantitative analysis shows that, while a founder's effort to write a business plan positively correlates with the likelihood of the founding team seeking external financing, business plans are no longer a determining factor for actually obtaining external equity funding. Through additional qualitative analysis, we shed light on this finding and point to other tools venture capitalists increasingly use to forecast venture performance, thereby substituting business plans as core documents of venture assessment. Our study thus contributes to a better understanding of new matching tools between entrepreneurs and investors, thereby adding new knowledge to entrepreneurship scholars and policy-makers alike.

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1. Introduction

Business Plan (BP) research has gained prominence ever since the 1970s because BPs have started to be considered a necessary condition for founders of nascent ventures to acquire finance. In line with the long tradition of BP research (e.g., Castrogiovanni 1996; Delmar and Shane 2003; Sexton and Bowman-Upton 1991), we define a BP as the synthetic output of information gathering and analytical distillation process, including the task evaluation, risk identification, strategy building and financial planning of the nascent venture. With all the detailed information it contains (Sahlman 1997), BP soon became a mechanism that allows nascent ventures to present themselves to various stakeholders by documenting how the venture intends to enter the market (Mason and Stark 2004). Thereby, business plans became a practice, an accepted social norm (for a definition of social norms, see Elster 1989), required by investors and then internalized by entrepreneurs.

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To date, the literature on entrepreneurial finance thus broadly agrees that BPs are of fundamental importance to demonstrate the viability of a business idea to potential funders. According to Gumpert (2002), 10 million BPs were written per year in the recent past. This indicates that a significant number of new enterprises were willing to invest parts of their scarce resources into business plan writing. While not all ventures preparing a BP actually approach professional investors to ask for external funding, a considerable share does (e.g., MacMillan, Siegel, and Narasimha 1985; Kirsch, Goldfarb, and Gera 2009).

Similarly, the literature on entrepreneurial finance widely agrees that funders use BPs¹ as a means to assess whether or not nascent ventures promise a (decent) return on investment (Parker and Van Praag 2006). In other words, amongst the criteria upon which investors base their decisions to provide funding to nascent ventures is the existence of a well-structured and comprehensive BP (see Arkebauer 1995; Kuratko and Hodgetts 1998; MacMillan, Siegel, and Narasimha 1985). A BP was found to be the first item that external equity funders requested to entrepreneurs whenever the latter approached the former to secure external financing (Hormozi et al. 2002). While the availability of a BP is generally not linked to the provision of a particular type of entrepreneurial finance, it has been found to be particularly important for providers of external equity finance, i.e., business angels (BAs) and venture capitalists (VCs) alike (Hormozi et al. 2002; Karlsson and Honig 2009). Thereby, several studies argue that external equity financiers, in general, and VCs, in particular, chiefly base their judgments about whether or not to invest in a venture on a BP – with a specific focus on its first few pages (Shepherd and Zacharakis 1999; Zacharakis and Shepherd 2001). Furthermore, Mason and Harrison (1996) report that more than three-quarters of BAs ask for a BP before making any step towards investment decisions. Taken together, the literature on entrepreneurial funding thus describes BP as a sort of “passport” that provides nascent ventures with the chance to “cross the border” and give an excellent first impression (Barrow, Barrow, and Brown 2001; Hormozi et al. 2002; Shepherd and Douglas 1999), especially of the quality of the founding team (Sahlman 1997; Whitehead 2003). The latter is a criterion that has been found to rank particularly high in the eyes of VC funders when selecting which ventures to finance (Barringer and Ireland 2011).

Over the past decade, it is however noteworthy that the tools available to gain insights into future venture performance have notably increased, partly in response to digitalisation, which makes it possible to compare investment opportunities on a large scale. These additional tools include, for example, business model canvas (BMC) (Osterwalder and Pigneur 2010), lean prototyping that asks for “pilot experiments” (i.e., the lean start-up approach of Ries 2011), a short video, or even a PowerPoint presentation (Investintech 2017; Zimmerman 2017).

The validation of the importance of the lean start-up approach(es) and related tools is also evidenced by a recent study by Dushnitsky and Matusik (2019) which looks at new patterns in the field of entrepreneurship. Based on a Google Trends analysis, the authors illustrate that the traditional term “business plan” has dropped in popularity over the past 15 years, being increasingly substituted with terms related to lean start-up methods. Indeed, when extending this insight with Google Trends analyses until 2022, we see that terms coupled with the lean start-up approach according to Ries (2011) (namely *minimum viable product* which represents the creation of a testing product and *pivot*

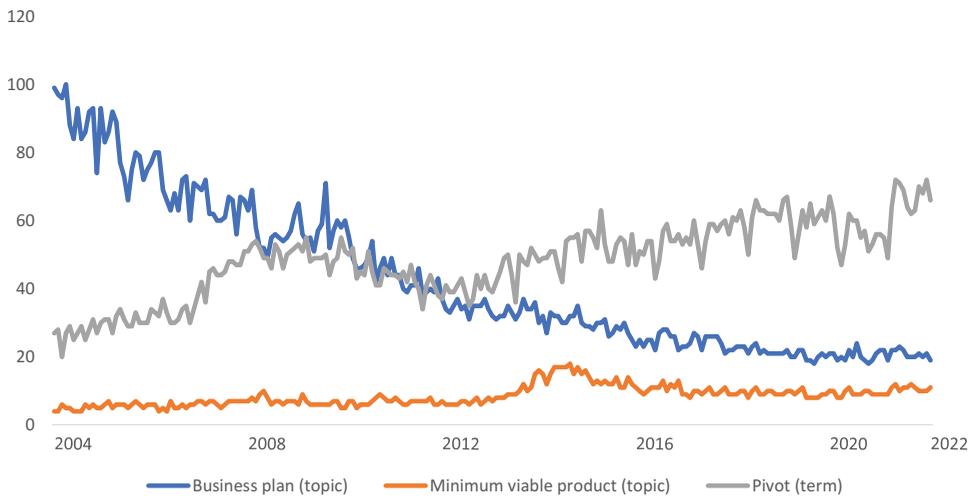


Figure 1. Google Trends report for “business plan”, “minimum viable product” and “pivot”. Legend. Google Trends report of the relative popularity of the three terms: *business plan*, *minimum viable product* and *pivot* in the USA between 2004 to 2022. The relative popularity is measured simply by the absolute number of searches of each item during the investigated period (report produced on 29.11.2022).

referring to a set of actions undertaken to correct/test certain new features of a product), have become equally or even more prominent than *business plan* (see Figure 1).

Without necessarily undermining the potential usefulness of BP for other purposes (Delmar and Shane 2003), the increasing importance of alternative assessment tools of a venture’s potential raises the question of how these alternative tools change the importance of BPs as a means to acquire equity funding. To address this question, we combine quantitative with qualitative evidence. In the first step, we use the “Perfect Timing” database and study 301 nascent ventures with regression analyses in order to assess the extent to which BPs are still used by founders of nascent ventures to apply and obtain external equity funding. In a second step, we provide qualitative evidence gained from overall 8 interviews with founders and funders to gain insights into how important they consider these new assessment tools in relation to BPs.

We find that founders seeking external equity are still significantly more likely to write BPs and dedicate more time to them than founders who do not seek external equity funding. Interestingly, though, neither the writing of a business plan nor the efforts put into writing it, positively influence the chances of actually acquiring external equity funding. The qualitative insights gained explain this phenomenon by showing that founders still perceive BPs as a necessary condition for acquiring external equity funding, whereas funders rather turn to additional and alternative tools in order to assess whether or not to invest in a nascent venture.

The remainder of the study proceeds as follows. Section 2 offers the theoretical framework for answering our research questions. Section 3 illustrates data and methodology for our quantitative and qualitative analyses, while Section 4 uncovers the results. Section 5 is offering a concluding discussion and final remarks.

2. Theoretical framework

Taking an institutional perspective, Scott (2001) established that the legitimacy of a practice inside an organization rests on three pillars: a normative pillar, a regulatory pillar and a cultural-cognitive pillar. In line with Selznick (1957), we here refer to a practice as *normatively* legitimate when it is in line with societal values. Likewise, a practice is legitimate from a *regulatory* perspective when it conforms with a society's formal, i.e., written, rules and laws (North 1990). And a practice is *culturally* legitimate when it is in line with the unwritten, cognitive structures of a society's institutional environment (Meyer and Rowan 1977). Furthermore, Scott (2001) also argues that a practice is more easily adopted when all three pillars are in place. Importantly, though, some practices emerge without conforming to all three aforementioned pillars. In these instances, the early adopters of a new practice might be stigmatized, if that practice gets discredited by other actors (Sutton and Callahan 1987).

From this institutional perspective, a BP is very likely to constitute a practice deemed consistent with the normative, regulatory and the cultural-cognitive pillars of the institutional matrix (North 1990) within which a venture operates. However, the increasing availability of alternative assessment tools to assess a venture's potential, and the fact that these tools are increasingly accepted (Baehr and Loomis 2015; Contigiani and Younghyman 2022; Ghezzi 2019; Silva et al. 2020; Investintech 2017; Williams, Spinuzzi, and Newbold 2020; Zimmerman 2017), are likely to change the role that BPs play in entrepreneurial finance – from the perspective of entrepreneurs and funders alike.

In fact, there is evidence that BPs are considered less important by entrepreneurs as a precondition to apply for external equity funding (Lange et al. 2007), though BPs may still serve as a tool to help founders coordinate the various gestation activities (Delmar and Shane 2003). Furthermore, Ghezzi (2019) finds that entrepreneurs operating in digital sectors adopt alternative practices, such as “lean start-up approaches” (a combination of lean start-up and customer validation), when approaching VCs and BAs for equity funding. Importantly, such alternative practices are pragmatic and allow the testing and validation of business assumptions through iterative communication with potential funders (Blank 2007). Finally, the aforementioned Google Trends analysis by Dushnitsky and Matusik (2019) testifies how “business plans” have dropped in popularity, while alternative practices for presenting the potential of start-ups have increased. Thus, there are hints that BPs could no longer be deemed essential by entrepreneurs in their search for external funding. This leads us to question the well-established finding that the drafting of a BP is positively correlated with seeking (and then obtaining) external equity financing. Accordingly, we ask:

Research Question 1.1.: *Amongst all nascent ventures, are those that have written a business plan more likely to apply for external equity financing than those ventures that have not written a business plan?*

Similarly, the literature teaches us that also funders attribute less importance to BPs as a source of information for evaluating whether, or not, to invest in a nascent venture. For example, already in 2002, Gumpert (2002) called for a mindset change in his book *Burn Your Business Plan*. More specifically, Gumpert perceives investors as the initiators of a change away from the lengthy, traditional business plans, because they are simply

too busy for reading all the detailed BP information. Indeed, the large majority of venture capitalists, investigated in Gumpert's (2002) survey, admitted that a business plan hardly represented a tool that can sufficiently uncover both the current stage and future prospects of nascent ventures with the necessary accuracy. Accordingly, 90% of all respondents challenged the usefulness of BPs as they consider BPs to provide an overly optimistic perspective of nascent ventures. Interestingly, respondents also highlighted that BPs are, by definition, not iterative but, sooner or later, outdated. In line with this criticism, Cars (2017) ironically described BPs as "Pinocchio" documents; likewise, DeNoble and Zoller (2017) refer to BPs as a "pie in the sky" since they are packed with desk research: commonly "overbuilt" and "over-designed" (Blank 2007), thereby hardly exciting the external investors. The latter, in turn, seem to prioritize those applicants who have adopted lean start-up approaches in order to get customer feedbacks on their business ideas instead of relying on second-hand data (Ghezzi 2019) that reduce the plausibility of BPs (DeNoble and Zoller 2017). Taken together, this leads us to question the value of BPs also from the perspective of external equity providers. Accordingly we ask:

Research Question 1.2.: *Amongst all nascent ventures that have applied for external equity financing, are those that have written a business plan more likely to obtain external equity financing?*

On the other hand, an alternative strand of studies on entrepreneurial finance suggests that the wide variety of possible sources of information for assessing the future performance prospects of new enterprises implies that BPs do not lose their importance as a prerequisite for seeking finance, but, rather, need to be written with increasing care and detail to serve this purpose. More specifically, Kirsch, Goldfarb, and Gera (2009) state that, in addition to adequate content, a BP also requires a convincing format and length to meet the expectations of financiers. Obviously, drafting a business plan that is able to address these aspects takes time. Considering the high opportunity cost associated with writing a BP and considering the particular time constraints of business founders who have to give up other valuable activities to develop their new ventures (see Bhide 2000), we expect that founders who invest more time in writing a BP are also more likely to use it as a tool to apply for external funding, rather than as a means to simply organize their own ideas. But since BPs have multiple uses and purposes (Delmar and Shane 2003), this cannot be taken for granted. We therefore formulate:

Research Question 2.1.: *Amongst all nascent ventures that wrote a business plan, are those that invested more time in its writing more likely to apply for external equity financing?*

Finally, it is legitimate to expect that funders will only consider those BPs that are well-written, providing clear and rich details about nascent ventures. Accordingly, it is fair to assume that the quality of the presentation of a BP will likely depend on its thoughtfulness and so ultimately, on the effort and time resources invested by the founders in its writing (Chen, Yao, and Kotha 2009). Scholars have two views on how potential financiers might perceive a BP. The first view looks at the ceremonial function of a BP as an instrument to address the institutional isomorphism adopted by new ventures in order to comply with the existing "standards" (DiMaggio and Powell 1983; Honig and Karlsson 2004; Kirsch, Goldfarb, and Gera 2009). If BPs mostly have a ceremonial function, then the

time dedicated to their preparation by founders is unlikely to influence the investment decisions of external funders.

The second view, by contrast, is theoretically based on the problem of information asymmetries between (prospective) investors and entrepreneurs (Gompers and Lerner 1999) and the entrepreneurs' willingness to reduce this asymmetric information. This, in turn, leads entrepreneurs to decide carefully about the information that they choose to include in a BP in order to present their venture as a promising start-up (Connelly et al. 2011; Feeney, Haines, and Riding 1999). In short, entrepreneurs who choose to reduce information asymmetries tend to use BPs primarily as communicative documents (Kirsch, Goldfarb, and Gera 2009). If BPs indeed serve as instruments that facilitate the decision-making process of external finance providers, then funders can be expected to provide financing to those nascent ventures that are willing to be less opaque (i.e., disclose more information) and, presumably, invest more time in writing a BP. We investigate these two alternative views by posing the following question:

Research Question 2.2.: *Amongst all nascent ventures that wrote a business plan and have applied for external equity financing, are those that invested more time in its writing more likely to get external equity financing?*

3. Methodology

To shed light on these research questions, we proceed in two steps, developing an explanatory sequential mixed-method design approach (Creswell 2003). In a first step, we investigate questions 1.1. to 2.2. with the help of quantitative regression analyses. Then, to provide a better understanding of these quantitative results, we conduct in-depth qualitative interviews to uncover the underlying causalities with the help of systematic case comparisons.

3.1. Data sources

3.1.1. The perfect timing dataset

The quantitative regression analyses of the first step are based on the Perfect Timing database, which, to date, constitutes one of the most complete and reliable databases on the start-up processes of nascent ventures (FIRES 2018). Thanks to its fine-grained, over-time information on venture creation processes, the Perfect Timing database is increasingly used – *inter alia* to investigate processes of team formation, of product development, and of entire venture creation pathways, and to make cross-country comparisons of venture innovativeness (Bijedić et al. 2020; Held, Herrmann, and van Mossel 2018; Held, Herrmann, and Polzin 2020; Herrmann, Storz, and Held 2022). Data on 871 start-up processes (and the activities undertaken each month to build-up the venture's human, financial, and knowledge resources), were collected with the help of computer-assisted telephone interviews with venture founders. To be considered for an interview, founders needed to have registered their start-up in technology-driven sectors, namely an alternative-energy (AE) or information technology (IT) venture between 2004–2014. The focus on these industries offers a particular advantage for our study, because both AE and IT ventures

have been found to be in particular need of and/or attract large VC funding (Wüstenhagen and Teppo 2006).

Also due to the fact that nascent ventures have been randomly sampled, the Perfect Timing dataset is deemed to offer a sufficiently good representation of the broader venture population in the respective industries and countries (e.g., Held, Herrmann, and van Mossel 2018; Held, Herrmann, and Polzin 2020; Herrmann 2019). Differently from other studies on “business planning” which focus on a single institutional context (e.g., Gruber 2007), the broader coverage of the Perfect Timing dataset increases the external validity of the resulting findings, because it allows us to assess the importance of BPs for new ventures, at a broader geographical level, by also including ventures founded under very different institutional circumstances. As such, our sample consists of new ventures created in bank-based economies such as Germany, Italy, as well as in more liberal economies, namely the United Kingdom (UK) and the United States (USA) (see Table 1).

As a further strength, while many datasets used in entrepreneurship studies often consider data at a single point in time, the Perfect Timing dataset was collected in two waves between 2011 and 2018, offering a unique opportunity to cross-check the validity of the information provided over time. Finally note, that out of the 871 startups included in the Perfect Timing dataset, 301 ventures have the necessary information on all variables of interest for our study, and therefore were included in the quantitative analyses.

3.1.2. *The data collected via interviews*

To explore the causalities underlying the quantitative analyses of step one (in line with Creswell 2008), eight in-depth interviews with founders and investors were conducted in the second step in order to gain a deeper understanding of the relevance of BPs in the eyes of entrepreneurs and financiers. To this end, we followed an explanatory sequential form of a mixed-method study, whereby we used our prior quantitative data as a basis for the qualitative inquiry (see also Cameron 2009). More specifically, we arranged online and in-person meetings with six entrepreneurs and two investors (mostly from the observed countries)² with whom we conducted semi-structured interviews³ (Merton and Kendall 1946; Richards and Morse 2012). The objective was to gain insight into the interviewees’ experience with BPs, their views on the use of BPs, and how the importance of BPs as a valuation tool may have changed over the past ten years. The fact that we interviewed both investors and entrepreneurs provided a comprehensive view of the use and usefulness of BP preparation, and its changing role, in obtaining external equity financing, thus increasing the internal validity of our analyses (Yin 2003). On average, the interviews lasted 60

Table 1. Geographical distribution of the sample of startups.

Country	No. of startups	% of startups
Germany	100	33.23
Italy	64	21.26
UK	73	24.25
USA	64	21.26
Total	301	100.00

Table 2. Details on the interviewees (Map of informants).

Informant/ interviewee (Initials only)	Country of operation	E (if an entrepreneur) I (if an investor/position held) No. 1–6 – identification numbers (see also Table 5)	Role in the research	Implication for the research
A.L.	US	E 1; CEO	Key informant who has been involved in entrepreneurial activities and who continuously asked for external funding	Expected to provide details about his/her experience with writing business plans; his/her opinion on the question whether business plans matter or not; if not, expected to justify it, provide examples of other means that facilitate the matching between entrepreneurs and investors.
M.C.	US	E 2; CEO	Key informant who has been involved in B series of external funding.	As above.
E.G.	IT	E 3; CEO	Key informant as a serial entrepreneur aiming to obtain external funding.	As above.
A.B.	GER	E 4; CEO	Key informant from his entrepreneurial background.	As above.
A.S.	GER	E5; CEO	Key informant who has been involved in A series of external funding.	As above.
J. W.	GER	E6; CEO	Key informant from his entrepreneurial background and his involvement in B series of external funding.	As above.
F. K.	AU	I 1; Serial entrepreneur, Fundraising expert (3 times fundraiser), investor	Key informant who has been a fundraiser three times and who is now a VC investor.	As above and below.
A.G.	CH	I 2; Head of finance and deals	Key informant who has been working in a venture capital company for 15 years.	Expected to provide details on how much external equity investors are interested and require start-ups to provide business plans; expected to mention what are the tools that may have replaced business plans, in case that they oppose the selection through business plans.

minutes, were performed face-to-face, recorded digitally and then transcribed. Table 2 provides an overview of the details on the interviewed informants.

3.2. Analytical approach

3.2.1. The regression model(s)

In the first quantitative part of the study, we are interested in testing the relevance of BP preparation for start-ups in both seeking and obtaining external equity investments while

controlling for potential unobserved heterogeneity that may affect these two events. Therefore, we applied the method used by Bertoni, D'Adda, and Grilli (2019), who address a similar concern by employing a probit model with sample selection (i.e., a Heckman two-step probit model). In our case, the first equation models a venture's likelihood of seeking for external equity finance, either BA or VC, while the second equation determines the venture's probability of receiving external equity financing. Both equations are estimated simultaneously using maximum likelihood. We included several independent variables that control for the characteristics of founders and ventures, as well as other context-related covariates. These controls include human capital variables (founders' education and work experience), founders' motivations, the founding team's size (used as an exclusion restriction, e.g., Bertoni, D'Adda, and Grilli 2019; Hsu 2004; Sørensen 2007), the ventures' rate of innovativeness, as well as the dummy that captures whether a venture operates in the ICT sector or not.

3.2.2. Combining grounded theory coding with qualitative comparative case studies

Turning to the qualitative analysis, to analyse the data from the interviews collected, we first coded the interview material following the grounded theory approach of Glaser and Strauss (1967; see also Strauss and Corbin 1998), and then systematically compared the information obtained across cases in line with the case study approach of Eisenhardt (1989). A grounded theory approach was the most useful first step of our qualitative analyses in order to classify the empirical raw material into different dimensions through open coding, axial coding, and selective coding (Glaser and Strauss 1967). In a second step of our qualitative analyses, the systematic comparison of cases on these dimensions was very useful to reveal the (changing) role of BPs in the acquisition of external equity financing.

In line with both grounded theory and comparative case studies, our sample was theoretically drawn with the aim of maximizing our insights on the results obtained from the quantitative analysis, again aiming even in this qualitative analysis to a broad sample composition (covering entrepreneurs and financiers operating in different countries). While theoretical saturation was reached with the completion of interview no. 6, we conducted two additional interviews (to entrepreneurs no. 5 and entrepreneur no. 6) to increase the internal validity of the findings.

3.3. Operationalization

3.3.1. Operationalisation of quantitative indicators in the regression model(s)

To shed light on questions 1.1. to 2.2., four key variables were built, namely:

- the *selection variable*: on whether or not a nascent venture applied for external equity financing;
- the *outcome variable*: on whether or not a nascent venture obtained external equity financing;
- as well as *two core explanatory variables*: on whether, or not, a business plan was written during the venture creation process; and how much time was eventually spent on writing a business plan.

Table 3 provides an overview of the dependent and explanatory variables used in the regression analyses.

Our dependent variables are two dummies. The selection variable, *Sought_Financing*, is a dummy that equals 1 if the start-up has searched for external equity finance (from BAs or VCs) during its venture creation process. The outcome variable, *Obtained_Financing*, equals 1 if the nascent venture received equity finance (from BAs or VCs) during its venture creation process.

In a first probit model with sample selection, the independent variable of interest is whether a BP was written during the venture creation process or not (*BusinessPlan*). In a second probit model with sample selection, run on those ventures which wrote a BP, the independent variable of interest is the time invested into its writing (*Time*), which reflects the months that founders invested into the preparation of the BP – that is, the number of months that elapsed between the start of BP preparation and its completion.

We employed several control variables that may influence whether new ventures search for and obtain external equity financing. The first group of controls concerns founders' human capital. Following Colombo and Grilli (2005), the human capital of the founding team may affect the firm's decision to seek external finance in two ways. On the one hand, due to the wealth effect of human capital, fewer external financial resources may be needed for starting a new venture, the higher is the human capital (and the wealth) of founders. On the other hand, due to an human capital's capability effect, highly skilled founders generally have more ambitious entrepreneurial projects (compared to founders with lower skills) (e.g., Åstbro and Bernhardt 2005; Bertoni, D'Adda, and Grilli 2019; Klepper 2001; Shane 2000) that typically require more funds to be realized. Furthermore, the human capital of founders may be an important criterion that influences investors in their decisions. Therefore, we control for whether the human capital of founders influences a new venture's decision to seek external funding and whether it obtains it.

Table 3. Quantitative operationalization of variables.

Description	
Selection variable	
<i>Sought_Financing</i>	Dummy equals 1 if the firm has searched for equity finance (BA or VC) during its venture creation process.
Outcome variable	
<i>Obtained_Financing</i>	Dummy equals 1 if the firm has received equity finance (BA or VC) during its venture creation process.
Explanatory variables	
<i>BusinessPlan</i>	Dummy equals 1 if the firm has prepared a written business plan.
<i>Time</i>	Number of months that the firm employed to prepare a written business plan.
<i>LnFounders</i>	Logarithm of the number of founders.
<i>PhDdegree</i>	Dummy equals to 1 if the founding team consists of one or more founders with a PhD degree.
<i>Start-UpExp</i>	Dummy equals to 1 if within the firm there are one or more founders who have previously matured an entrepreneurial experience.
<i>OppDriven</i>	Dummy equals to 1 if within the firm there are one or more founders whose motive to establish the new venture was "opportunity exploitation-driven".
<i>Product_Novelty</i>	A discrete variable that captures the level of firms' product innovativeness as described by the founders and cross-checked by interviewers and researchers. To firms considered as incrementally innovative is assigned a value 1 while to those deemed as radically innovative is given a value of 2.
<i>ICT</i>	Dummy that equals to 1 if the venture operates in the ICT sector.
<i>Country dummies</i>	Dummies that capture the geographical location of the firm.

In particular, to assess such effects, we measure human capital in various ways: first, we use the founders' education levels by considering the presence of at least one founder with a PhD within the founding team (*PhDdegree*). Second, we consider the previous entrepreneurial experience of founders (*Start-UpExp*).⁴ Third, we also test whether the founders' declaration of their opportunity-driven intrinsic motivation (*OppDriven*) influences either of the two funding-acquisition steps. Relatedly, another variable (*Product_Novelty*) captures the level of firms' innovativeness: while firms developing only incrementally innovative goods (including products and services, or both) were assigned a value 1, firms developing radically innovative goods were given a value of 2. This variable is not just the self-perception of the founders but was coded in a three-step process where the entrepreneur's description of his/her company's core product was cross-checked by the interviewer and project leader for building a more objective classification schedule of innovativeness.⁵

Finally, we control for the natural logarithm of the founding team's size (*LnFounders*) in addition to the variables related to human capital. This variable serves as an exclusion restriction, and our choice to use it for that purpose is in line with the relevant literature (e.g., Bertoni, D'Adda, and Grilli 2019; Hsu 2004; Sørensen 2007). Similar to the two-step model of Bertoni, D'Adda, and Grilli (2019), the founding team's size (*LnFounders*) is reputed to affect a venture's odds of securing equity finance, but it only does so through the probability that the venture seeks external financing. Accordingly, the founding team's size may influence the decision of nascent ventures to seek external finance (Bertoni, D'Adda, and Grilli 2019) for two reasons: namely (1) the ease of sharing entry costs within a group and (2) the social capital of team members that can be exploited to access external finance (Michelacci and Silva 2007; Heuven and Groen 2012). Given that our model specification already controls for the entrepreneurial team's quality and their specific competencies (through the proxies of the highest degree of education, previous start-up experience), no theoretical argument or empirical study can be convincingly advocated to explain why the size of the founding team would influence the likelihood of receiving external equity finance (Bertoni, D'Adda, and Grilli 2019). The founding team's size can, therefore, serve as an exclusion criterion based on the assumptions that the previous arguments are indeed applicable, and that no unobserved heterogeneity links the number of founders to the likelihood of obtaining external finance.

Table 4 presents the descriptive statistics and the correlation matrix of the variables at hand. Our first independent variable of interest *BP* shows a positive (and statistically significant at 5% level) correlation of +0.17 with the first equation dependent variable (*Sought_Financing*), while correlation is positive but slightly lower with the second equation dependent variable (*Obtained_Financing*). Interestingly, the second core explanatory variable *Time* shows a positive correlation with *Sought_Financing* and a negative correlation with *Obtained_Financing*. To dig into these differences, we pursue a further in-depth investigation through econometric analysis of the role of *BP* for nascent ventures acquisition of external financial resources.

3.3.2. Coding the qualitative interviews conducted

To shed light on the causalities underlying the quantitative analyses, the interview material collected was (transcribed and) coded as follows (see Glaser and Strauss 1967; see also Strauss and Corbin 1998): in the first step of open coding, the transcribed

Table 4. Presentation of descriptive statistics and correlation matrix.

	Mean	S.D	Min	Max	1	2	3	4	5	6	7	8	9	10
1 Sought_Financing	0.252	0.435	0.000	1.000	1.000									
2 Obtained_Financing	0.303	0.462	0.000	1.000	-	1.000								
3 BusinessPlan	0.757	0.429	0.000	1.000	0.170	0.148	1.000							
4 Time	2.968	4.456	0.000	52.76	0.068	-0.032	-	1.000						
5 LnFounders	0.729	0.536	0.000	2.079	0.151	0.153	0.140	-0.022	1.000					
6 PhDegree	0.219	0.414	0.000	1.000	0.208	0.165	0.135	0.013	0.187	1.000				
7 Start-UpExp	0.505	0.500	0.000	1.000	0.034	-0.014	-0.005	0.003	0.050	0.188	1.000			
8 OppDriven	0.728	0.446	0.000	1.000	-0.033	0.103	0.081	-0.032	0.244	0.225	0.324	1.000		
9 Product_Novelty	1.249	0.433	1.000	2.000	0.261	0.063	0.021	0.098	-0.001	0.189	0.083	0.065	1.000	
10 ICT	0.740	0.439	0.000	1.000	-0.100	-0.046	0.029	0.017	-0.075	-0.024	-0.091	-0.000	0.1138	1.000

Legend. Descriptive statistics on all variables based on 301 observations, except for *Obtained_Financing* (76 observations) and *Time* (200 observations). Correlation matrix based on all available information on the Perfect Timing Database.

Table 5. A display of the qualitative data of the study.

Actors	Perception on the usefulness of BPs	Reasons for this perception	Opinion on alternative tools to assess venture performance
[E 1]	<i>"I would highly discourage anybody from doing so [writing a BP] or making a decision depending on a business plan. Planning 6 months in advance is extremely difficult, and anything beyond that implies that you are making things up".</i>	<i>"An investor who requires a business plan is not a sophisticated investor – he does not understand the dynamics of a technology start-up. The best investors I know did never require a business plan".</i> <i>"Market finally understood that business plans are systemically flawed. So, the market has abolished them. I have never met a venture capital investor that required me to develop a business plan".</i>	<i>"Road-maps that predict the next year in terms of total addressable market projected, and that offers a general vision of how the company would look like after ten years (for early-stage ventures, there seem to be no need for financial projections – especially when it comes to Series A funding)".</i> <i>"A pitch deck which should remain as short as possible".</i>
[E 2]	<i>"It depends on the stage of the funding (seed, series A, B, C, etc.) the lower end the less important BP is. For later stages, BP is more important in terms of planning (cash flow, revenue, opex/capex) and less important in terms of other operations".</i>	<i>"In our case, investors were more focused on connecting with the team, understanding the business idea and hearing more about our vision. They had no interest on a longer document with plenty of details such as a business plan. Perhaps that has to do with their time and their perception of BPs as non-realistic documents".</i>	<i>"VC investors in general, and Sequoia in this particular case, provides on their web page a guide that with 10 bullet points, offers insights on how to pitch. This may implies that the traditional business plan is no longer used".</i>
[E 3]	<i>"After a long time wasted on developing a BP, I understood that such a document is not relevant for the type of business that I was doing. I do not think that it is relevant for any type of business nowadays".</i> <i>"Serious entrepreneurs may have a business plan at a later stage, that may even be asked by investors, but that is absolutely unnecessary for fledgling ventures".</i> <i>"Accelerators and incubators try to push you to have a BP, but 90% of the time, the BPs do not reflect the reality, in a 5 years period, these ideas look completely different".</i>	<i>"Investors in seed stage, have changed their approach and I have the feeling that they do not take BP as the main document to evaluate the lean process".</i>	<i>"For a two-sided platform, all what mattered for fund raising was the accumulated followers in social media, that would reflect the market validation, something that the funders asked for".</i> <i>"Very basic prototype of the product".</i> <i>"Technology should be tested by the time one approaches professional investors".</i>
[E 4]	<i>"BP had defocused entrepreneurs from the main goal – customers' validation".</i>	<i>"BP used to be a kind of 'Rome's Trevi Fountain', now things have changed, and investors have no time to read a 40 pages document full of wishes and desires that hardly reflect the reality".</i>	<i>"The lean Launchpad, or a pitch deck. Again, pitch deck that is done with canvas has a lot of business plan elements, you have to do financial forecasting, to know the market, but in comparison to BP, here you have to get customer validation".</i> <i>"All this information can be grasped from a pitch deck (stand out for a 5–10-minute presentation)".</i>

(Continued)

Table 5. (Continued).

Actors	Perception on the usefulness of BPs	Reasons for this perception	Opinion on alternative tools to assess venture performance
[E 5]	<i>"I regret having spent time on preparing a long document like BP. Maybe it can help with an overall planning but not for attracting investors, as it is subject to continuous change. Investors know that it is not realistic what is envisioned there".</i>	<i>"I prepared the plan to send it to investors. No responses, they do not care. Then I changed the strategy, I focused on building the startup, and that helped".</i>	<i>"I definitely think that a 5 minute presentation does the job better than a detailed plan with lots of financial information in it (mostly only plans)".</i>
[E 6]	<i>"Do not prepare a business plan, unless you want to waste time"</i>	<i>"None of the early-stage investors care about your long future-oriented plan. They might find it useful for later rounds"</i>	<i>"I could convince my investors (among other things) by also showing data on our reached visibility and first costumers"</i>
[I 1]	<i>"Success is not about the 'document type' (i.e., business plan), but that founders have the answers to the relevant questions of their business".</i>	<i>"Investors, in my experience – also having raised several millions for my own start-ups – don't care about the document type, but that they get answers and information about the relevant questions".</i>	<i>"Answering some of the key questions related to a start-up can easily be done via a pitch deck or any other short document".</i>
[I 2]	<i>"No need to write 40 pages business plan".</i>	<i>"There is a change regarding usefulness of BPs. The change has mainly come from the increase in the number of start-ups asking for funds and the Internet era, which made us [investors] filter carefully which information to consume".</i>	<i>"Some relevant questions about the start-up (team, innovation, market factors, business model, exit perspectives) can be grasped by a pitch deck/5–10 minutes presentation. That would suffice".</i>

interviews were analysed and coded line by line in order to identify the most relevant text passages on how BPs and alternative assessment tools of venture performance are perceived by the interviewees. In the second step of axial coding, the open codes were grouped into overall three topics that re-occurred in the interviews, namely (1) the interviewees' perception of the usefulness of BPs, (2) the reasons for this perception, and (3) the interviewees' opinion on alternative tools to assess venture performance. For any of these three dimensions, the most insightful quotes are listed in [Table 5](#).

4. Results

4.1. Regression results

In order to investigate questions 1.1. to 2.2. on the links between BP preparation and the acquisition of external equity financing, [Table 6](#) provides the estimates of the two equations of the probit model with sample selection.

Columns 1 and 2 report the estimates about the effects of having, or not having, written a BP on the venture's probability to search for and obtain external equity financing. We find that a formally prepared BP positively correlates with the likelihood that founders seek external equity finance.⁶ The marginal effect of the covariate shown in Column 1 of [Table 6](#) reveals that the preparation of a BP leads to a 17.35% increase in the new venture's likelihood to seek external finance. In other words, and in answer to

Table 6. Selection and outcome equations: the choice of seeking external equity finance and the likelihood of obtaining it.

Probit model with sample selection	<i>Sought_Financing</i> (1)	<i>Obtained_Financing</i> (2)	<i>Sought_Financing</i> (3)	<i>Obtained_Financing</i> (4)
<i>BusinessPlan</i>	0.693** (0.245)	0.345 (1.062)		
<i>Time</i>			0.0404† (0.0238)	-0.00306 (0.0253)
<i>LnFounders</i>	0.500** (0.174)		0.619** (0.204)	
<i>PhDDegree</i>	0.549* (0.219)	-0.0504 (0.561)	0.435* (0.247)	-0.387 (0.318)
<i>Start-UpExp</i>	0.235 (0.180)	-0.575† (0.311)	0.203 (0.216)	-0.684† (0.385)
<i>OppDriven</i>	-0.205 (0.205)	0.266 (0.391)	0.153 (0.271)	0.302 (0.521)
<i>Product_Novelty</i>	0.552** (0.203)	-0.502 (0.326)	0.790** (0.245)	-1.033** (0.352)
<i>ICT</i>	-0.571** (0.206)	0.0980 (0.661)	-0.524* (0.252)	0.255 (0.332)
<i>Constant</i>	-1.718* (0.429)	0.281 (2.892)	2.041** (0.525)	-2.589* (0.912)
<i>Log Likelihood</i>	-171.1049		-119.1731	
<i>Number of Observations</i>	301 (76 uncensored)		200 (57 uncensored)	

Legend. Coefficients are reported, standard errors in parentheses. Significance level: ** $P < 0.01$, * $P < 0.05$, † $P < 0.1$. Both models include country dummies.

question 1.1: amongst all nascent ventures, those that have written a business plan are still more likely to apply for external equity financing than those ventures that have not written a business plan.

At the same time, Column 2 does not provide supporting evidence that preparing a BP plays a significant role in actually obtaining external equity from professional investors. In answer to question 1.2, we find that, amongst all nascent ventures that have applied for external equity funding, those that have written a business plan are no longer more likely to obtain external equity financing than those ventures that have not written a business plan. This result is a first indication of the declining importance of BPs in the eyes of potential investors, possibly because several substituting tools (such as BMC, lean prototyping, short videos, or PowerPoint presentations) have increasingly served the same purpose of presenting the venture to the outside – as we will explore later by the means of the qualitative analysis.

Similarly, the probit model with sample selection displayed in Columns 3 and 4 point to the role played by time invested into BP preparation (*Time*) on ventures' propensity to look for (3) and obtain (4) external equity finance. The time invested into writing a BP positively and significantly (at the 10% level) influences founders' likelihood to seek external finance (the marginal effect equals +1.69%). In answer to question 2.1, we thus find that, amongst all nascent ventures that wrote a BP, those investing more time in its writing are still more likely to apply for external equity financing.

Interestingly, though, *Time* is not positively correlated to the investors' probability of granting finance to these entrepreneurial endeavours. Thus, in answering to question 2.2, Column 4 shows that, conditional on searching for external equity financing, those ventures that have spent more time on writing a business plan are

not more likely to obtain funding. This documented limited importance of the invested time into writing a BP for obtaining finance may be a further sign that, for investors, BPs have lost most of their importance as a tool for assessing the economic potential of companies.

Turning to the exclusionary restriction, the founding team's size (*LnFounders*) positively affects a venture's likelihood of seeking external finance (with a marginal effect of +12.53%). This result confirms our previous expectations that larger teams can better share entry costs and leverage on social capital than small teams (also supported by the previous literature; e.g., Bertoni, D'Adda, and Grilli 2019; Michelacci and Silva 2007), thereby pushing them to seek external finance, but do not affect the rate of external finance obtainment.⁷ Therefore, this finding confirms the idea that this variable represents a viable exclusionary restriction from not only a theoretical but also an empirical point of view.

Regarding founders' human capital, their *PhDdegree* has a positive and significant effect (at the 5% level) on a firm's propensity to search for external equity finance. More concretely, *PhDdegree* increases the likelihood of seeking funding by a marginal effect of +13.76%. This confirms that individuals with a PhD education tend to start ventures with ambitious business ideas which, in turn, lead them to seek external funds with a higher probability in order to start or scale up the newly founded venture. However, our analyses also show that a PhD has no effect on the actual acquisition of external finance: teams with PhD holders are equally likely to obtain external finance as teams without PhD holders. Individuals' prior involvement in start-up activities (*Start-UpExp*) does not significantly influence the search for external finance but it negatively correlates with its obtainment in Column 2 (with a magnitude of -18.41%). This result could be interpreted in terms of the prevalence of the aforementioned "wealth effect" over the "capability effect" of human capital (Colombo and Grilli 2005). Furthermore, even for companies seeking external financing, the experienced entrepreneurial team may probably be in a better position to assess the conditions offered by potential investors. This may make the team less inclined to accept the investors' conditions. Finally, the degree of novelty of a venture's business idea (*Product_Novelty*) is found to significantly influence the founders' likelihood to seek external finance with an effect size of +13.83%. However, the degree of novelty does not impact the success of nascent ventures in actually acquiring external equity finance. In contrast, when *Time* is considered (see Column 4), the magnitude of the effect of *Product_Novelty* on the obtainment of funds is -24.12%. This is only a partially surprising result. While it is true that a positive relationship between venture capital financing and the innovativeness of a company has been documented, this relationship was mainly referred to the United States (e.g., Kortum and Lerner 2000); recent studies show a more nuanced picture of this relationship when considering institutional contexts other than the United States (e.g., Europe) and considering the different institutional heterogeneity of investors (e.g., Bertoni and Tykvová 2015).

4.2. The insights gained from systematic case comparisons

Thus, how can we explain the above finding that the writing of a business plan, as well as the time invested to this end, influence the propensity of *founders to apply* for external equity, while it does not influence the likelihood of *obtaining external equity from funders*?

The entrepreneurial finance literature allows us to make sense of the founders' sustained writing of BPs as it indicates that alternative assessment tools of venture performance need some time before they can establish themselves as a new social norm, which applies to the perception of entrepreneurs and funders alike. Scholars broadly agree on the concept of a norm as an appropriate behaviour of individuals characterized by a certain identity (e.g., Katzenstein 1996; Finnemore and Sikkink 1998). Importantly, the establishment of norms arises from a life cycle, which includes (1) norm emergence, (2) a norm cascade process, and (3) norm internalization (Sunstein 1996). (1) The crucial actors in the first stage are the so-called "norm entrepreneurs", who convince a larger mass to display a new behaviour, which is the appropriate one for that specific community. (2) In the second stage of the norm cascade process, norm entrepreneurs incentivize other members (also outside the community) to follow that specific behaviour – with the aim of reaching (3) the "taken-for-granted" stage, where the new norm has become completely internalized (Finnemore and Sikkink 1998).

A positive response to peer pressure involves three mechanisms: legitimacy, conformity, and esteem. While legitimacy evaluates the quality of a norm, conformity and esteem are mechanisms that encourage the adopters to embrace a norm to be part of a group (in other words, the process of norm internalization, see Finnemore and Sikkink 1998). Organizations behave in a similar way in order to please their stakeholders – particularly those on which they are dependent (DiMaggio and Powell 1983). Considering that organizational behaviour is largely influenced by formal and informal institutional pressure, the organizations start to act collaboratively and comply with such pressures by adopting those rituals and customs that they deem most useful.

Translating this argument of DiMaggio and Powell (1983) to entrepreneurial finance, nascent ventures that are chronically short of financial resources are likely to act in a way that conforms with the requests of potential funders – as the latter are at the source of vital resources (DiMaggio and Powell 1983). Importantly, though, social norms change; and the transition phase – where stakeholders need to get rid of a former norm (such as the usage of business plans) – may meet with reluctance towards the new norm, because social norms are difficult to change. Entrepreneurs, or those who ask for venture funding, are typically the followers of social norms seeking to comply with the requirements and expectations of their financiers. In order not to disappoint financiers on the previous norm of BP writing, entrepreneurs are likely to only adjust rather slowly to new norms of providing alternative assessment tools of venture performance. Given that entrepreneurs are norm followers⁸ and given that the emergence of a new norm takes time, we wondered whether it holds true that:

Research Question 3.1.: *Do entrepreneurs use alternative tools (than BPs) to convey the financial potential of their business idea to external equity funders?*

And indeed, the qualitative evidence gained (summarized in Table 5) highlights that all entrepreneurs interviewed have a similar *perception* with regard to the usefulness of BPs when applying for external equity funding. Importantly, they all point to a period of learning experience which they have undergone. Over time, and through trial-and-error processes, the entrepreneurs realized the limited utility of writing BPs for obtaining finance from equity investors, be it venture capitalists or a business angel: "After a long time wasted on developing a BP, I understood that such a document is not relevant for the

type of business that I was doing. I do not think that it is relevant for any type of business nowadays" said the entrepreneur no. 3.⁹

The most important *reasons* for the limited usefulness of BPs, according to the entrepreneurs interviewed, are that investors have no time to read the document in the necessary detail. Furthermore, markets were said to change so quickly that a business plan risks becoming obsolete shortly after its completion – as pointed out by entrepreneur no. 1: *"I would highly discourage anybody from doing so [writing a BP] or making a decision depending on a business plan. Planning 6 months in advance is extremely difficult, and anything beyond that implies that you are making things up"*. Similarly, entrepreneur no. 1 highlighted that investors who ask for a business plan should be considered with caution: *"An investor who requires a business plan is not a sophisticated investor – he does not understand the dynamics of a technology start-up. The best investors I know did never require a business plan"*.

The interviews conducted also suggest that, when interacting with investors, entrepreneurs have learnt that there are *alternative ways of presenting their business ideas* and that preparing a business plan is not strictly needed to this end – as was mentioned by entrepreneur no. 2: *"VC investors in general, and Sequoia in this particular case, provides on their web page a guide that with 10 bullet points, offers insights on how to pitch. This may imply that the traditional business plan is no longer used"*. The entrepreneurs generally agreed that investors seek for *"Road-maps that predict the next year in terms of total addressable market projected, and that offers a general vision of how the company would look like after ten years (for early-stage ventures, there seem to be no need for financial projections – especially when it comes to Series A funding)"* (entrepreneur no. 1). But rather than a BP, investors today require a *"lean launchpad"*¹⁰ (entrepreneur no. 4), *"a pitch deck which should remain as short as possible"* (entrepreneur no.1), a *"very basic prototype of the product"* (entrepreneur no. 3), or customer validation as reflected by the number of followers in a prominent social media (entrepreneur no. 3). Such tools do not require early-stage ventures to perform any precise financial plan (especially when it comes to Series A funding) said entrepreneurs no. 2 and no. 5. Both justify this by saying that, during their venture's early stage, the start-up undergoes tremendous changes on a weekly basis, which makes it hard to use tools, such as business plans, which are by definition static documents.

In sum, while entrepreneurs acknowledged the importance of alternative assessment tools, they all needed time to accept these new social norms and *initially started with the idea of writing a BP*. In answer to question 3.1, we conclude that entrepreneurs hardly – and typically after a period of learning time – use alternative tools (with respect to BPs) to convey the financial potential of their business idea to external equity financiers.

The opposite line of reasoning applies to norm initiators, such as venture capital funders, which might explain their *limited consideration of BPs for granting external equity capital*. Interestingly, the Google Trends analysis of Dushnitsky and Matusik (2019) indicates that the term "business plan" has marked a decline in popularity for one and a half-decade now. The authors interpret this finding as an attempt of the market to substitute BPs with alternative assessment mechanisms – which, in turn, might reflect a change in the norms of venture funders. Among these alternative tools as potential replacements of BPs there is certainly the business model canvas (BMC), which acts as a one-page presentation that includes the fundamental elements of a business – such as its revenues,

costs, and customers (Osterwalder and Pigneur 2010). The document is designed to allow for quick updates, making it an elegant and iterative tool for reporting on the performance and prospects of start-ups. Other tools – such as a lean prototype that asks for either “pilot experiments” (i.e., the lean start-up approach of Ries 2011), a short video, or a PowerPoint presentation highlighting the main business idea (Investintech 2017; Zimmerman 2017) – are also increasingly used to document the viability of start-ups and potential returns on investment. New market dynamics, resulting from increasing digitisation and greater demand for finance, require more versatile tools to assess the future performance of companies, which are of crucial importance for professional equity investors. As a result, professional equity investors, who also act as “norm entrepreneurs”, have begun to legitimise these new instruments, which are more versatile and, therefore, better able to respond to the information needs of the increasingly dynamic markets created in the last decade (Chakravarty, Grewal, and Sambamurthy 2013). We, therefore, pose the following research question:

Research Question 3.2.: *Do funders increasingly use alternative tools (rather than BPs) to assess the financial potential of a nascent venture’s business idea?*

And, indeed, the qualitative interviews conducted reveal that investors might no longer consider BPs valid instruments to evaluate the potential performance of nascent ventures. Investor no. 2 points to the *reasons* of this change in social norms within the entrepreneurial finance community: *“The change has mainly come from the increase in the number of start-ups asking for funds and the Internet era, which made us [investors] filter carefully which information to consume”*.

Importantly, both investors interviewed pointed to the importance of alternative tools to assess venture performance. They admitted that information – such as the founding team’s characteristics (i.e., the founders’ background, their values and execution capabilities), innovation (its relevance to the market and scalability), market factors (such as the industry and geographical location), the venture’s business model (in terms of revenue achievements and customer validation), and the exit perspectives of an entrepreneurial venture – are all important pieces of information for investors. But to transmit this information, one does not need a business plan anymore. The information can be grasped more easily from a pitch deck of a 5–10-minute presentation, which should remain as short as possible (e.g., 10 pages) and contain as little text as possible, so to accomplish the “projection” task. Investor 1 adds: *“answering some of the key questions related to a start-up can easily be done via a pitch deck or any other short document”*. Similarly, investor 2 concurs: *“Some relevant questions about the start-up (team, innovation, market factors, business model, exit perspectives) can be grasped by a pitch deck/5–10 minutes presentation. That would suffice”*. Moreover, if we look at the web pages of prominent VC funding firms, we see consensus among investors regarding the tools that they consider useful for interacting with entrepreneurs. More specifically, some VC funders suggest specific guidelines (which in some cases are constantly updated) for preparing a pitch or a slide deck. Sequoia Capital, for example, a prominent American VC even suggests to its applicants to use declarative concise statements regarding the company’s purpose, the customer’s problems the company wants to solve, answers to the question ‘why now?’, assessments of market potential, competitors and the planned approach to defeat them, the business model, team members and financials, if available (Sequoiacap 2022). In other words,

professional equity investors are not interested in knowing fund applicants' dreams; instead, they want to "educate" entrepreneurs to think of a pitch as an effective, but still economical way, of interacting. This additional evidence leads us to conclude, in answer to question 3.2., that *funders may indeed increasingly use alternative tools to BPs in order to assess the financial potential of a nascent venture's business idea*, which speaks in favour of an emerging social norm that is rooted in necessity.

5. Discussion and conclusions

The findings of our study challenge the long-standing argument of the entrepreneurial finance literature that business plans are a *conditio sine qua non* for nascent ventures to apply for, and obtain, external equity financing from professional investors. Combining quantitative and qualitative results, our study documents a "mismatch" related to BP preparation: while nascent ventures looking for finance still choose to engage, and in some cases, invest substantial time, in writing BPs, VC and BA investors do no longer base their funding decisions on this type of document as they seem to invest on promoting new tools that allow a more effective interaction with entrepreneurs (e.g., Sequoia Capital). In other words, although BP might still be a useful tool for planning inside the start-up (Delmar and Shane 2003), the preparation of such a document is no longer instrumental for securing external equity finance (no matter how much time entrepreneurs invest in its writing).

Our qualitative analyses point to several reasons why business plans may have lost importance as assessment tools of nascent ventures in their attempt to obtain external equity funding. First, recent technological developments have spurred new online tools and techniques that have advantages over traditional means such as BPs. They provide short-content solutions that more efficiently articulate the strategies of new ventures (Blair 2013). These new tools and techniques are also more versatile, allowing easy changes and interventions in the presentation of business ideas. Second, given that a BP is a static document, which aims at forecasting the venture's future, its applicability in a dynamic and rapidly changing market is questionable (Chakravarty, Grewal, and Sambamurthy 2013). Third, and as a corollary of the two previous reasons, our interviews with entrepreneurs and investors suggest that there is a broader shift in social norms from traditional BP writing towards digital tools for assessing the future performance of nascent ventures.

We observe that our findings contribute in several ways to the extension of entrepreneurship literature, with a particular focus on the entrepreneurial finance and business planning domains, by offering up-to-date evidence that challenges the merits of the BP preparation for funding acquisition by nascent ventures. In contrast to the positive approach of previous entrepreneurial finance studies in relation to the importance of BP for external funding (see for e.g., Arkebauer 1995; Kuratko and Hodgetts 1998; Lange et al. 2007; MacMillan, Siegel, and Narasimha 1985; Shepherd and Zacharakis 1999; Zacharakis and Shepherd 2001), we examine – by taking the perspective of a possible change in social norms – that BP's utilization for a venture in its early stage of creation does not lead to external funding, despite the efforts (in terms of time and money) that entrepreneurs may devote to prepare it. In addition, by combining evidence from

quantitative and qualitative data, we point at the new potential tools that might have gained prominence in the eyes of funding providers.

Although we carefully designed this study, needless to say, it is not immune to limitations, which can be addressed in future research. First, in principle, we think that the profile of the ventures yields findings which apply to a broad set of new ventures in intense technology sectors such as IT and AE industries – which, in turn, ensures the external validity to our findings. Nevertheless, the applicability of our findings might be particularly restricted to sub-samples of nascent ventures that are in extreme necessity of external equity funding. Hence, future research might shed light on the applicability of our outcomes to more ambitious nascent venture populations. The second limitation relates to the fact that we employed a time-invariant variable to understand a firm's probability of seeking external finance. The alternative – i.e., the employment of a time-varying variable that addresses the moments when firms began to seek financing and when they obtained it – would not have been a perfect solution either, given the difficulty associated with remembering the exact timing of the “search” events (see Bertoni, D'Adda, and Grilli 2019). We need to leave these concerns to future research.

Another limitation concerns the corroboration of our quantitative results with the additional qualitative work we have conducted in this study. More specifically, although we qualitatively suggest that the mindset towards using a BP artefact to obtain external funding is changing, we cannot be fully definitive about the change in the social norm. We therefore invite future research to confirm our findings through quantitative approaches.

Despite these unavoidable limitations, we believe that our study has important implications for entrepreneurs and educators. Entrepreneurs of new ventures may find useful to learn that BPs have significantly diminished in relevance for acquiring external equity funding. Therefore, entrepreneurs may carefully evaluate with a cost-benefit analysis whether the writing of BPs is still worthwhile, also in light of the emerging alternatives that might do a better job in obtaining external equity financing. The changes occurring to the ways in which new businesses are conceptualized have influenced the birth of new business-idea presentation methods – such as BMC (Osterwalder and Pigneur 2010), lean prototyping (Ries 2011), short video presentations, or even PowerPoint presentations (Investintech 2017; Zimmerman 2017). While we do not test if these tools represent perfect substitutes for a traditional BP document, we use them as possible explanations that may justify the BPs' reduced importance in the eyes of prospective investors. Our findings invite entrepreneurs to be more alert towards the assessment tools that equity investors use.

Furthermore, our study has implications for educators too. Although teaching BP writing seems still relevant considering the importance of these documents for planning and gestation activities in start-ups (Delmar and Shane 2003), our study indicates that courses related to BP writing should not focus solely on business plans as evaluation tools of the future performance of a new entrepreneurial venture (see Honig 2004). Instead, courses on entrepreneurial finance should embrace the new, digital-based methods of presenting a new entrepreneurial idea by highlighting their relevance for funds' acquisition. Developing the skills which are necessary and more in line with investors' needs and decision schemes should be a priority – especially for higher-education managers involved in entrepreneurship. And considering the high opportunity costs they may

face particularly in the early stage of venture creation, entrepreneurs will strongly benefit from such knowledge in order to efficiently allocate their limited resources.

Notes

1. Although a BP does by no means guarantee a venture's success, it has been suggested that its preparation considerably reduces the likelihood of failure (Crawford-Lucas 1992).
2. Among them, there were two entrepreneurs from the United States, three from Germany, one from Italy; in the case of investors, one investor was from Austria while the other was from Switzerland.
3. This method is used when there is a need to complement objective knowledge with subjective components (Merton and Kendall 1946). It is a unique way of obtaining comparable responses without restricting the interviewees when it comes to open questions (McIntosh and Morse 2015).
4. In unreported regressions, we also consider the founders' previous positions as company managers or university professors (*WhiteCollar*). We do not observe any change in the current outcomes that will be uncovered in section 4 (Results).
5. The variable is the same used in Herrmann, Storz, and Held (2022), where the procedure is fully described (p.10): "A product's novelty has been defined in three steps. First, the founder was asked how novel her product idea was when the venture was founded. Second, each interviewer was trained in the industry's main innovative products and was thus able to compare a product's novelty across the industry – a skill which was refined with each interview conducted. Interviewers were thus able to cross-check the founder's answer by comparing the product's innovativeness with those of other ventures. In the third step, the three project coordinators (familiar with the industries' main innovations thanks to their longstanding experience in data cleaning), again cross-checked the product's novelty, indicated against a classification scheme that was developed while cleaning the entire dataset. In both step two and step three, the interviewer and the data cleaner relied on the information provided by the founder as well as on online information about the venture's business idea. While subjectivity is a typical problem in survey analysis, this three-step process made it possible to minimize the over-estimation bias that typically occurs when founders self-report the level of their business' innovativeness. The product's novelty was measured as imitation (0), incremental innovation (1), and radical innovation (2)".
6. Considering the differences between BAs and VCs we have also performed a separate analysis for both types of investors. The results obtained were stable.
7. In fact, in an unreported regression, we also checked for the importance of this variable in the second step of the analysis. It appeared non-significant for ensuring external finance, hence paving the way for us to use it as an exclusionary restriction.
8. It should be noted that the literature on institutional entrepreneurship argues that actors (who are not limited to founders but also include other individuals and organizations) can become institutional entrepreneurs whenever they leverage resources to establish a new institution, i.e., a written or unwritten rule that is then followed by others (Leca, Battilana, and Boxenbaum 2008; Mutch 2007; Wade-Benzoni et al. 2002). However it is important note that the use of a BP, or of more modern ways of presenting a venture's potential, is a norm that is not necessarily advanced by entrepreneurs in the first place but can be (implicitly or explicitly) induced, as we also document below, by their financiers. So, the literature on "norm following" rather than institutional entrepreneurship appears as the most appropriate one to interpret our findings.
9. All interviewees in Table 5 are identified with "E" and "I" and the respective interview number, where "E" stands for "Entrepreneur" and "I" for "Investor".
10. Entrepreneur no. 4 also mentioned that a pitch deck, done with canvas, has several business plan elements for which one has to do financial forecasting and know the market. Yet, in comparison to a BP, this form of document requires to get customer validation.

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