Divide and Conquer:

Investor Type Diversity in Entrepreneurial Ventures*

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ABSTRACT

Entrepreneurial ventures benefit substantially from close interactions with their resource environment, but dependence on resource providers can give rise to power imbalances. Prior studies have identified various defense mechanisms by which less powerful ventures reduce the risk of opportunistic behavior by more powerful equity investors. This study extends our understanding of resource dependence in entrepreneurial ventures by studying how and which ventures protect themselves in their *first* interaction with key equity investors when established defense mechanisms are scarce. Drawing from resource dependence theory, we theorize and show that ventures with higher ex-ante cash levels and prior experience with co-investments involving different investor types protect themselves by simultaneously attracting equity from a diverse set of investors in their first investment round. This strategy significantly facilitates follow-on funding. We extend Resource Dependence Theory by showing how a "Divide and Conquer"-strategy can shield a less powerful actor from opportunistic behavior by powerful resource providers.

Keywords: Resource Dependence, Equity Mix, Entrepreneurial Finance, New Ventures

INTRODUCTION

To ensure their organizational continuity and growth, entrepreneurial ventures rely on critical resources from their external environment, including financial capital from equity investors. However, in interacting with resource providers, entrepreneurs face a trade-off: resource providers can provide valuable resources but dependence on them can lead to power imbalances as investors are typically more powerful than entrepreneurial ventures (Aldrich et al., 2020; Pfeffer & Salancik, 2003; Wasserman, 2017). The basic premise in the resource dependence literature is that ventures rely on defense mechanisms to prevent abuse of power imbalances and, as such, protect their ventures against potential opportunistic behavior (Emerson, 1962; Pfeffer & Salancik, 2003). Ventures, for instance, may partner with powerful investors when their own resources are well protected (Hallen et al., 2014; Katila et al., 2008; Ueda, 2004), or when the risk of opportunism is smaller (Diestre & Rajagopalan, 2012). More specifically, entrepreneurs may resort to patenting their intellectual property (Katila et al., 2008), postponing or abandoning an investment round involving an opportunistic investor (Katila et al., 2008), strengthening their social defenses by attracting reliable existing investors in their venture (Hallen et al., 2014), or even relocating to a richer resource environment (De Prijcker et al., 2019).

Not all ventures pay resort to these strategies, however. For example, few ventures have patents or have the means to relocate, and social defenses by existing investors are not available in a first investment round. Ventures raising a first – and often only – investment round hence provide an interesting context for studying how they manage resource dependencies. The initial formation of relationships is furthermore critical to ventures as this lays the foundation for subsequent dependence relationships.

This paper extends our understanding of how ventures may manage initial resource dependencies, and which ventures do so. To do so, we draw on resource dependence theory, enriched by qualitative insights from interviews with entrepreneurs and early-stage investors. First, we propose an additional defense mechanism that has not been advanced before, namely raising equity

from multiple (different) types of investors in a first investment round (henceforth "multi-type co-investments"), each with their own goals, preferences, and processes. We argue that the amalgamation of heterogeneous goals and preferences in multi-type co-investments allows entrepreneurs to exploit potential dissonance between investors and – in combination with smaller individual equity stakes – dilutes the control of any individual investor. Consequently, this "Divide and Conquer"-strategy allows entrepreneurs to retain more control. Second, we examine venture-level antecedents of multi-type co-investments. Similar to other defense mechanisms, not all ventures might have the ability to simultaneously attract multiple investor types in a first investment round. Therefore, we ask the following research question: *Which ventures raise equity through a diverse set of investor types in their first investment round?*

Next, in post hoc analyses, we shed light on the venture-level implications of attracting funding from multiple investor types simultaneously. Given entrepreneurial ventures' motivations to reduce dependence on their initial investors, it is also important to understand the venture-level implications thereof. To do so, we analyze the association between multi-type co-investments and both the likelihood and speed of follow-on fundraising. Follow-on fundraising is often crucial for young ventures as it shapes their long-term survival, growth, and future profitability but entails significant challenges. While early-stage investors help their portfolio ventures to raise follow-on funding (Gompers et al., 2020), investor types are heterogeneous in their propensity to do so (Bessière et al., 2020). This, therefore, obfuscates the association between multi-type co-investments and follow-on fundraising. This is a theoretically and empirically relevant question as firm-level implications of dependence-reducing actions are not yet fully understood and might be a double-edged sword (Hillman et al., 2009).

Our empirical analyses are based on a unique hand-collected data set of 4,553 first equity investment rounds in U.K. early-stage high-tech ventures. We integrate investment data from multiple data sources to identify equity-funded ventures and supplement this with ventures' accounting, governance, and patent data. We reveal interesting stylized facts. First, while the entrepreneurial

finance literature has predominantly focused on single-type co-investments (i.e., co-investments between, for instance, two or more business angel (BA) investors), our data indicate that multi-type co-investments (e.g., a co-investment between an accelerator and a BA) occur in 25 percent of first investment rounds.[1] In line with our hypotheses, we show that ventures with more cash or founded by entrepreneurs with prior multi-type co-investment experience have a higher propensity to raise a first equity round from multiple types of investors. This suggests that entrepreneurs with more negotiating power thanks to their prior experience and investor network, or ventures that are less dependent on prospective investors because of their available cash, exploit the opportunity to "divide and conquer" their investor base by simultaneously involving multiple types of co-investors. Finally, we find that ventures that attract funding through multi-type co-investments have a 35% higher likelihood to raise follow-on funding and also do so significantly faster.

Overall, our study makes several important contributions. First, we contribute to the resource dependence literature by introducing a novel defense mechanism to protect relatively weak young ventures against powerful investors. We show that a remarkably large set of ventures manage resource dependence by attracting initial funding from multiple investor types simultaneously. This strategy can be used when ventures are not able to resort to other frequently applied defense mechanisms such as legal, timing, and social defenses. Next, we provide insights into the implications of resource dependence strategies, which have been remarkably understudied (Hillman et al., 2009). In particular, we show that reducing dependence on early resource providers through a "Divide and Conquer"-strategy benefits entrepreneurs – and investors – as this facilitates follow-on fundraising.

Second, we contribute to the general entrepreneurial finance literature by considering multiple investor types beyond the current predominant focus on traditional investors like VCs or BAs in isolation. More specifically, recent market developments such as the proliferation of new equity sources (Block et al., 2018), significant investor type heterogeneity (Drover et al., 2017), and

[1] We consider the full spectrum of early-stage investors and include venture capital (VC), BA, private equity (PE), crowdfunding, accelerators/incubators, family offices, hedge funds, sovereign wealth funds, and initial coin offerings (ICOs). We additionally differentiate between the investor's affiliation (i.e., independent, corporate, bank/insurance, government, or university).

increasing interactions between investor types (Cumming et al., 2019) now allow entrepreneurs to raise equity from a more diverse set of equity investors (Bellavitis et al., 2017). While this has not been addressed before in the literature, we also show that many ventures simultaneously raise funding from different investor types, rather than in isolation or sequentially. This matters greatly as multi-type co-investments significantly facilitate follow-on funding. As such, we explicitly contribute to the calls for more research on the interactions between capital sources (e.g., Cosh et al., 2009; Cumming et al., 2019; Drover et al., 2017).

Third, because entrepreneurial ventures have a high probability of suffering from a funding gap (Manigart et al., 2020), but the complexity of their funding landscape is not well understood yet, our findings also inform entrepreneurs, investors, and policymakers. More specifically, we show how multi-type co-investments benefit entrepreneurs in managing their resource dependence and raising follow-on funding, and as such, enable their survival, growth, and societal contribution.

THEORETICAL FRAMEWORK AND HYPOTHESES

Resource dependence theory starts from the observation that organizations are inherently embedded in networks of interdependencies with resource providers. In order to maintain control over crucial resources, organizations aim to reduce dependence on key resource providers (Pfeffer & Salancik, 2003). Young ventures rely strongly on external equity investors to provide key financial and managerial resources, next to information (De Prijcker et al., 2019). In this relationship, young ventures are typically weaker than their investors. Dependence on investors with strong power differentials can engender opportunistic behavior by the investor. For example, corporate VCs pursue the strategic objectives of their parent companies which generally operate in the same industry as the entrepreneurial venture (Park & Steensma, 2012). As such, they may on the one hand provide superior industry expertise and relevant social networks to their portfolio ventures, but on the other hand, they also have strong incentives to misappropriate the venture's resources or imitate its intellectual property for strategic purposes benefiting the parent corporation. Entrepreneurial ventures are well aware of this and are more likely to partner with a corporate VC if their intellectual

property is well protected (Dushnitsky & Shaver, 2009) or if they are in dire need of the corporate VC's unique resources (Katila et al., 2008). This implicit trade-off between risk and reward is not limited to investments by corporate VCs. To limit potential opportunistic behavior from any type of investor, entrepreneurs do their own due diligence on potential investors' past behavior and reputation and prefer to partner with investors who they perceive as being more ethical (Collewaert & Fassin, 2013; Drover et al., 2014), even if this implies having to accept a lower valuation (Hsu, 2004).

As a result, organizations typically shape their resource environment by engaging in various dependence-reducing tactics including board interlocks, mergers and acquisitions, and even political appointments (Hillman et al., 2009). These tactics, however, primarily apply to large and mature firms. Entrepreneurial ventures rely on alternative techniques including legal (e.g., patents), timing (i.e., postponing investment with powerful investors to future investment rounds), and social defenses (i.e., peer monitoring by earlier and reputable investors) to limit resource dependence (Hallen et al., 2014; Katila et al., 2008). Still, few early-stage ventures already have patents, and while the first investment round is a critical and defining event for entrepreneurial ventures, timing and social defenses are primarily relevant in further investment rounds. It is hence important to understand how ventures that cannot use these defense mechanisms manage their dependency on first-round equity investors.

Ventures that can avoid raising external equity prefer to do so, given the reluctance of many entrepreneurs to give up control (Hsu, 2004; Kirilenko, 2001). Hence, especially ventures with little internal funds or depleted debt capacity raise external equity (Plummer et al., 2016; Vanacker & Manigart, 2010), making equity investors critical financial resource providers. An attractive strategy to manage critical dependence on financial resource providers can therefore be to simultaneously attract a diverse set of investors. In order to manage their critical dependencies, entrepreneurs actively choose their network ties (Hallen & Eisenhardt, 2012) and influence the choice of equity investors (Eckhardt et al., 2006) and formation of co-investments (Zhang, 2019). The choice to

attract funding initially lies with the entrepreneurial venture, i.e., investors cannot invest in ventures that shun equity funding. Still, not all entrepreneurs are equally capable of keeping control over their venture (e.g., Wasserman, 2017). We argue that a "Divide and Conquer"-strategy, i.e. raising equity from multi-type co-investors, can be a valuable defense mechanism for entrepreneurial ventures to limit dependence on a single type of investor in their first investment round and hence retain more control. In our interviews, for instance, an early-stage investor noted:

> [Investor] Combining funding from angel and crowdfunding investors is often a strategy in small or early-stage investment rounds when the entrepreneur wants to keep control.

We first draw upon arguments that are advanced when studying syndicates of investors of the same type. We then explain how including multiple types of investors strengthen these arguments. First, compared to solo investments, co-investments reduce the relative amount invested by an individual investor. On average, the ownership stakes and hence the power of individual investors will be smaller when raising funding from multiple (types of) investors. This makes it more difficult for an individual investor to engage in opportunistic behavior and misappropriate venture resources.

Next, compared to investment rounds with a single investor, co-investments incentivize peer monitoring. That is, co-investments create strong incentives for co-investors to monitor each other in order to safeguard the outcome of their own investment. In VC syndicates, for instance, peer monitoring has been theoretically shown to limit free-rider behavior and consequently results in better exit outcomes (Bayar et al., 2020). Next to limiting free-riding, peer monitoring also demotivates investor opportunism because of costly potential repercussions such as loss of reputation. Indeed, social defenses have been shown to be valuable in successive investment rounds, as first investors have strong incentives to ensure proper behavior by following investors (Hallen et al., 2014). In a similar way, investment rounds in which multiple types of co-investors invest together also encourage peer monitoring and hence limit opportunistic behavior by any single investor. Multi-type co-investments hence build social defenses.

While both arguments also apply to traditional syndicated investment rounds involving multiple investors of the same type, multi-type co-investments can even better preserve entrepreneurial power (Chahine et al., 2012). Investors of different types have different goals, visions, strategies, and time horizons (Drover et al., 2017). This amalgamation creates a greater probability of dissonance between investors. As such, entrepreneurs can exploit this dissonance and thereby limit opportunistic behavior by an individual investor. Moreover, co-investors have even stronger incentives to monitor each other, as the threat of opportunistic behavior by other investors that goes against their own (diverging) interests is bigger. This makes multi-type co-investments an even more powerful mechanism to limit individual investors' power. This was echoed in our interviews with investors and an entrepreneur, who indicated:

> [Entrepreneur] We explicitly looked for different investor types to balance the power between them.

> [Investors] From an entrepreneurial viewpoint, co-investments could be a "divide and conquer" strategy to keep more decision power.... All these different investors have different visions.

In general, a diverse equity mix makes it more difficult for one particular investor to force his or her agenda (Villanueva & Sapienza, 2009). An investor, for instance, mentioned:

> [Investor] We do not like to co-invest with business angels because this often means that the entrepreneur and angel will have more than 50 percent of control rights. Also, having too many angels on the cap[italization] table overly complicates decision-making and governance.

Furthermore, multi-type co-investments allow attracting a more diverse and unique set of resources, while simultaneously preventing power imbalances and, as such, limiting expropriation risks (Emerson, 1962). Specifically, they allow combining financial, human, and social capital from institutional investors such as VCs or PEs, while protecting entrepreneurial interests via more entrepreneur-friendly investors such as angels or family offices. This was resonated by an investor and an entrepreneur, respectively, who stated:

> [Investor] Entrepreneur-friendly angel investors are often purposely demanded by entrepreneurs to co-invest alongside venture capital investors. This gives entrepreneurs a sense of safety.
>
> [Entrepreneur] We explicitly looked for "friendly finance" to complement other investor types with whom we have a more distant connection.

While we argue that raising equity from multiple investor types is a powerful mechanism to mitigate power imbalance risks, it is also a difficult strategy, and hence not all ventures are capable of doing so. We propose that especially ventures with high levels of ex-ante financial and relevant social resources will have a higher probability of implementing this strategy.

As power is generally decreasing in resource need and increasing in resource availability (Emerson, 1962), entrepreneurs differ based on the power they have during negotiations with external equity providers (Ewens et al., 2022). Following Emerson (1962), we argue that entrepreneurs with more available funds prior to seeking external equity are more powerful and hence are able to attract funding through multi-type co-investments. Indeed, when venture growth and survival are less contingent on obtaining external capital when fundraising, entrepreneurs have a less urgent need for a particular investment round. A longer financial runway provides entrepreneurs with the ability to postpone or even abandon an unfavorable investment round and, therefore, gives entrepreneurs negotiating power (Ewens et al., 2022). Entrepreneurs who are able to "time the market" (Cerpentier et al., 2021) benefit from higher investor attention (Que & Zhang, 2021). Our interviews with entrepreneurs who were able to raise equity from multiple investor types provide interesting insights:

> [Entrepreneur] We were in a luxury position: we had sufficient resources and no cash drain, which gave us power during negotiations. Looking back, the negotiations for that investment round happened at the right time in our company's life cycle.
>
> [Entrepreneur] We had some financial means left and our costs were not too high. If we wanted, we could still walk away from the deal.

Alternatively, an entrepreneur who was not able to raise equity from multiple investor types commented:

[Entrepreneur] The fact that we needed the cash, put our backs against the wall.

In all, our theorizing and qualitative insights suggest that having more available funds before fundraising increases entrepreneurs' ability to leverage their financial resource environment's heterogeneous and interactive nature by attracting equity from a diverse set of investors, thereby reducing too strong dependence on any single equity investor:

> **Hypothesis 1 (H1):** *Entrepreneurs with ex-ante more available funds attract funding through a more diverse set of investor types in their first investment round*

The ability to attract a diverse investor pool is not only driven by venture characteristics such as ex-ante financial capital but also by entrepreneurial characteristics such as social capital. Entrepreneurs, for instance, manage resource dependence and its effects on venture outcomes through learning (Yli-Renko et al., 2020). Social capital through prior experience with multi-type co-investments (e.g., through board membership in ventures that attracted multi-type co-investments in the past) could, therefore, be an important driver of how entrepreneurial ventures anticipate and manage resource dependence on their first investors. The effect of prior multi-type co-investment experience was confirmed by one entrepreneur and one investor during interviews:

> [Entrepreneur] Based on our network, we quickly found an angel investor to fund part of the round. He knew us and trusted prior mutual co-investors. This allowed us to raise money very fast.
>
> [Investor] There might be a network effect in that multi-type co-investment experience allows tapping into known investors.

The effect of experience can be explained in multiple ways. First, although entrepreneurial ventures benefit from co-investments, searching for suitable co-investment candidates is costly and time-consuming. Prior multi-type co-investment experience suggests that the entrepreneurs developed a network of investors, which should alleviate some of the search costs. Moreover, prior multi-type co-investment experience additionally fosters entrepreneurs' current tendency to attract funding through multi-type co-investments given their benefits. A pre-existing network of diverse

equity investors might, furthermore, also indirectly strengthen entrepreneurs' negotiation power. As with ex-ante financial capital, entrepreneurs' dependence on a particular investor decreases with the size and strength of the investor network an entrepreneur can fall back upon under unfavorable investment conditions.

Second, prior multi-type co-investment experience also increases entrepreneurs' knowledge of the current state of, and diversity within, their financial resource environment. This is important, as entrepreneurs might not always be fully aware of the full spectrum of available capital sources (Shepherd et al., 2015). Multi-type co-investment experience will, therefore, allow entrepreneurs to draw upon valuable knowledge, and as such, will increase the propensity to recurrently engage in multi-type co-investment formation.

Third, prior multi-type co-investment experience also bolsters confidence and perceived capability to manage complex and intricate relationships with multiple resource providers, each with different investment goals and processes. Several interviewed entrepreneurs and investors highlighted how multi-type co-investments entail greater complexity compared to other types of (co-)investments:

> [Entrepreneur] Being funded by different investor types provides a good dynamic and multiple insights, but is also very complex and requires balancing various visions.
>
> [Investor] Entrepreneurs often underestimate the complexity and added work of a broad investor base.

The combination of heterogeneous investment visions, strategies, and value-adding propensities, for instance, leads to increased work and communication responsibilities. Entrepreneurs with past multi-type co-investment experience should, therefore, have a higher dexterity in managing the complexities inherent to these investments. Based on these arguments, we hypothesize:

> **Hypothesis 2 (H2):** *Entrepreneurs with multi-type co-investment experience attract funding through a more diverse set of investor types in their first investment round*

DATA AND METHODS

We test our hypotheses on UK early-stage high-tech ventures.[2] We collect investment information on all equity investments that were completed between 2005 and 2020 by ventures that were no older than ten years at the time of their first equity investment. We hereby dropped all mergers and acquisitions initiated by other ventures as acquiring ventures have substantially different motives, post-investment behavior, and exit propensities relative to entrepreneurial equity investors.

We combine information from three commercial databases, Refinitiv Eikon, Crunchbase, and Zephyr. These databases contain investment and investor information on worldwide investments and have been used extensively in prior studies.[3] Triangulating three data sources allows capturing a more extended range of investor types as, for instance, Refinitiv Eikon has an established coverage on VC and PE investments, whereas Crunchbase has a superior coverage of new early-stage investors such as ICOs, accelerators, and BAs (Dalle et al., 2017). We complement missing data with information based on web searches, news articles, and company or investor websites, for instance, to define the type and affiliation of an investor. After harmonizing key information such as venture and investor names and eliminating overlapping investments between the three data sources, we obtain 8,061 investments in 4,925 independent U.K. early-stage high-tech ventures by 4,406 distinct investors (i.e., U.K. and non-U.K. investors). We supplement this data with venture-level data including longitudinal accounting, ownership, and governance information from Orbis and patent information from PATSTAT.

Dependent variables. To test our hypotheses, we follow the resource dependence literature (e.g., Hallen et al., 2014) and take the number of distinct investor types that simultaneously invested in the first investment round as our dependent variable. This is an appropriate proxy of investor type diversity as each additional investor type expands the heterogeneity within an

[2]We define early-stage ventures as ventures that are independent and that operate in a high-tech industry. See table A1 in the appendix for the list of included NACE codes.

[3]Recent examples in the management and entrepreneurship literature include: Bellavitis et al. (2022); Lei et al. (2017); Wadhwa et al. (2016) using Refinitiv Eikon, Kanze et al. (2018); Nuscheler et al. (2019); Wang et al. (2022) using Crunchbase, and Meuleman et al. (2017); Post et al. (2022); Wry et al. (2014) using Zephyr.

investment round. We also construct an index of investor-type diversity (ITD) through a Blau index, normalized by the maximum investor-type diversity in a given year.[4] To fully capture the heterogeneous visions, objectives, and strategies, we classify investor types according to their type and affiliation. Specifically, we include VC, BA, PE, crowdfunding, accelerators/incubators, family offices, ICOs, sovereign wealth funds, and hedge funds and additionally distinguish between independent, corporate, bank-affiliated, government-affiliated, and university investors. In case of discrepancy between the three data sources, we manually verified investors' type and affiliation based on their websites or Google searches. Our dependent variable ranges from 1 to 5 distinct investor types in the first investment round. We also use a more narrow classification by not differentiating based on investor affiliation in robustness checks.

Independent variables. We use the amount of available financial capital in the venture to measure entrepreneurial negotiating power. Specifically, we use the cash ratio (cash to total assets) one year before the first investment round. This proxies for negotiating power because sufficient cash allows the entrepreneur to still walk away from the deal if needed, resulting in entrepreneurial power (Ewens et al., 2022). Next, we measure multi-type co-investment experience by a dummy taking on one if current top management team and/or board members have been active in ventures that received funding through multi-type co-investments prior to the present first investment round. To do so, we considered all U.K. early-stage ventures that raised equity between 2000 and 2020, marked multi-type co-investment rounds, and cross-referenced their top management team and board members to those from ventures in our dataset.[5] We only considered past multi-type co-investment rounds during entrepreneurs' tenure in those ventures.

Control variables. To reduce spurious variance, we include one-year lagged venture-related control variables that have been identified in prior literature on determinants of ventures' propensity to raise equity (e.g., Colombo et al., 2019; Cosh et al., 2009; Eckhardt et al., 2006). First, we include the age of the entrepreneurial venture in years (*Venture age*) to account for the stage of the venture

[4]Our index is computed as: $ITD_t = (1 - \sum_{i=1}^{n} P_i^2)/(k_t - 1/k_t)$, with P_i the proportion of a given investor type i in the investment round's total equity mix, and k_t the maximum number of distinct investor types in year t.

[5]Orbis reports unique identifiers for every top management team or board member.

(e.g., Hallen et al., 2014) and the natural log of total assets (*Venture size*) to control for the size and financing need of the venture. Next, we control for the asset structure through the ratio of tangible (*Tangibles*) and intangible (*Intangibles*) assets to total assets, and the debt structure through the ratio of short-term (*ST liabilities*) and long-term (*LT liabilities*) liabilities to total assets. This is highly relevant in the present context as high-tangible or low-leveraged ventures might find it structurally easier and less costly to attract bank financing, which consequently reduces the need to partner with investors (Vanacker & Manigart, 2010). To account for observable venture quality, we distinguish between profitable and nonprofitable ventures (*Profitable*), control for the venture's past average growth rate in total assets (*Past growth rate*), and whether the venture had patents (*Patents*) or received a grant (*Grant*) prior to its first investment round. Entrepreneurial human capital also matters in investment decisions as it facilitates the search for investors and informs investors of entrepreneurial quality and experience (Ko & McKelvie, 2018; Zhang et al., 2008). We, therefore, control for the number of founders (*Founding team size*) and differentiate between ventures with and without past entrepreneurial experience (*Entrepreneurial experience*).[6] A final venture-related control variable is its location, whereby we differentiate between London-based and other ventures (*London*). Lastly, we include industry and investment year fixed effects.

Method

We match ventures with and without first-round multi-type co-investments using multivariate-distance kernel-matching. We match on venture size one year before the investment round, year of incorporation, deal year, and require exact matching on the two-digit high-tech industry code. Relying on matched samples accounts for the non-random selection in attracting multiple investor types, minimizes unobserved spurious variance, and reduces endogeneity issues.[7] To test the relationship between our independent variables and the number of investor types in the first investment round, we run matched-samples truncated Poisson models. Truncated Poisson models accommodate the structure of our dependent variable by specifying a natural lower bound (i.e., we do not observe

[6]To construct this variable, we rely on the population of newly founded ventures in the U.K. and capture whether members of the founding team also founded other ventures prior to their current first investment round.

[7]Table A4 in the appendix presents statistics on the matching quality.

non-funded ventures) and higher bound (i.e., the maximum number of investor types in a given year). We also run matched-samples Tobit regressions on the index of Investor Type Diversity.

RESULTS

Descriptive Analyses

Figure 1 provides an interesting new insight. Although prior literature on co-investments has predominantly focused on single-type co-investments (i.e., co-investment between two or more investors of the same type, for instance, two VCs), we find that multi-type co-investments are substantially more prevalent compared to single-type co-investments.[8] Figure 1 differentiates between the first (panel A) and later investment rounds (panel B). Panel A shows that 25 percent of all first-round investments in early-stage high-tech ventures are conducted through multi-type co-investments compared with only six percent of single-type co-investments. The relative prominence of multi-type co-investment is even more striking in later-round investments: Panel B indicates that 30 percent of investments are multi-type co-investments, whereas still, only six percent are single-type co-investments.

Table 1 illustrates the distribution of investments based on the number of investor types for the first and later investment rounds. 73 percent of first investment rounds are funded by a single investor type (i.e., no co-investments and single-type co-investments), which decreases to 58 percent in later rounds. Multi-type co-investments are mostly funded by two investor types (20 percent of first-rounds and 24 percent of later-rounds). However, interestingly, almost six percent of first investments consist of three distinct investor types and one percent of more than three investor types.

Insert Figure 1 and Table 1 about here

[8] See also table A2 in the appendix for the distribution of investor types in first and later investment rounds

Table 2 presents summary statistics for the matched sample on first investment rounds used in subsequent regression analyses. In their first investment round, early-stage high-tech ventures receive on average funding from 1.35 investor types and have an average cash ratio of 23 percent. 18 percent of ventures have prior multi-type co-investment experience. Entrepreneurial ventures are just over two years when they receive their first equity investment. One year before the investment, they have average total assets of €2.3M, have low tangible, intangible, and long-term liability ratios, but have significant short-term liabilities (30 percent). One out of three ventures is profitable, and the average (median) past growth rate is 660 (0) percent. 11 percent of ventures already have one or more patents, and four percent received a grant prior to requesting equity funding for the first time. Entrepreneurial ventures have been, on average, founded by just under three founders, who, in 38 percent of ventures, have founded another venture prior to requesting funding. Lastly, 42 percent of the early-stage high-tech ventures in our sample are located in London.

Insert Table 2 about here

Antecedents Of Multi-Type Co-Investments

Table 3 presents the results for matched-samples truncated Poisson regressions on the number of first-round investor types (columns 1-4) and Tobit regressions on first-round investor type diversity (columns 5-8). Models 1, 2, 5, and 6 separately include the two independent variables, columns 3 and 7 include them simultaneously, and columns 4 and 8 include industry × investment year fixed effects. All specifications support our hypotheses as we find significant and positive associations between, on the one hand, ex-ante cash levels (H1) and prior multi-type co-investment experience (H2), and both the number of investor types and investor type diversity on the other hand.[9] These effects remain statistically similar when controlling for time-varying industry effects in columns 4 and 8.

[9]In additional analyses, we did not observe curvilinear effects for cash.

Marginal means plotted in figure 2 reveal that these effects are also economically sizeable. Ventures with a 20 percent cash ratio have an expected number of investor types of 1.40, which increases by 10 percent to 1.54 for ventures with an 80 percent cash ratio. Ventures without multi-type co-investment experience have an expected number of investor types of 1.36, which increases by 19 percent to 1.62 for ventures with multi-type co-investment experience.

Insert Table 3 and Figure 2 about here

Robustness Checks

We verify the robustness of our findings fourfold. First, the value of adding an additional investor type might be decreasing in the number of investor types. That is, the choice to add a second investor type to the equity mix can be completely different compared to adding a third or fourth investor type. To account for these decreasing marginal effects, we ran ordered logit models and verified the robustness of our findings. Next, we also account for the over-dispersion of zero values by additionally running zero-inflated Poisson (ZIP) and zero-inflated ordered logit (ZIOL) models (Lambert, 1992). Zero inflation is modeled through a first-stage binary choice model between the zero outcomes on the one hand and non-zero count outcomes on the other hand. Our first stage consists of logit models with deal size as a predictor. To empirically accommodate the lack of zeros (but over-dispersion of ones) in our data, we linearly transform the dependent variable by subtracting the value of one. We find similar results. Our results are furthermore not driven by the categorization of investor types or by the time frame that we used. Specifically, our results hold when we use a narrow categorization of investor types (i.e., not differentiating based on investors' affiliation), and when only including deals from 2011-2020, when crowdfunding initially appeared and other investor types such as accelerators became more prevalent.

Testing Alternative Explanations

There might be several alternative explanations as to why ventures attract multi-type co-investments, which we rule out in table A5. First, ventures in higher need of financial resources might attract funding from more investors or more investor types. Investors typically syndicate investments to fund bigger projects (Manigart et al., 2006), which might be particularly important to smaller investors such as angels, accelerators, or crowdfund campaigns. Controlling for the natural logarithm of the deal size (*Deal size*), however, does not change our results.[10]

Second, it might be that some investors persistently co-invest with other investor types. Such past shared co-investments might motivate – or demotivate – to co-invest again (Alexy et al., 2012). For instance, certain angel investors might have good (bad) experiences with crowdfunding platforms and, therefore, might be more (less) inclined to co-invest again with crowdfund investors. However, controlling for the history between co-investors through the number of past shared connections resulting from prior co-investments (*Co-investors' history*) does not alter our results.

Third, ventures that attract funding from multiple investors have, intuitively, a higher likelihood of investor-type diversity. We rule out this explanation by additionally matching on the number of first-round investors and find that our results hold.

Insert Table A5 about here

Source Of Cash And The Great Financial Crisis

Table A6, columns 1-4, account for the source of cash by controlling for changes in equity and (short and long-term) liabilities. We find that the cash coefficient remains positive and statistically significant, which implies that operational cash is most likely driving our effects. Next, columns 5-8 present evidence of the relative importance of cash and multi-type co-investment experience

[10] Key reasons to not automatically include deal size are the many missing values and the multiple, and sometimes inexplicably large, discrepancies between our three data sources. Furthermore, in contrast to all other variables, the deal size is only observed after the funding has been raised.

during the GFC. Bank financing was hard to obtain during the GFC, particularly for young high-tech ventures without collateral or a historical track record of successful lending. Investors, however, also found it much harder to find good deals. Both exacerbated the importance of cash, which is why we expect that entrepreneurial power through ex-ante cash is particularly pronounced during the GFC. Columns 5-8 in table A6 show that the main effects of both our independent variables remain, but that cash was indeed significantly more important during the GFC than during other periods. Moreover, in non-crises times ventures with 80% cash levels have, on average, five percent higher investor-type diversity than comparable ventures with 20% cash levels, but during the GFC, investor-type diversity increases by 44% for the same increase in cash levels.

Post-Hoc Analyses: Implications Of Multi-Type Co-Investments

Implications of resource-dependence tactics are not well understood (Hillman et al., 2009). While raising multi-type co-investment funding can reduce power dependence on first investors, how it affects future venture development including follow-on funding is not straightforward. That is, increased investor heterogeneity could hinder follow-on funding because it could lead to more investor conflict, organizational complexity, and weaker reputation effects driven by the more difficult disentanglement of individual investor's contributions (Sorenson & Stuart, 2008). On the other hand, multi-type co-investments also bring a larger and more diverse set of complementary resources, and as such, could activate ventures' growth potential quicker and facilitate follow-on funding (Dyer et al., 2018).

We use longitudinal data on the entire funding trajectory of all ventures to examine venture-level implications of multi-type co-investments. First, we model the likelihood of follow-on funding in $t + 1$ via population-averaged generalized estimation equations (GEE) based on multivariate-distance kernel-matched samples. GEE models have the attractive feature of specifically accounting for the correlated structure of our panel data. We use the same matching specification as before but additionally match on the cash ratio and multi-type co-investment experience one year before the first investment round. After matching all ventures that attracted multi-type co-investments in their

first round with similar ventures that have not attracted such investments, we regress the likelihood of attracting follow-on funding onto our independent and control variables. We additionally control for the venture's age at the first investment round (*Venture age at round 1*) and the independent variables from the analyses on the antecedents (*Cash ratio* and *Prior co-investment experience*). We furthermore include industry, year, and investment round fixed effects, and dummies that capture the duration between investment rounds. The latter account for a timing effect driven by the number of years that have passed after the last funding round. Second, we run multiple-event Cox-proportional hazard models with time-varying covariates and industry fixed effects to examine the effect of multi-type co-investments on the duration between two subsequent investment rounds. In both analyses, we specifically account for left censoring (i.e., ventures only enter the sample on their first investment round) and right censoring (i.e., ventures leave the sample after bankruptcy, M&A transactions, or an IPO).

Table 4 presents the results of the GEE regressions in which we measure the multi-type co-investment nature of the last investment round threefold: (i) whether an investment round was funded by multiple investor types, (ii) the number of distinct investor types, and (iii) whether the first investment round was funded by multiple investor types. Models 1 to 6 subsequently introduce the three independent variables. Models 7 and 8 account for heterogeneous effects across investment rounds by including interaction terms (unreported) between *Multiple investor types* and all investment round numbers. Uneven models do not control for deal size, whereas even columns do. All model specifications suggest that simultaneously attracting multiple investor types increases the likelihood of follow-on funding. This effect is also economically significant as the likelihood of follow-on funding increases from 14 percent to 19 percent (i.e., a 35 percent increase) if the most recent funding round was a multi-type co-investment. This finding is robust when we only consider venture-investment year observations (presented in table A7), and when we only consider the first-investment round (presented in table A8). The effect of multi-type co-investments is furthermore not restricted to an increased funding likelihood in $t + 1$ but continues to predict follow-on likelihood until five years after the deal (see table A9).

Insert Table 4 about here

Next, we also examine the speed of follow-on funding and the impact of simultaneously attracting funding from multiple investor types. Table 5 presents the results of Cox proportional hazard models using the same specification as earlier models. Specifically, we find that ventures with multi-type co-investments raise follow-on funding faster than ventures without such investments (i.e., the hazard rate of attracting follow-on funding increases). For instance, covariate-adjusted event estimates suggest that 50 percent of ventures with multi-type rounds raised follow-on funding five years after their latest investment round, whereas only 25 percent of ventures without such investments have raised follow-on funding by then.[11] Interestingly, column 1 shows that the effect of first-round multi-type co-investments is sticky over investment rounds as it continues to predict the time between any two investment rounds (and not just between the first two rounds).

Insert Table 5 about here

Our findings on the implications of multi-type co-investments are also robust when we run extended Probit regressions on the likelihood of second-round funding in $t + 1$ that specifically account for endogenous selection and treatment. Moreover, we first account for censoring due to IPO, M&A, or bankruptcy by regressing the censoring indicator (i.e., ventures that could not have raised second-round funding in $t + 1$) onto a dummy that takes on one if the first investment round occurred in the first quarter of the year and a set of investment year FEs. In the second stage, we account for endogenous treatment by regressing a multi-type co-investment dummy[12] onto the independent and control variables from the first set of analyses on antecedents and thereby allow for heterogeneous correlation structures in the multi-type and non-multi-type sub-samples. Lastly, in the third stage, we regress the conditional likelihood of second-round funding in $t + 1$ onto our

[11] See also figure A3 for covariate-adjusted Kaplan-Meier event curves.

[12] Results do not change when applying ordinal endogenous treatment based on the number of investor types.

independent and control variables, accounting for the selection and treatment adjustments from the first two stages. We, again, find positive and highly significant treatment effects (ATT = 0.12; $p < 0.001$).

DISCUSSION AND CONCLUSION

Discussion

Raising capital from powerful investors can provide unique resources and substantial added value to less powerful entrepreneurial ventures but can also cause power imbalances and expose the venture to potential opportunistic behavior (Katila et al., 2008). This risk exposure is particularly concerning for entrepreneurial ventures as this may hinder their innovative output, growth, and consequently, their added value to the real economy (Pahnke et al., 2015). Resource dependence scholars have identified various mechanisms that organizations use to limit their dependence on key resource providers (e.g., Hillman et al., 2009). These mechanisms (e.g., board interlocks, M&A, or political appointments) are, however, not readily available to young entrepreneurial ventures. Other defenses that are more applicable to an entrepreneurial context include legal, timing, and social defenses (Hallen et al., 2014; Katila et al., 2008) or even relocation (De Prijcker et al., 2019). It is, however, not clear from past studies how entrepreneurial ventures manage resource dependence in their first interactions with resource providers when they cannot resort to established defense mechanisms. This is important to know, as initial interactions with key resource providers such as investors lay the basis for future dependence relationships and are often even the only dependence on investors.

We have extended resource dependence theory by introducing a new strategy in how ventures may manage dependence on their first resource providers (Emerson, 1962). Specifically, we have argued that a "Divide and Conquer"-strategy, i.e., simultaneously attracting funding from multiple investor types, each with their own idiosyncratic goals, visions, and strategies (Drover et al., 2017), allows entrepreneurs to limit power imbalances. Moreover, the inherent social defenses, reduced individual investor ownership stakes, and potential exploitation of dissonance between investors in

multi-type co-investments increase entrepreneurial control and reduce investor opportunism risk. We have furthermore shown the practical relevance of this investment strategy by showing that multi-type co-investments facilitate future fundraising through both an increased likelihood and speed of follow-on funding. It hence appears that entrepreneurs who have successfully reduced resource dependence on their first equity investors have a higher propensity to again attract equity financing. Having early defenses in place might comfort entrepreneurs to partner again with equity investors, or alternatively, might signal a strong and fertile ground for subsequent investors to add and extract value.

In particular, we contribute to the growing literature on tie formation in entrepreneurial ventures (Hallen et al., 2014; Katila et al., 2021, 2008). By modeling the risk of opportunistic behavior as a function of defense mechanisms, extant studies suggest that ventures first seek defenses and that the effectiveness of existing defenses then influences the amount of opportunism risk they are willing to take. We extend these studies' contributions by highlighting that ventures already in their first investment round raise equity through multi-type co-investments to limit future power imbalances. We furthermore answer the call of Wry et al. (2013) to step away from dyadic resource dependence structures by specifically considering ventures' complex and intricate resource environments on which they rely for critical resources.

Our results further uncover heterogeneity based on the ventures that use this defense mechanism. Indeed, while potentially favorable to reduce opportunistic investor behavior, not all ventures have the ability to raise equity from multiple investor types. Our empirical analyses on 2,380 first investment rounds in U.K. entrepreneurial ventures show that ventures with higher ex-ante cash levels and those led by entrepreneurs with prior multi-type co-investment experience are able to attract funding through a more diverse investor base. First, driven by a less urgent resource need, considerable financial leeway provides entrepreneurs with negotiating power as they can still walk away from unfavorable investment conditions. This allows them to capitalize on the heterogeneity in their resource environment by attracting funding through multi-type co-investments. Second,

entrepreneurial multi-type co-investment experience is also important as it reveals valuable knowledge of the financial resource environment and bolsters entrepreneurs' confidence to manage the complexities inherent to multi-type co-investments.

Our contributions further reach beyond resource dependence theory. Moreover, we extended prior entrepreneurial finance research by observing the whole financial equity landscape, rather than focusing on one or two investor types in isolation, and provided new insights into the dynamic and interactive nature of today's entrepreneurial finance environment (e.g., Cumming et al., 2019). Moreover, we have shown that already in the first investment round, 25 percent of investments are simultaneously funded by various investor types. Our theorizing and interview insights furthermore elucidated entrepreneurs' motivation to engage in multi-type co-investments. Lastly, we have shed light on important venture-level implications of multi-type co-investments.

Limitations

As with any study, ours is also not without limitations. First, we have focused on ex-ante cash levels and past experience with multi-type co-investments as measures for entrepreneurial negotiating power. Sufficient financial resources and a relevant network allow entrepreneurs to walk away from unfavorable deals, strengthening their negotiating power. Still, other unobservable entrepreneurial characteristics such as strong investor networks without established investment ties or investor characteristics such as the pressure to invest for fund-based investors might also shape the power balance between the investor(s) and entrepreneurs during investment negotiations. Our understanding of resource dependence management at tie formation would benefit greatly from scholarly attention to other sources of relative negotiating power. For instance, our interviews indicated that a friend-investor (such as a befriended angel investor) is also a defense mechanism commonly used by entrepreneurial ventures to protect against potentially opportunistic investors.

Second, insights from resource dependence theory and qualitative interviews suggest that multi-type co-investments are a technique entrepreneurs purposefully use to prevent resource de-

pendence on their first investors. In this paper, we have also looked at the implications of multi-type co-investments on follow-on funding, but we have not empirically validated their effectiveness. That is, while entrepreneurs might be convinced of the benefits of multi-type co-investments, it is not yet clear whether they effectively prevent power imbalances or under what conditions. We leave this for future research.

Third, as a result of our extensive data collection strategy, we believe that we were able to capture almost all relevant equity investments during our time frame. It is, nevertheless, possible that some investor types are underrepresented in traditional data sources. This bias would, however, suppress investor-type diversity, and as such, strengthen our results.

Conclusion

The present study extends our current understanding of resource dependence in entrepreneurial ventures. Moreover, we have studied how ventures manage their resource dependence on their first key resource providers when they cannot resort to established defense mechanisms. Drawing from resource dependence theory and qualitative interview insights, we have theorized and shown that entrepreneurial ventures with more negotiation power (through higher ex-ante cash levels) and with prior experience with co-investments between different investor types reduce resource dependence by simultaneously attracting equity from a more diverse set of investors. We have also shown that these investments facilitate the likelihood and speed of follow-on funding. This research has both theoretical and practical relevance as much of the extant literature is noteworthy silent about resource dependence in initial relationships, whereas this matters greatly for all equity-seeking ventures, but also for investors and policymakers.

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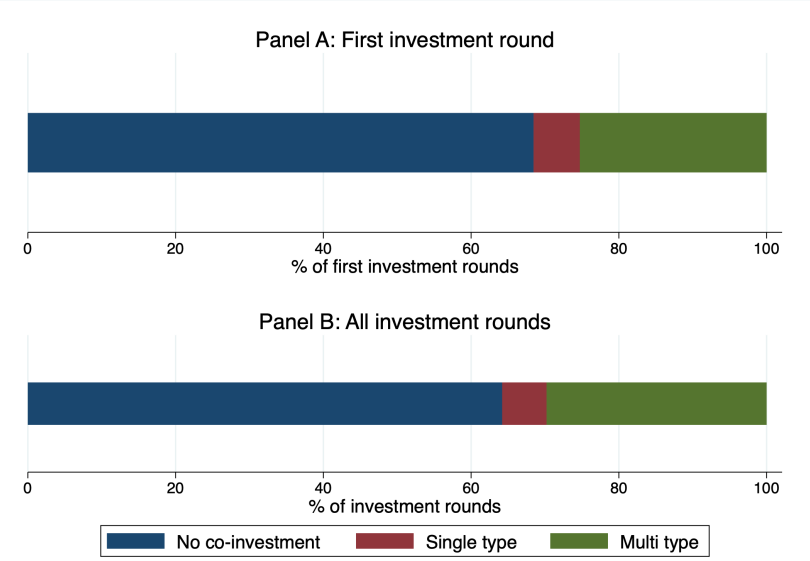
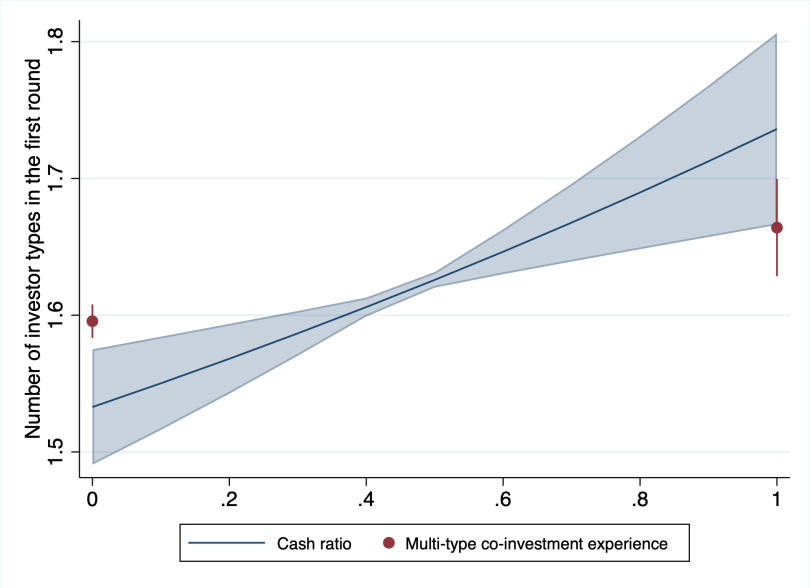
TABLES AND FIGURES

FIGURE 1: Investments by co-investment type



Notes: No co-investments are investments with exactly one investor, single-type co-investments are investments in which multiple investors of the same type co-invest (e.g., two or more angels), multi-type co-investments are co-investments of different investor types (e.g., two angels co-invest with an accelerator).

FIGURE 2: Marginal means plot



Notes: This figure presents marginal means (including 95% confidence bands) for ex-ante cash levels and prior multi-type co-investment experience after truncated Poisson regressions on the number of investor types in the first round (i.e., model 8 in table 3).

TABLE 1: Distribution of investments by number of investor types

	First round		Later rounds		All rounds	
#investor types	#investments	%	#investments	%	#investments	%
1	1,744	73.28	1,236	58.03	3,008	66.07
2	477	20.04	508	23.85	988	21.70
3	131	5.50	230	10.80	367	8.06
4	21	0.88	94	4.41	119	2.61
5	7	0.29	43	2.02	51	1.12
6			17	0.80	18	0.40
7			1	0.05	1	0.02
8			1	0.05	1	0.02
N	2,380	100.00	2,130	100.00	4,553	100.00

Notes: This table presents the distribution of investments based on the number of investor types on the sample used in regression analyses. Separate distributions are presented for the first round, later round, and all rounds together.

TABLE 2: Summary statistics

	Count	Mean	Median	SD	Min	Max
Number of investor types	2,380	1.35	1.00	0.65	1.00	5.00
Cash ratio	2,380	0.23	0.03	0.32	0.00	1.00
Prior co-investment experience	2,380	0.18	0.00	0.38	0.00	1.00
Venture age	2,380	2.26	1.46	2.45	0.00	9.99
Venture size	2,380	3.18	3.19	3.21	0.00	13.92
Intangibles	2,380	0.08	0.00	0.21	0.00	1.00
Tangibles	2,380	0.06	0.00	0.14	0.00	1.00
ST liabilities	2,380	0.30	0.06	0.38	0.00	1.00
LT liabilities	2,380	0.10	0.00	0.26	0.00	1.00
Profitable	2,380	0.33	0.00	0.47	0.00	1.00
Past growth rate	2,380	6.60	0.00	30.49	-0.93	230.30
Patents	2,380	0.11	0.00	0.32	0.00	1.00
Grant received	2,380	0.04	0.00	0.20	0.00	1.00
Founding team size	2,380	2.90	2.00	2.93	1.00	105.00
Entrepreneurial experience	2,380	0.38	0.00	0.49	0.00	1.00
London	2,380	0.42	0.00	0.49	0.00	1.00

Notes: This table presents summary statistics for the first investment round on their matched estimation samples (columns (7) and (8) in table 3).

TABLE 3: Matched-samples truncated Poisson and Tobit regressions

	DV = number of first-round investor types				DV = first-round investor type diversity			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash ratio	0.18***		0.17***	0.20**	0.10**		0.10*	0.11*
	(0.05)		(0.05)	(0.06)	(0.04)		(0.04)	(0.05)
Prior co-inv. exp.		0.19***	0.21***	0.20***		0.08**	0.09***	0.08**
		(0.04)	(0.04)	(0.05)		(0.03)	(0.03)	(0.03)
Venture age	-0.03***	-0.03***	-0.02**	-0.02*	-0.01*	-0.02**	-0.01*	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)
Venture size	0.01	0.03**	0.01	0.01	0.01	0.02***	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
Tangibles	-0.39	-0.22	-0.36	-0.34	-0.26	-0.15	-0.25	-0.23
	(0.32)	(0.14)	(0.31)	(0.34)	(0.18)	(0.08)	(0.17)	(0.18)
Intangibles	-0.00	-0.10	-0.01	-0.06	-0.01	-0.05	-0.01	-0.03
	(0.11)	(0.08)	(0.11)	(0.08)	(0.06)	(0.04)	(0.06)	(0.04)
ST liabilities	-0.09	-0.14***	-0.09	-0.10	-0.02	-0.04	-0.02	-0.03
	(0.05)	(0.03)	(0.05)	(0.06)	(0.03)	(0.02)	(0.03)	(0.03)
LT liabilities	0.06	0.05	0.08	0.11	0.03	0.01	0.04	0.05
	(0.07)	(0.07)	(0.07)	(0.08)	(0.05)	(0.04)	(0.05)	(0.06)
Profitable	0.04	0.03	0.03	0.05	0.01	0.00	0.01	0.02
	(0.03)	(0.05)	(0.04)	(0.03)	(0.02)	(0.03)	(0.02)	(0.02)
Past growth rate	0.00***	0.00***	0.00***	0.00***	0.00***	0.00**	0.00***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Patents	0.10	0.09	0.09	0.06	0.06	0.05	0.05	0.04
	(0.07)	(0.07)	(0.08)	(0.08)	(0.04)	(0.04)	(0.04)	(0.04)
Grant received	0.32***	0.33***	0.33***	0.35***	0.21***	0.22***	0.21***	0.24***
	(0.07)	(0.06)	(0.07)	(0.07)	(0.04)	(0.04)	(0.04)	(0.04)
Founding team size	-0.00	-0.01	-0.01	-0.00	-0.00	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Entrepreneurial exp.	-0.01	-0.03	-0.02	-0.02	-0.00	-0.01	-0.00	-0.00
	(0.03)	(0.03)	(0.03)	(0.04)	(0.02)	(0.01)	(0.02)	(0.02)
London	-0.01	-0.01	0.00	0.00	-0.00	0.00	0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)
Industry FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Industry × year FE	No	No	No	Yes	No	No	No	Yes
Number of ventures	2,382	2,567	2,382	2,382	2,380	2,565	2,380	2,380
Log Likelihood	-4,525.48	-4,834.75	-4,515.61	-4,386.27	-3,417.41	-3,667.84	-3,407.94	-3,168.15
χ^2 / Pseudo R^2	9,050.97	9,691.49	9,031.22	8,772.54	0.03	0.03	0.04	0.10

Notes: This table presents cross-sectional regression results on matched-samples first-round investments. Prior co-inv. exp. denotes prior multi-type co-investment experience. Goodness-of-fit statistics include χ^2 and pseudo R^2 for the Poisson and Tobit regressions, respectively. Robust standard errors in parentheses, clustered at the industry level; constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE 4: Matched-samples GEE population-averaged regressions

	DV = Probability of follow-on funding in $t + 1$							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Multiple investor types	0.38***	0.20*					0.48***	0.30**
	(0.08)	(0.08)					(0.09)	(0.10)
Number of investor types			0.29***	0.20***				
			(0.04)	(0.04)				
Round 1 = multi-type					0.41***	0.28***		
					(0.08)	(0.08)		
Venture size	0.03**	0.03*	0.03*	0.03*	0.03**	0.03*	0.03**	0.03*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Venture age	-0.28***	-0.25***	-0.27***	-0.25***	-0.25***	-0.23***	-0.28***	-0.25***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Venture age at round 1	0.17**	0.16*	0.16**	0.16*	0.14*	0.14*	0.17**	0.16*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)
Cash ratio	0.14	0.04	0.12	0.02	0.16	0.06	0.14	0.05
	(0.13)	(0.16)	(0.13)	(0.16)	(0.13)	(0.16)	(0.13)	(0.16)
Tangibles	-0.28	-0.50	-0.29	-0.50	-0.31	-0.51	-0.27	-0.48
	(0.31)	(0.35)	(0.32)	(0.35)	(0.32)	(0.35)	(0.31)	(0.35)
Intangibles	-0.46*	-0.54*	-0.44*	-0.53*	-0.47*	-0.55**	-0.48*	-0.56**
	(0.19)	(0.21)	(0.19)	(0.21)	(0.19)	(0.21)	(0.19)	(0.21)
ST liabilities	0.02	0.00	0.03	0.00	0.02	0.00	0.02	0.01
	(0.11)	(0.13)	(0.11)	(0.13)	(0.11)	(0.13)	(0.11)	(0.13)
LT liabilities	-0.21	-0.34*	-0.22	-0.35**	-0.21	-0.33*	-0.21	-0.33*
	(0.12)	(0.14)	(0.12)	(0.14)	(0.12)	(0.14)	(0.12)	(0.14)
Profitable	0.07	0.11	0.06	0.11	0.07	0.11	0.07	0.11
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)
Past growth rate	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Patents	0.47***	0.50***	0.45***	0.49***	0.47***	0.50***	0.46***	0.49***
	(0.10)	(0.11)	(0.09)	(0.11)	(0.10)	(0.11)	(0.10)	(0.11)
Grant	0.45	0.52	0.45	0.50	0.44	0.50	0.44	0.50
	(0.24)	(0.27)	(0.23)	(0.27)	(0.24)	(0.27)	(0.24)	(0.27)
Founding team size	-0.01	-0.02	-0.01	-0.02	-0.00	-0.01	-0.01	-0.02
	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)	(0.01)	(0.02)
Entrepreneurial experience	-0.06	-0.07	-0.05	-0.06	-0.05	-0.07	-0.05	-0.07
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)
London	0.16	0.20*	0.15	0.19*	0.17*	0.20*	0.16*	0.21*
	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.09)
Co-investment history	0.04***	0.04***	0.03**	0.03**	0.05***	0.04***	0.04***	0.04***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Prior co-inv. exp.	0.23*	0.18	0.22*	0.18	0.23*	0.18	0.23*	0.18
	(0.10)	(0.11)	(0.09)	(0.11)	(0.10)	(0.11)	(0.10)	(0.11)
Deal value		0.02*		0.02		0.02*		0.02*
		(0.01)		(0.01)		(0.01)		(0.01)
Investment round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time since last round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	No	No	No
Multi-type × Inv. round FE	No	No	No	No	No	No	Yes	Yes
Number of observations	8,998	6,421	8,998	6,421	9,030	6,448	8,998	6,418
Number of ventures	2,483	1,856	2,483	1,856	2,483	1,856	2,483	1,856
χ^2	400.34	308.12	419.71	314.57	403.50	310.02	1,951.47	1,386.72

Notes: This table presents longitudinal GEE results based on matched samples on all investment rounds in U.K. early-stage high-tech ventures. Robust standard errors in parentheses, clustered at the venture level; constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

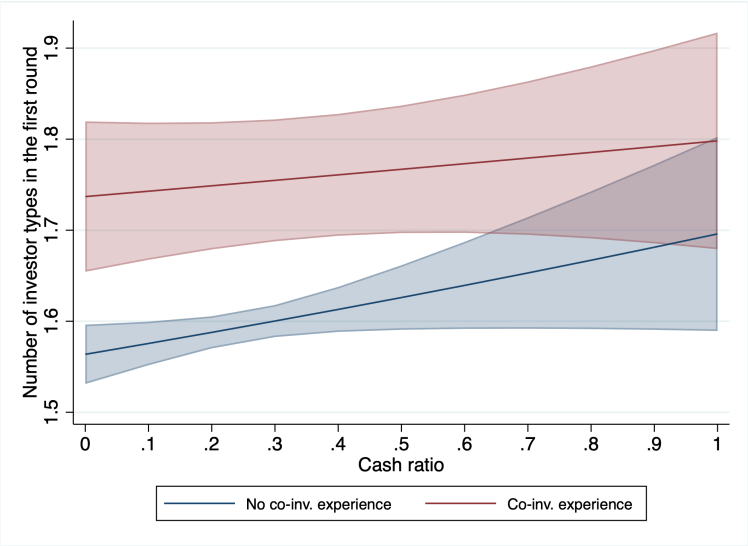
TABLE 5: Cox proportional hazard model with time-varying covariates

	DV: Time to next round			
	(1)	(2)	(3)	(4)
Time independent covariates				
Round 1 = multi-type	0.26***			
	(0.04)			
Founding team size	0.00	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.01)	(0.01)
Entrepreneurial experience	-0.13**	-0.14**	-0.13**	-0.12**
	(0.05)	(0.05)	(0.05)	(0.05)
London	0.03	0.04	0.04	0.04
	(0.05)	(0.05)	(0.05)	(0.05)
Prior co-investment experience	0.11*	0.14**	0.14**	0.14**
	(0.05)	(0.05)	(0.05)	(0.05)
Venture age at round 1	-0.09***	-0.09***	-0.09***	-0.09***
	(0.01)	(0.01)	(0.01)	(0.01)
Industry FE	Yes	Yes	Yes	Yes
Time-varying covariates				
Multiple investor types			0.16***	
			(0.04)	
Number of investor types				0.10***
				(0.02)
Venture size	0.07***	0.07***	0.07***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)
Cash ratio	0.29***	0.30***	0.26***	0.25***
	(0.07)	(0.07)	(0.07)	(0.07)
Tangibles	-0.05	-0.05	-0.03	-0.04
	(0.15)	(0.15)	(0.16)	(0.16)
Intangibles	-0.14	-0.14	-0.18	-0.18
	(0.10)	(0.10)	(0.09)	(0.09)
ST liabilities	0.05	0.05	0.05	0.05
	(0.05)	(0.05)	(0.05)	(0.05)
LT liabilities	0.03	0.03	0.04	0.04
	(0.06)	(0.06)	(0.06)	(0.06)
Profitable	0.37***	0.37***	0.38***	0.38***
	(0.03)	(0.03)	(0.04)	(0.04)
Past growth rate	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)
Patents	0.28***	0.30***	0.31***	0.30***
	(0.05)	(0.05)	(0.05)	(0.05)
Grant	0.58***	0.60***	0.56***	0.55***
	(0.09)	(0.09)	(0.10)	(0.10)
Co-investment history	0.02***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)
Number of observations	12,236	12,236	12,050	12,050
Number of ventures	4,179	4,179	4,179	4,179
Log Likelihood	-15,253.60	-15,269.63	-14,887.32	-14,884.04
χ^2	570.75	542.76	555.18	9,634.99

Notes: Robust standard errors in parentheses, clustered at the venture level; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

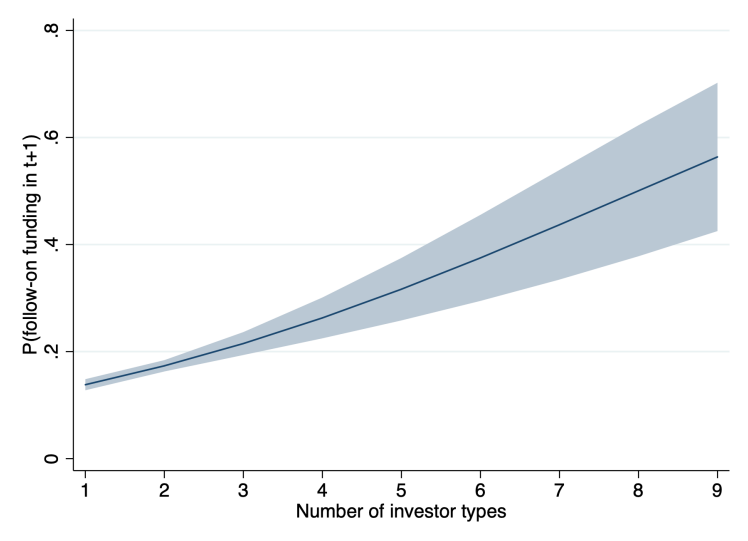
APPENDIX

FIGURE A1: Marginal effect plot of the interaction between cash ratio and prior multi-type co-investment experience



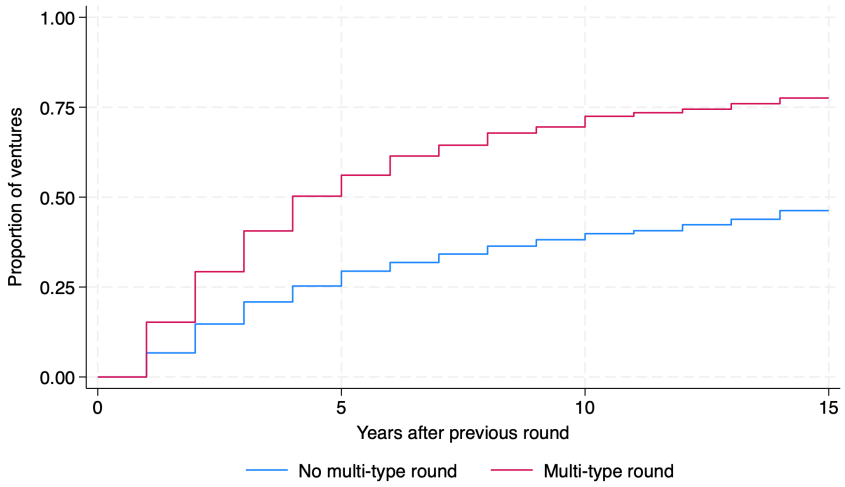
Notes: This figure presents marginal effect plots (including 95% confidence bands) for the interaction between ex-ante cash levels and prior multi-type co-investment experience after truncated Poisson regressions on the number of investor types in the first round (i.e., model 4 in table A5).

FIGURE A2: Marginal effect plot of the number of investor types on the likelihood of follow-on funding



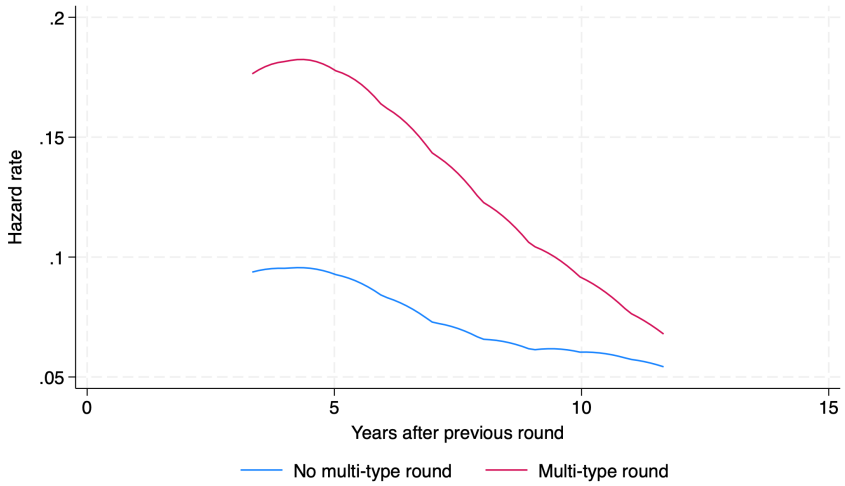
Notes: This figure presents the marginal effects plot (including 95% confidence bands) of the number of investor types on the probability of follow-on funding in $t + 1$ after GEE regressions based on matched samples (see table 4).

FIGURE A3: Covariate-adjusted Kaplan-Meier event estimates



Notes: This figure presents Kaplan-Meier event estimates by the multi-type nature of the most recent investment round, adjusted for all covariates included in the Cox-proportional hazard models from table 5. Specifically, it shows the proportion of ventures that have raised follow-on funding by a given analysis time (in years).

FIGURE A4: Smoothed hazard estimates



Notes: This figure presents smoothed hazard estimates by the multi-type nature of the most recent investment round. Specifically, it shows the hazard rate $\lambda(t)$ by analysis time (in years), representing the likelihood that a venture will attract equity in the following year, conditional on not having raised equity since the last investment round.

TABLE A1: Distribution of ventures by industry classification

NACE 2 code	and industry description	Number of ventures	Percent
20	Manufacture of chemicals and chemical products	34	1.40
26	Manufacture of computer, electronic and optical products	85	3.51
27	Manufacture of electrical equipment	36	1.49
28	Manufacture of machinery and equipment	49	2.02
29	Manufacture of motor vehicles, trailers and semi-trailers	11	0.45
30	Manufacture of other transport equipment	35	1.44
59	Motion picture, video and television programme production, sound recording, and music publishing activities	75	3.09
60	Programming and broadcasting activities	9	0.37
61	Telecommunications	100	4.13
62	Computer programming, consultancy and related activities	1,375	56.72
63	Information service activities	260	10.73
71	Architectural and engineering activities; technical testing and analysis	59	2.43
72	Scientific research and development	296	12.21
N		2,424	100.00

TABLE A2: Distribution of investors by detailed classification

	First round		Later rounds		All rounds	
	#investments	%	#investments	%	#investments	%
Venture Capital	3,494	43.72	2,964	43.16	6,458	43.46
Business Angel	1,256	15.72	733	10.67	1,989	13.39
Corporate VC	707	8.85	893	13.00	1,600	10.77
Bank VC	569	7.12	662	9.64	1,231	8.28
Incubator/Accelerator	518	6.48	237	3.45	755	5.08
Private Equity	429	5.37	496	7.22	925	6.23
Crowdfunding	383	4.79	271	3.95	654	4.40
Government VC	232	2.90	208	3.03	440	2.96
Bank PE	179	2.24	215	3.13	394	2.65
Corporate INC/ACC	107	1.34	57	0.83	164	1.10
Other	57	0.71	53	0.77	110	0.74
Government PE	29	0.36	30	0.44	59	0.40
Family Office	14	0.18	14	0.20	28	0.19
Sovereign Wealth Fund	6	0.08	27	0.39	33	0.22
Initial Coin Offering	9	0.11	3	0.04	12	0.08
Hedge Fund	3	0.04	4	0.06	7	0.05
Total	7,992	100.00	6,867	100.00	14,859	100.00

Notes: This table presents the distribution of investor types using the detailed classification at the company × investment round × investor level. Separate distributions are presented for the first round, later round, and all rounds together. Other investor types comprise of other equity investors such as investment management firms and mutual funds. It is generally difficult to find good data on BA investments due to the informal nature. We have nevertheless verified the validity of our data by cross-referencing our investor type distributions with recent industry reports and are confident that we have relied on the best available data.

TABLE A3: Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
(1)	Number of investor types	1.00																					
(2)	Multiple investor types	0.81***	1.00																				
(3)	Round 1 = multi-type	0.47***	0.58***	1.00																			
(4)	Venture age	0.07***	0.05**	0.05**	1.00																		
(5)	Age at first round	−0.04*	−0.04*	−0.01	0.64***	1.00																	
(6)	Venture size	0.16***	0.12***	0.10***	0.67***	0.37***	1.00																
(7)	Cash ratio	0.19***	0.16***	0.15***	0.23***	0.09***	0.46***	1.00															
(8)	Tangibles	−0.03	−0.01	−0.03	0.16***	0.19***	0.12***	−0.05**	1.00														
(9)	Intangibles	−0.05**	−0.04*	−0.03	0.14***	0.11***	0.25***	−0.21***	−0.09***	1.00													
(10)	ST liabilities	0.00	0.02	−0.01	0.35***	0.33***	0.25***	0.08***	0.28***	0.06***	1.00												
(11)	LT liabilities	0.01	0.02	0.01	0.18***	0.15***	0.18***	0.03	0.13***	0.11***	0.17***	1.00											
(12)	Profitable	0.15***	0.12***	0.05**	0.28***	0.20***	0.36***	0.25***	0.12***	0.14***	0.31***	0.04*	1.00										
(13)	Past growth rate	0.05**	0.06***	0.04*	−0.04*	0.03	0.00	0.10***	0.06***	−0.02	0.04*	0.00	0.10***	1.00									
(14)	Patents	0.11***	0.08***	0.07***	0.36***	0.08***	0.40***	0.17***	0.03*	0.17***	0.06***	0.11***	0.18***	0.00	1.00								
(15)	Grant received	0.11***	0.08***	0.08***	0.14***	−0.05**	0.14***	0.11***	−0.03	0.03	−0.01	−0.01	0.07***	0.04*	0.19***	1.00							
(16)	Founding team size	0.03	0.03	0.03	0.04*	−0.10***	0.10***	−0.03	−0.03*	0.04*	−0.09***	−0.01	−0.03	−0.07***	0.09***	0.04*	1.00						
(17)	Entrepreneurial exp.	0.00	0.02	−0.01	−0.15***	−0.13***	−0.04*	−0.05**	−0.05**	−0.03	−0.09***	0.00	−0.08***	−0.04*	−0.04*	−0.04*	0.17***	1.00					
(18)	London	0.01	0.00	−0.02	−0.14***	−0.07***	−0.06***	−0.04*	−0.10***	−0.04*	−0.05*	−0.05**	−0.05**	0.02	−0.19***	−0.08***	−0.04*	−0.01	1.00				
(19)	Number of investors	0.81***	0.63***	0.33***	0.06**	−0.07***	0.17***	0.20***	−0.05*	−0.06***	−0.02	0.00	0.16***	0.04*	0.11***	0.11***	0.07***	0.02	0.03	1.00			
(20)	Co-investors' history	0.39***	0.34***	0.21***	0.10***	0.01	0.14***	0.14***	−0.01	−0.02	0.00	−0.01	0.13***	0.04*	0.15***	0.11***	0.02	0.05**	−0.07***	0.46***	1.00		
(21)	Prior co-investment exp.	0.09***	0.09***	0.13***	0.06**	0.02	0.13***	0.13***	−0.02	0.01	−0.05**	−0.03	0.07***	−0.02	0.15***	0.07***	0.12***	0.13***	−0.13***	0.10***	0.14***	1.00	
(22)	Ln(Deal value (kEUR))	0.29***	0.26***	0.14***	0.10***	−0.05**	0.15***	0.09***	−0.01	0.00	−0.01	0.01	0.11***	−0.01	0.14***	0.10***	0.02	0.05**	−0.01	0.34***	0.19***	0.07***	1.00

Notes: This table presents correlations between independent and control variables on the estimation sample for all investment rounds; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A4: Statistics on matching quality

		Mean treated	Mean control	% bias	% reduction in |bias|	T-test
Matching variables						
Total assets	U	3.4264	3.2114	7.2		1.77
	M	3.4264	3.3305	3.2	55.4	0.68
Year of incorp.	U	2013.0	2013.3	-8.9		-2.7**
	M	2013.0	2012.8	6.4	28.4	1.45
Deal year	U	2014.7	2015.0	-5.9		-1.70
	M	2014.7	2014.9	-5.5	7.6	-1.20
Industry = 1	U	0.0341	0.0351	-0.6		-0.10
	M	0.0341	0.0265	4.2	-656.8	0.98
Industry = 2	U	0.0081	0.0140	-5.6		-1.60
	M	0.0081	0.0060	2.0	64.2	0.55
Industry = 3	U	0.0130	0.0173	-3.5		-1.00
	M	0.0130	0.0144	-1.2	66.1	-0.20
Industry = 4	U	0.0016	0.0058	-6.8		-1.80
	M	0.0016	0.0000	2.7	60.7	1.16
Industry = 5	U	0.0171	0.0148	1.8		0.55
	M	0.0171	0.0120	4.0	-123.9	0.92
Industry = 6	U	0.0171	0.0362	-11.9		-3.3**
	M	0.0171	0.0169	0.1	99.0	0.03
Industry = 7	U	0.0016	0.0049	-5.8		-1.50
	M	0.0016	0.0000	2.8	51.0	1.16
Industry = 8	U	0.0284	0.0384	-5.6		-1.60
	M	0.0284	0.0253	1.7	68.5	0.43
Industry = 9	U	0.5852	0.5662	3.8		1.17
	M	0.5852	0.6077	-4.5	-18.2	-1.00
Industry = 10	U	0.0950	0.1201	-8.1		-2.4*
	M	0.0950	0.0927	0.7	90.8	0.18
Industry = 11	U	0.0171	0.0285	-7.7		-2.2*
	M	0.0171	0.0181	-0.7	91.2	-0.10
Industry = 12	U	0.1729	0.1050	19.7		6.31***
	M	0.1729	0.1733	-0.1	99.4	0.00
Independent variables						
Cash	U	0.3501	0.2711	21.7		5.23***
	M	0.3501	0.2949	15.1	30.1	2.91***
Co-inv. Exp.	U	0.2313	0.1300	26.6		8.55***
	M	0.2313	0.1809	13.2	50.3	2.76***

Notes: This table presents the bias reduction as a result of our matching exercise, as well as mean differences between treated and control groups based on the matching variables and the two independent variables cash and multi-type co-investment experience (*Co-inv. Exp.*); U and M denote the Unmatched and Matched subgroups, respectively * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A5: Matched-samples truncated Poisson and Tobit regressions

	DV = number of first-round investor types				DV = first-round investor type diversity			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash ratio	0.17**		0.16**	0.21*	0.09*		0.09	0.11*
	(0.05)		(0.06)	(0.10)	(0.04)		(0.05)	(0.06)
Prior co-inv. exp.		0.19***	0.20***	0.18**		0.09***	0.10***	0.08**
		(0.04)	(0.05)	(0.06)		(0.02)	(0.03)	(0.03)
Venture age	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Venture size	-0.00	0.02***	-0.00	-0.01	-0.00	0.01*	-0.00	-0.00
	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Tangibles	-0.14	-0.06	-0.12	-0.06	-0.11	-0.06	-0.10	-0.07
	(0.26)	(0.17)	(0.25)	(0.29)	(0.17)	(0.11)	(0.16)	(0.18)
Intangibles	0.11	0.01	0.09	0.09	0.07	0.02	0.06	0.06
	(0.11)	(0.08)	(0.11)	(0.10)	(0.07)	(0.04)	(0.07)	(0.06)
ST liabilities	-0.06	-0.08*	-0.06	-0.09	-0.00	-0.01	-0.00	-0.02
	(0.05)	(0.04)	(0.05)	(0.07)	(0.03)	(0.03)	(0.03)	(0.04)
LT liabilities	0.13	0.13	0.14	0.18*	0.08	0.07	0.09	0.10
	(0.09)	(0.08)	(0.09)	(0.08)	(0.06)	(0.06)	(0.06)	(0.06)
Profitable	0.03	0.01	0.02	0.03	0.01	-0.01	0.00	0.01
	(0.04)	(0.05)	(0.04)	(0.04)	(0.03)	(0.04)	(0.03)	(0.03)
Past growth rate	0.00	0.00	0.00	0.00*	0.00*	0.00*	0.00*	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Patents	0.03	0.00	0.02	0.01	-0.01	-0.02	-0.01	-0.01
	(0.07)	(0.06)	(0.08)	(0.09)	(0.04)	(0.04)	(0.04)	(0.04)
Grant received	0.27*	0.28*	0.28*	0.27	0.19***	0.20***	0.19***	0.19**
	(0.13)	(0.12)	(0.13)	(0.16)	(0.05)	(0.05)	(0.05)	(0.06)
Founding team size	0.00	-0.00	-0.00	-0.01	0.00	-0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Entrepreneurial exp.	-0.02	-0.04	-0.03	-0.02	0.00	-0.00	-0.00	0.01
	(0.04)	(0.04)	(0.04)	(0.04)	(0.02)	(0.03)	(0.02)	(0.02)
London	-0.00	-0.01	0.00	-0.00	0.01	0.01	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)
Deal size	0.03***	0.03***	0.03***	0.03***	0.01***	0.01***	0.01***	0.01***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)
Co-investors' history	0.04***	0.04***	0.04***	0.04***	0.03***	0.03***	0.03***	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)
Industry FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Industry × year FE	No	No	No	Yes	No	No	No	Yes
Number of ventures	1,644	1,768	1,644	1,644	1,643	1,767	1,643	1,643
Log Likelihood	-3,331.42	-3,547.39	-3,324.34	-3,224.08	-2,353.43	-2,518.60	-2,343.98	-2,154.73
χ^2 / Pseudo R^2	6,662.84	7,094.78	6,648.69	6,448.17	0.06	0.06	0.06	0.14

Notes: Prior co-inv. exp. denotes prior multi-type co-investment experience. Goodness-of-fit statistics include χ^2 and pseudo R^2 for the Poisson and Tobit regressions, respectively. Robust standard errors in parentheses, clustered at the industry level; constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A6: Matched-samples truncated Poisson regressions on the number of investor types

	DV = number of first-round investor types							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Cash ratio	0.16***		0.14**	0.22**	0.14**		0.13*	0.18*
	(0.05)		(0.05)	(0.08)	(0.05)		(0.06)	(0.09)
Prior co-inv. exp.		0.23***	0.24***	0.25***		0.21***	0.22***	0.20***
		(0.04)	(0.05)	(0.05)		(0.04)	(0.05)	(0.06)
ΔEquity/TA	-0.02	-0.02	-0.02	-0.01				
	(0.04)	(0.04)	(0.04)	(0.04)				
ΔLiab/TA	0.00**	0.00***	0.00***	0.00***				
	(0.00)	(0.00)	(0.00)	(0.00)				
GFC					-0.48**	-0.24	-0.43*	-0.33
					(0.17)	(0.15)	(0.17)	(0.19)
GFC × Cash ratio					0.86***		0.80***	1.08***
					(0.18)		(0.16)	(0.26)
GFC × Prior co-inv. exp.						-1.06*	-0.91*	-0.99
						(0.51)	(0.45)	(0.54)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Year FE	Yes	Yes	Yes	No	Yes	Yes	Yes	No
Industry × year FE	No	No	No	Yes	No	No	No	Yes
Number of ventures	1,452	1,563	1,452	1,452	1,644	1,768	1,644	1,644
Log Likelihood	-2,879.80	-3,069.93	-2,870.72	-2,764.00	-3,327.33	-3,544.14	-3,318.04	-3,216.75
χ^2	5,759.60	6,139.85	5,741.43	5,528.00	6,654.66	7,088.27	6,636.07	6,433.51

Notes: Prior co-inv. exp. denotes prior multi-type co-investment experience. ΔEquity/TA and ΔLiab/TA denote changes in equity and total liabilities (from $t-2$ to $t-1$), respectively, scaled by total assets in $t-1$. GFC is the Global Financial Crisis (2008Q2-2009Q4). Robust standard errors in parentheses, clustered at the industry level; constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A7: GEE regressions based on matched samples (only venture × inv. year observations)

	DV = P(follow-on funding in $t+1$)				
	(1)	(2)	(3)	(4)	(5)
Multiple investor types		0.29*			0.43**
		(0.11)			(0.14)
Number of investor types			0.24***		
			(0.06)		
Round 1 = multi-type				0.29**	
				(0.11)	
Controls	Yes	Yes	Yes	Yes	Yes
Investment round FE	Yes	Yes	Yes	Yes	Yes
Time since last round FE	No	No	No	No	No
Industry FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Multiple investor types × Inv. round FE	No	No	No	No	Yes
Number of observations	3,605	3,587	3,587	3,605	3,587
Number of ventures	2,379	2,379	2,379	2,379	2,379
χ^2	79.83	88.68	93.89	87.76	94.03

Notes: Robust standard errors in parentheses, clustered at the venture level. Constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A8: GEE regressions based on matched samples (only first-round observations)

	DV = P(follow-on funding in $t+1$)		
	(1)	(2)	(3)
Multiple investor types		0.43**	
		(0.14)	
Number of investor types			0.33***
			(0.09)
Controls	Yes	Yes	Yes
Investment round FE	No	No	No
Time since last round FE	No	No	No
Industry FE	No	No	No
Year FE	Yes	Yes	Yes
Multiple investor types × Inv. round FE	No	No	No
Number of observations	2,300	2,300	2,300
Number of ventures	2,300	2,300	2,300
χ^2	65.01	73.26	73.03

Notes: Robust standard errors in parentheses, clustered at the venture level. Constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

TABLE A9: GEE regressions based on matched samples by various time periods

	P(follow-on by $t+1$)		P(follow-on by $t+2$)		P(follow-on by $t+3$)		P(follow-on by $t+4$)		P(follow-on by $t+5$)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Multiple investor types	0.05***		0.08***		0.09**		0.09**		0.09*	
	(0.01)		(0.02)		(0.03)		(0.03)		(0.04)	
Number of investor types		0.04***		0.07***		0.07***		0.07***		0.07***
		(0.01)		(0.01)		(0.02)		(0.02)		(0.02)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investment round FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	No	No	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multiple investor types × Inv. round FE	No	No	No	No	No	No	No	No	No	No
Number of observations	9,278	9,278	7,814	7,814	6,422	6,422	5,085	5,085	3,896	3,896
Number of ventures	2,489	2,489	2,263	2,263	1,985	1,985	1,654	1,654	1,338	1,338
χ^2	118,064.18	89,475.37	9,956,546	9,490,674	2,835.07	2,896.02	520.62	524.95	1,643.82	1,660.86

Notes: This table presents results of separate GEE population-averaged regressions on the probability of follow-on funding by $t+1$ until $t+5$, respectively. All previous controls have been included. Robust standard errors in parentheses, clustered at the venture level; constant included but not reported; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$