

CEOs' appraisals of venture capitalists' external and internal support: a transaction cost economics perspective

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ABSTRACT

Previous research has established that, in addition to provision of financing, venture capitalists (VCs) may add value to new ventures via different types of management support. In this paper, we propose that transaction cost economics (TCE) may complement other theoretical frameworks (e.g., agency theory, the resource-based view, knowledge-based theory, and resource dependence perspective) in explaining CEOs' polar and ambivalent appraisals of the benefits and costs of different types of VC support and the overall value of VC assistance. Following TCE, we approach VC-funded new ventures as hybrids of markets and hierarchies. Hence, we assume that VCs help their portfolio companies both to externalize, or learn to better operate under the market mode of governance, and internalize, or learn to better operate under the hierarchy mode of governance. We propose that VCs use external support to facilitate venture externalization and use internal support to facilitate venture internalization. Based on structural equation modeling (SEM) analysis of data from an online survey that generated 104 valid responses from CEOs of VC-funded new ventures, we establish that CEOs associate VCs' external support positively with the perceived benefits of VC assistance and negatively with the perceived costs of VC assistance. In contrast, CEOs associate VCs' internal support positively both with the perceived benefits and costs of VC assistance. We also demonstrate that CEOs' assessments of the perceived benefits and costs of VC assistance are, respectively, associated positively and negatively with their appraisals of the overall value of VC assistance. Finally, we ascertain that CEO experience is related negatively to CEOs' appraisals of the overall value of VC assistance. Implications of these findings for research and practice are discussed.

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Introduction

Prior research has established that CEOs of new ventures that received VC funding often express polar, and, moreover, extremely ambivalent opinions regarding the benefits and costs of particular types of VC support, and the overall value of VC assistance (Smith 2001; Zheng 2011). In fact, CEOs strongly diverge in their assessments of the value of certain kinds

of VC support and the amounts of such support that they wished to receive and received, wished to receive, but did not receive, or did not wish to receive, but received nevertheless, despite their resistance (Rosenstein et al. 1990, 1993; Ehrlich et al. 1994; Barney et al. 1996; Smith 2001). Curiously, a recent study showed that out of 4653 entrepreneur comments on VCs, 1908 were positive, 1566 were negative, and 608 were neutral (Zheng 2011, 77). Although entrepreneurs easily identify VCs with better track record, they do not necessarily prefer such VCs (Bengtsson and Wang 2010) and may even be critical of successful VCs for lack of efficiency and competence (Zheng 2011).

Moreover, while some CEOs view VC support as extremely valuable (Rosenstein 1988; Macmillan, Kulow, and Khoylian 1989; Rosenstein et al. 1989, 1990, 1993; Ehrlich et al. 1994; Barney et al. 1996; Stubner, Wulf, and Hungenberg 2007; Yitshaki 2008, 2012; Rajchlova 2013), others adamantly deny that VC support may have any value whatsoever or even regard VC assistance as patently counterproductive and even destructive of new ventures (Gomez-Mejia, Balkin, and Welbourne 1990; Fredriksen, Olofsson, and Wahlbin 1992; Barney et al. 1996; Fiet et al. 1997; Busenitz, Fiet, and Moesel 2004; Parhankangas and Landström 2004, 2006; Berg-Utby, Sørheim, and Widding 2007). Similarly, some studies have demonstrated that VC support had a positive effect on venture performance (Croce, Martí, and Murtinu 2013; Dutta and Folta 2016). Conversely, other studies did not find that VC support had a positive effect after examining comparable VC-funded and non-VC-funded ventures (St.-Pierre, Nomo, and Pilaeva 2011). In light of such polarization and ambivalence in CEOs' perspectives on whether or not VC assistance is useful or counterproductive and destructive, many scholars stated that the value added by active VCs typically contrasted in research with laissez-fair VCs needs further examination (Timmons and Bygrave 1986; Macmillan, Kulow, and Khoylian 1989; Bygrave and Timmons 1992; Sapienza 1992; Mason and Harrison 1999; Sætre 2003; Wijbenga et al. 2003; Large and Muegge 2008; Khanin and Turel 2016).

To conceptualize VC assistance to new ventures, scholars typically employ agency theory, the resource-based view, knowledge-based theory, or the resource dependence perspective. Agency theory generally helps understanding the reasons for common tensions and conflicts in the VC–CEO relationship explained by the fact that the two cooperating parties' interests diverge as principals and agents may choose to pursue opposite, self-interested, and even opportunistic agendas (Sahlman 1990; Sapienza and Gupta 1994; Gompers and Lerner 2004; Brettel, Mauer, and Appelhoff 2013). Thus, VCs may be concerned primarily about maximizing the value of their investment as well as its impact on their fundraising. This may lead to grandstanding – pushing portfolio companies to exit too early even though staying in business longer could allow selling the new venture later at higher valuations that would increase CEO payout (Gompers 1996; Lee and Wahal 2004), especially if VCs have a short-term orientation (Khanin and Turel 2012). In turn, CEOs may use VC financing to work on their own pet projects (Sahlman 1990).

In contrast, the resource-based view draws attention to VCs' resources and capabilities, new venture's resources and capabilities, and their fit or lack thereof (Arthurs and Busenitz 2006). From this standpoint, the efficacy of VC support to portfolio companies may depend on VCs' possession of requisite resources and capabilities and their ability to help portfolio companies obtain lacking or insufficient resources or develop requisite high-level capabilities. Applying this perspective, studies have shown that VCs' management support can have a positive impact on start-ups' performance (Stubner, Wulf, and Hungenberg 2007), especially by increasing the rates of innovation and commercialization (Croce, Martí, and Murtinu 2013;

Dutta and Folta 2016), and that VCs could help their portfolio companies develop valuable dynamic capabilities that would allow them to achieve success, and ultimately, launch an initial public offering (IPO) (Arthurs and Busenitz 2006; Gerasymenko and Arthurs 2014). Studies applying knowledge-based theory assert that different types of VCs may specialize in transferring different types of knowledge to portfolio companies with independent VCs helping ventures to professionalize and corporate VCs helping them to commercialize (Maula, Autio, and Murray 2005). Finally, the resource dependence perspective conceptualizes the relationship between VCs and portfolio companies as driven by their mutual need for each other's resources that may lead to productive integration as VCs are co-opted on board of directors but may also result in conflicts as CEOs of portfolio companies can resist giving up too much power to VCs (Starr and MacMillan 1990; Casciaro and Piskorski 2005; Graebner and Eisenhardt 2007; Katila, Rosenberger, and Eisenhardt 2008).

Transaction cost economics (TCE) ascertains that transactions can be organized under three structural alternatives or modes of governance: (1) markets: contractual relationships between autonomous economic actors; (2) hierarchies: quasi-contractual relationships between integrated actors ruled by administrative authority; and (3) hybrids: contractual relationships between partly autonomous and partly integrated actors, e.g., alliances, franchises, and joint ventures (Williamson 1975, 1985, 1991, 2010; Crook et al. 2013). Hence, TCE focuses on examining the comparative costs and benefits of markets, hybrids and hierarchies as modes of governance, and inquires under what conditions actors will externalize (transition from hierarchies to hybrids or from hybrids to markets) or internalize (transition from markets to hybrids or from hybrids to hierarchies).

Applying TCE, VCs need to simultaneously push their portfolio companies toward more thorough externalization and internalization. VCs can help new ventures to externalize or learn how to operate as an independent market actor, via external support, i.e., boundary spanning (Gomez-Mejia, Balkin, and Welbourne 1990) or commercialization (Maula, Autio, and Murray 2005). VCs can help new ventures internalize or learn how to run an effective organization, via internal support, i.e., managerial support (Gomez-Mejia, Balkin, and Welbourne 1990) or professionalization (Maula, Autio, and Murray 2005). Furthermore, TCE allows better understanding the contradictory nature of VC-driven push for internalization that could potentially make the new venture more effective as an organization, but impose excessive red tape that could suppress its entrepreneurial spirit and flexibility.

This is, of course, what happens when a new venture is acquired by an established company that could teach the start-up how to operate and collaborate effectively under a hierarchy mode of governance but could also smother its independence as a market actor and innovativeness (Williamson 1985). Hence, applying TCE perspective helps explaining CEOs' characteristic ambivalence in their appraisals of VC assistance (Gomez-Mejia, Balkin, and Welbourne 1990; Ehrlich et al. 1994; Barney et al. 1996; Busenitz, Fiet, and Moesel 2004; Yitshaki 2008, 2012; Forbes, Korsgaard, and Sapienza 2010; Zacharakis, Erikson, and George 2010; Khanin and Turel 2015). We suggest that CEOs appreciate both VC-led externalization and VC-led internalization but can be wary that excessive internalization could undermine venture's autonomy and entrepreneurial flexibility. Specifically, we argue that CEOs of new ventures will associate VCs' external support positively with the perceived benefits of VC assistance, and negatively with the perceived costs of VC assistance. Conversely, we argue that CEOs of new ventures will associate VCs' internal support positively both with the

benefits and costs of VC assistance because internalization may have its downside as it can increase venture's organizational efficacy but suppress its ability to stay innovative.

The sample for this study was collected by inviting new ventures in Southern California that received VC financing from 2001 to 2008 to respond to an online survey. Out of over 1,000 new ventures contacted, about 10% agreed to take part in our study. We developed a research model explaining how venture CEOs will assess the value of their alliances with VCs and used structural equation modeling (SEM) to examine the collected data. The paper is structured as follows. In the first section, we examine prior research on the perceived value of VC assistance to their portfolio companies. In the second section, we analyze the advantages vs. disadvantages of applying agency theory, the resource-based view, knowledge-based theory, and resource dependence perspective for examining CEOs' assessments of VC support, and argue that TCE could shed more light on CEOs' perceptions of the benefits and costs of particular kinds of VC support assistance and the total value of VC assistance. In the third section, we use TCE to generate hypotheses regarding CEOs' assessments of the value of their alliances with VCs. In the fourth section, we describe our methods and results. In the discussion section, we summarize this study's contributions, practical implications, and limitations as well as outline some directions for future research.

Prior research on venture CEOs' perspectives on VC support

Prior research contrasted active VCs that seek to provide significant management support to their portfolio companies and laissez-faire VCs that may, theoretically, limit their support to periodic infusions of capital contingent on portfolio companies' accomplishments (Macmillan, Kulow, and Khoylian 1989; Elango et al. 1995; Mason and Harrison 1999; Large and Muegge 2008). Scholars have also developed numerous typologies of VC support. The main categories of VC assistance identified in prior studies include (1) financial participation, (2) personnel management, (3) management selection, and (4) development and operations (Macmillan, Kulow, and Khoylian 1989) or (1) financial, (2) boundary spanning, and (3) managerial involvement (Gomez-Mejia, Balkin, and Welbourne 1990). Scholars also have discussed a number of additional forms of support that include reporting and operational control, reporting targets, and expertise sought (Ehrlich et al. 1994); dominant logic (Fried and Hisrich 1995); information gathering devices and decision-making devices and techniques (Flynn and Forman 2001); strategic information, sound business advice, and sound management advice (Busenitz, Fiet, and Moesel 2004); different types of advice (Maula, Autio, and Murray 2005); legitimization, mentoring, and consulting (Large and Muegge 2008); and communication management (Rajchlova 2013). However, these seem to represent merely aspects of the originally identified broad categories (Macmillan, Kulow, and Khoylian 1989).

In fact, the three-partite classification proposed by Gomez-Mejia, Balkin, and Welbourne (1990) appears to be the most parsimonious and useful of all such typologies explaining what VCs do (Gorman and Sahlman 1989; Sapienza 1992). In essence, it suggests that, in addition to financial support, VCs can help new ventures either externally (via 'boundary spanning') or internally (via 'managerial involvement') (Gomez-Mejia, Balkin, and Welbourne 1990). Similarly, scholars contrasted VCs' efforts to help portfolio companies professionalize (internal support) and commercialize (external support) (Maula, Autio, and Murray 2005). First, VCs can provide external support to new ventures by helping them go beyond the

boundaries of the initially created small entrepreneurial organization. This can be achieved by assisting new ventures in developing a better understanding of the marketplace, acquiring useful market contacts and allies, formulating a winning strategy, establishing legitimacy, competing with existing players and new entrants, gaining market share, finding buyers, or launching an IPO. Second, VCs can provide internal support to new ventures by helping them create a viable organization. This can be achieved by assisting new ventures in running operations, establishing checks and balances, providing sufficient incentives and allocating fair rewards, mentoring and coaching, and recruiting and dismissing underperforming employees in a timely manner.

Not surprisingly, given a great variety of particular types of support within the broad categories of external assistance and internal assistance and the great variety of venture types influenced by their industry, stage, geographic location, top management team (TMT), and founder experience as well as other factors (Gupta and Sapienza 1992; Sapienza 1992), prior research has established that venture CEOs assess the advantages vs. disadvantages of VC assistance from multiple perspectives (Ehrlich et al. 1994; Smith 2001; Large and Muegge 2008). Curiously, CEOs exhibit extreme ambivalence in appraising the value of VC assistance in general as well as the value of particular kinds and amounts of support that their ventures needed and actually received from their VCs; needed but did not receive, despite their requests; or did not need but received nevertheless over their objections and even active resistance (Barney et al. 1996; Smith 2001; Sætre 2003; Parhankangas and Landström 2004, 2006).

Thus, some CEOs acknowledged that VCs did provide financial, strategic, and operational assistance to their ventures that made them more competitive in the marketplace (Macmillan, Kulow, and Khoylian 1989; Rosenstein et al. 1990; Ehrlich et al. 1994; Barney et al. 1996; Stubner, Wulf, and Hungenberg 2007; Yitshaki 2008, 2012; Rajchlova 2013). In contrast, other CEOs denied that VC assistance had any value whatsoever or thought that VCs provided too much support in the areas where it was not really needed and too little support in the areas where it was really needed; finally, some CEOs did not think that there was the right fit between their ventures and their VCs, and believed that other VCs could have done much more for the money (Gomez-Mejia, Balkin, and Welbourne 1990; Rosenstein et al. 1990, 1993; Barney et al. 1996; Smith 2001; Busenitz, Fiet, and Moesel 2004; Berg-Utby, Sørheim, and Widding 2007; Yitshaki 2008, 2012; Brettel, Mauer, and Appelhoff 2013).

Accordingly, one study demonstrated that venture CEOs appreciated receiving VCs' financial support and networking assistance but viewed VCs' interference into venture's operations as useless and even harmful (Gomez-Mejia, Balkin, and Welbourne 1990). Other researchers found that, contrary to VCs that wanted to increase their strategic support of new ventures (Macmillan, Kulow, and Khoylian 1989), venture CEOs thought that VCs' strategic support was sufficient and wanted instead to secure more operational or network support (Ehrlich et al. 1994). Some studies have discovered that CEOs were not impressed with the quality of VC support, in general, with the exception of assistance provided by the top-20, most prestigious, high-flying VC firms (Rosenstein et al. 1993). Other studies have shown that CEOs were most critical of successful VCs (Zheng 2011) and did not seek their assistance (Bengtsson and Wang 2010). Scholars have shown that CEOs conceived of VC's strategic advice as patently irrelevant (Busenitz, Fiet, and Moesel 2004), and that many CEOs were disappointed and frustrated with the low quality of VC advice given to their ventures (Smith 2001;

Parhankangas and Landström 2004; Berg-Utby, Sørheim, and Widding 2007; Khanin and Turel 2015).

In sum, prior studies of VC–new venture alliances have established that: (1) VCs and CEOs may diverge substantially in their assessments of the relative value of the main types of VC support; furthermore, CEOs espouse a wide range of opinions in this regard resulting in inconsistent scholarly findings (Macmillan, Kulow, and Khoylian 1989; Rosenstein et al. 1993; Ehrlich et al. 1994; Barney et al. 1996; Busenitz et al. 1997; Busenitz, Fiet, and Moesel 2004; Bengtsson and Wang 2010; Zheng 2011); (2) CEOs' assessments of the value of VC assistance could be influenced by a variety of contextual factors including CEO experience, venture stage, industry, geographic location, and firm innovativeness (Sapienza 1992; Sapienza and Gupta 1994; Ehrlich et al. 1994; Barney et al. 1996); (3) new venture team members' appraisals of the value of VC assistance could be influenced by their perceptions of procedural justice, the challenges of integrating diverse organizational cultures, and the severity of affective (relational) vs. cognitive (task-based) conflicts often erupting between VCs and entrepreneurs (Gorman and Sahlman 1990; Sapienza 1992; Barney et al. 1996; Busenitz et al. 1997; Busenitz, Fiet, and Moesel 2004; Parhankangas and Landström 2004, 2006; Botelho and Jonathan 2006; Cumming and Johan 2007; Yitshaki 2008, 2012; Forbes, Korsgaard, and Sapienza 2010; Brettel, Mauer, and Appelhoff 2013; Khanin and Turel 2015); (4) different kinds of VC support activities can influence the relationship between the critical factors that might influence new venture's success, for example, VC monitoring can be negatively associated with the relationship between new venture's cost systems and performance (Wijbenga, Postma, and Stratling 2007); at the same time, VC monitoring can be positively associated with the relationship between financial systems and human resource slack (Vanacker, Collewaert, and Paeleman 2013); (5) VC support can be very helpful to new ventures (Schefczyk and Gerpott 2001, Stubner, Wulf, and Hungenberg 2007; Clarysse et al. 2013; Rajchlova 2013), especially, with regard to commercialization of new technologies (Croce, Martí, and Murtinu 2013; Dutta and Folta 2016); and finally, (6) many CEOs were displeased with VC assistance pointing to its low quality and harmfulness (Gomez-Mejia, Balkin, and Welbourne 1990; Smith 2001; Busenitz, Fiet, and Moesel 2004; Parhankangas and Landström 2004, 2006; Berg-Utby, Sørheim, and Widding 2007; Khanin and Turel 2015).

How can one explain from a conceptual standpoint such a wide range of CEOs' perspectives on VC assistance, and CEOs' characteristic ambivalence in assessing the overall value of VC assistance as well as the relative contributions of particular types of VC support to new venture's advancement? In the next section, we will examine the principal theories usually applied to examine VC–new venture alliances, and argue that TCE may complement other conceptual frameworks in explaining venture CEOs' polar and ambivalent assessments of the advantages vs. disadvantages of VC assistance provided to portfolio companies.

Theorizing VC assistance to portfolio companies: TCE's insights

Agency theory, the resource-based view, knowledge-based theory, and resource dependence perspective represent the principal theoretical lenses applied to examine the types and quality of VC support, and, respectively, CEOs' appraisals of VC assistance to new ventures (Gorman and Sahlman 1989; Sapienza 1989, 1992; Barney et al. 1996; Fiet et al. 1997; Maula, Autio, and Murray 2005; Bengtsson and Wang 2010; Zheng 2011; Rajchlova 2013). The advantage of employing agency theory for these purposes is that it clearly contrasts VCs' and CEOs'

overriding objectives (Gorman and Sahlman 1989; Sahlman 1990; Sapienza and Gupta 1994; Casamatta 2003; Gompers and Lerner 2004; Bottazzi, Darin, and Hellmann 2008). Agency theory suggests that VCs are interested primarily in getting the maximum value from their investment in new ventures, not merely from each individual investment, but the entire portfolio of companies assembled in the fund as well as increasing the effectiveness of their fundraising activities (Gompers 1996; Jackson, Bates, and Bradford 2012). As a result, VCs may choose to grandstand, i.e., push new ventures to exit too early in hope that a ‘home run’ will help their fundraising activities, even though exiting later could increase the value of the portfolio company, and hence, CEO payout (Gompers 1996). VCs may also take on too many portfolio companies which would decrease their attention and lower the quality of their support of new ventures but may raise their rate of return (Gifford 1997; Cumming and Johan 2007; Bernile, Cumming, and Lyandres 2007; Jackson, Bates, and Bradford 2012).

Applying the resource-based view to examine CEOs’ perspectives on VC assistance is also helpful. As VCs differ in terms of their resources and capabilities, particular VCs could excel at providing some types of support and fail at providing other types of support (Barney et al. 1996; Busenitz, Fiet, and Moesel 2004; Arthurs and Busenitz 2006). In turn, new ventures may need some but not other resources and capabilities, and, respectively, desire certain types of VC support, but not other types of VC support, or need some types of VC support to a lesser degree than offered by VCs (Smith 2001). As a result, venture CEOs may be very pleased with VC assistance if they are getting from the VCs what they think they need, and in sufficient amounts, making headway as a result. Conversely, CEOs can be very displeased with VC assistance if they feel that they are not getting what they want and need, not getting enough of what they want and need, or worse yet, getting a lot of what they do not want, despite their active resistance (Ehrlich et al. 1994; Busenitz, Fiet, and Moesel 2004). Knowledge-based theory sheds light on CEOs’ evaluations of VC support by showing that some VCs may focus on providing external support or “commercialization” (corporate VCs), whereas other VCs may focus on providing internal support or professionalization (independent VCs) (Maula, Autio, and Murray 2005) or various types of learning utilized by VC firms (Clarysse et al. 2013).

Finally, the resource dependence perspective focuses on new ventures’ efforts to secure needed resources leading to a characteristic dilemma: How can they get what they want and need from those that happen to have what they want without giving away too much power and influence to the resource providers? (Starr and MacMillan 1990; Katila, Rosenberger, and Eisenhardt 2008). As new ventures give VCs a portion of their equity, and, respectively, seats on board of directors, they may give away to VCs too much decision-making power with regard to how the portfolio company should be run and evolve in the future. This may cause conflicts if CEOs believe that VCs are taking their ventures in the wrong direction (Forbes, Korsgaard, and Sapienza 2010; Zacharakis, Erikson, and George 2010). Hence, securing VC resources could be beneficial to new venture, from CEOs’ perspective, if they feel that such resources are both useful and reasonably priced. Conversely, securing VC resources could seem disadvantageous, from CEOs’ perspective, if they feel that such resources are not needed, redundant, or even deleterious or useful but too expensive (Bengtsson and Wang 2010).

In sum, all the four theoretical frameworks – agency theory, the resource-based view, knowledge-based theory, and resource dependence perspective – provide insights into why CEOs may be appreciative vs. critical of VC assistance or be both appreciative and critical of

VC assistance at the same time. However, there are some important aspects of VC assistance to portfolio companies that these four theoretical frameworks typically applied to examine VC–new venture alliances appear to overlook. In essence, VCs help new ventures to professionalize (Hellmann and Puri 2002; Jackson, Bates, and Bradford 2012). Such professionalization may include external support (teaching new ventures how to operate in the marketplace) and internal support (teaching new ventures how to create an effective organization). Professionalization, however, may have both its advantages and disadvantages. The advantage of professionalization is that it can make new ventures more legitimate in the eyes of other market actors, develop their ability to compete in the marketplace, and create a more effective organizational structure including sophisticated systems of decision-making and control. The disadvantage of professionalization is that it can decrease the ability of new venture to generate new ideas, and its entrepreneurial spirit and flexibility.

None of the four perspectives typically employed to examine VC–new venture alliances takes into account such dialectic of professionalization that generates both some advantages and disadvantages. In contrast, TCE focuses precisely on the advantages vs. disadvantages of various modes of governance as well as the advantages vs. disadvantages of moving from one mode of governance to another. Expanding on Coase's (1937) original inquiry (why do firms exist?), TCE has focused on investigating the factors that influence the choice between the two alternative modes of governance: markets vs. hierarchies (Williamson 1975, 1985). Later, TCE approached hybrids (alliances) as the third governance mode that partially combines both the advantages and disadvantages of markets and hierarchies (Williamson 1991). Some scholars view hybrids as being principally different from markets and hierarchies, and furthermore able to generate some complementary or synergistic benefits (Makadok and Coff 2007, 2009). In contrast, other scholars argue that hybrids are predominantly influenced by one governance mode (either by markets or hierarchies) and may contain only insignificant additions of the alternative mode of governance (Hennart 2013). However, it is generally accepted that hybrids amalgamate markets and hierarchies.

Hybrids are created when the level of uncertainty, especially cognitive uncertainty (Weber and Mayer 2013) is high, and therefore there is a great need in partner collaboration, specifically, in securing the synergistic benefits of knowledge assets exchange and exercising effective mutual control (Matusik and Fitza 2012). From this standpoint, hybrids combine externalization, or adopting the market mode of governance (e.g., via alliances with other market actors that know how to operate in the marketplace), and internalization (mutual integration of allies providing access to both partners' resources and capabilities for the purpose of improving governance of the business enterprise). Such synthesis of externalization and internalization, however, may only come at a cost. Hence, hybrids frequently generate misalignment costs (Bidwell 2010) as they move in two opposite directions seeking to combine two conflicting modes of governance.

We propose that the TCE perspective on hybrids as organizations that seek to externalize and internalize at the same time is quite useful for understanding the nature of VC–new venture alliances, the kinds of support that VCs seek to provide to their portfolio companies, and CEOs' wide range of opinions and characteristic ambivalence expressed in their assessments of the overall value and particular types of VC assistance. In the next section, we apply TCE perspective to shed more light on this interesting subject.

VCs' external support and the perceived benefits of VC assistance

Companies form alliances to make up for the weaknesses, limitations, and vulnerabilities of their own resources and capabilities (Eisenhardt and Schoonhoven 1996). New ventures need such alliances; they often fail because of a lack of market discipline and understanding of how markets operate (Sahlman 1990; Sapienza and Gupta 1994; Wasserman 2012; Drover, Wood, and Payne 2014). Specifically, new ventures may forgo setting priorities and/or establishing the key milestones to properly pace themselves and reach their goals in a timely fashion; new ventures also may lack a sufficient understanding of the current market trends and competitive dynamics (Gersick 1994). Consequently, new ventures may benefit from gaining access to VCs' external support that could allow them to faster adapt to the marketplace (Barney et al. 1996; Busenitz, Fiet, and Moesel 2004; Vanacker, Collewaert, and Paeleman 2013). Alliances with VCs are attractive to new ventures as they afford access to financial capital (Jakobides and Winter 2007) and VCs' superior grasp of 'market rationality' (Steier 1998).

According to TCE, markets offer high-powered incentives, masterly apply contract law, and are highly adaptive to external change (Williamson 1985, 1991, 2010). Compared to new ventures as novices just seeking to develop and market new products and/or services, VCs may be regarded as seasoned professionals that are highly knowledgeable of the marketplace. Moreover, VCs specialize in transferring their knowledge to start-ups, installing market discipline, and sharing useful contacts (Drover, Wood, and Payne 2014; Hallen, Katila, and Rosenberger 2014). In turn, new ventures need access to VCs' resources and capabilities facilitating success in the marketplace that VCs can transfer to their novice partners via different kinds of external support (Petkova, Rindova, and Gupta 2013; Petkova et al. 2014).

VC-driven push for externalization may help a new venture develop a better understanding of the marketplace and competitive dynamics; improve its quality of decision-making; and spearhead its further growth. In other words, VCs could help a new venture improve its performance dramatically (Gerasymenko and Arthurs 2014). This is why venture CEOs are likely to appreciate VCs' external support and associate it with the perceived benefits of VC assistance contributing to venture's faster growth (Davila, Foster, and Gupta 2003; Croce, Martí, and Murtinu 2013; Dutta and Folta 2016). To summarize:

Hypothesis 1: Venture CEOs will relate VCs' external support to the perceived benefits of VC assistance.

VCs' internal support and the perceived benefits of VC assistance

VC firms differ greatly in terms of their activism (Mason and Harrison 1999). VCs can be more active or less active depending on their style: hands-on vs. laissez-faire (Macmillan, Kulow, and Khoylian 1989); status: independent, captive, or semi-captive (Hassan and Leece 2008), and venture prospects: if VCs believe that a venture is likely to exit by launching an IPO, they would give it more attention (Gerasymenko and Arthurs 2014). Active VCs are likely to provide a venture not only with external support but also internal support (Schefczyk and Gerpott 2001; Smith 2001). This may include solving administrative problems, providing operational assistance, and helping dismiss underperforming employees (Ehrlich et al. 1994; Fiet 1995a, 1995b; Fiet et al. 1997; Busenitz, Fiet, and Moesel 2004).

Some CEOs actually value VC ability to provide operational guidance over strategic advice (Ehrlich et al. 1994; Smith 2001). Cash-strapped ventures may not be able to afford the luxury of hiring special advisors to resolve their operational issues. VC-financed companies, however, have access to such resources – as VCs themselves or resident entrepreneurs may have operational background. VCs' consultative role could be very important to new ventures (Rajchlova 2013). This may explain why VCs often retain the most successful CEOs as advisors (Wasserman 2012). The ability of VC firms to provide internal support and its quality that one can expect to increase as VCs become increasingly involved with the venture and its operations matter to portfolio companies' CEOs (Jackson, Bates, and Bradford 2012). Hence, CEOs are likely to view VCs' internal support as helpful and associate it with the perceived benefits of VC assistance. To summarize:

Hypothesis 2: Venture CEOs will relate VCs' internal support to the perceived benefits of VC assistance.

VCs' external support, VCs' internal support, and the perceived costs of VC assistance

VCs typically help their portfolio companies to setup sophisticated systems of monitoring and control (Wijbenga et al. 2003; Garg 2013; Vanacker, Collewaert, and Paeleman 2013). To venture CEOs, though, such enhanced oversight may appear excessive and counterproductive, as it can limit CEO decision-making flexibility, create coordination problems, and undermine CEO authority and ability to lead the venture (Gomez-Mejia, Balkin, and Welbourne 1990; Parhankangas and Landström 2004, 2006; Berg-Utby, Sørheim, and Widding 2007). Moreover, VCs may often dismiss venture CEOs to expedite venture advancement (Fiet et al. 1997; Bruton, Fried, and Hisrich 2000; Wasserman 2012; Khanin et al., 2009; Gerasymenko and Arthurs 2014). CEOs can regard such effects of VCs' push for creation of a cooperation-based organization that may result in decreased managerial authority, reduced decision-making flexibility, and coordination problems as the costs of VC assistance.

CEOs often claim that VCs' rigid control established to limit their potential opportunism (Garg 2013) could deprive them of the freedom to seize fleeting opportunities as they come along (Barney et al. 1996). In essence, CEOs are required by VCs to make asset-specific investments into proprietary control systems that each VC firm puts in place to establish its oversight of the new venture (Wijbenga et al. 2003; Wijbenga, Postma, and Stratling 2007). No wonder CEOs may become frustrated with such imposition of excessive control that tie them to VC firms, and clamor that VCs' assistance impedes their ability to govern the venture (Steier and Greenwood 1995). CEOs may also express negative opinions of VC control because it subverts TMT creativity; forces TMT members to accept VCs' business views with which they may not agree (Barney et al. 1996); and decreases management flexibility, increases operational costs, and creates coordination problems (Botelho and Jonathan 2006). Studies have shown that VCs may inappropriately interfere with running a venture bluntly undermining CEO authority and imposing red tape (Sapienza 1989; Kannianen and Keuschnigg 2004; Cumming and Johan 2007; Yitshaki 2008). VC monitoring, oversight, and control may negatively moderate the relationship between the cost systems and performance (Wijbenga, Postma, and Stratling 2007).

Venture CEOs may want to obtain operational assistance but object when VCs overrule their decisions (Wasserman 2012). No wonder many CEOs decry VC interference into venture

governance as intrusive (Parhankangas and Landström 2004, 2006). Hence, CEOs are likely to associate VCs' internal support with the costs of VC assistance. In contrast, CEOs are unlikely to associate VCs' external support with the costs of VC assistance as it is related to providing them with information about the marketplace and useful contacts that are unlikely to reduce the venture's entrepreneurial flexibility or undermine CEO authority. Moreover, CEOs may believe that the more VCs focus on providing external support, the less they will focus on providing internal support. As a result, CEOs may feel that VCs' concentration on external support decreasing their focus on internal support will actually reduce the overall costs of VC assistance. To summarize:

Hypothesis 3: Venture CEOs will relate VCs' external support negatively to the perceived costs of VC assistance.

Hypothesis 4: Venture CEOs will relate VCs' internal support positively to the perceived costs of VC assistance.

Venture CEOs' perceptions of the overall value of VC assistance

In light of TCE, CEOs' polar views and characteristic ambivalence in appraising VC assistance are understandable. On the one hand, both VCs' external support and internal support help entrepreneurial start-ups to professionalize by becoming savvy market actors and building effective organizations. On the other hand, while the advantages of externalization can be seen by CEOs as pure, unadulterated benefits, the advantages of internalization could be more problematic as it may impose redundant layers of decision-making, subjugate a small entrepreneurial organization to extensive monitoring and control, and undermine CEOs' decision-making authority and flexibility as well as threaten CEOs with eventual replacement (Fiet et al. 1997; Bruton, Fried, and Hisrich 2000; Khanin et al. 2009; Forbes, Korsgaard, and Sapienza 2010; Zacharakis, Erikson, and George 2010; Wasserman 2012).

No wonder venture CEOs, as we hypothesized in previous sections, may relate external support and internal support to the perceived benefits of VC assistance and also relate VCs' internal support to the perceived costs of VC assistance. As CEOs weigh in on the overall value of VC assistance, they are bound to take into account such benefits and costs. It is natural to assume that the perceived benefits of VC assistance will be positively related to CEOs' assessments of the overall value of VC assistance, whereas the perceived costs of VC assistance will be negatively related of the overall value of VC assistance. To summarize:

Hypothesis 5: Venture CEOs will relate the benefits of VC assistance positively to the total value of VC assistance.

Hypothesis 6: Venture CEOs will relate the costs of VC assistance negatively to the total value of VC assistance.

Does experience affect venture CEOs' perceptions of the overall value of VC assistance?

Prior research has shown that as venture CEOs gain experience, they could become increasingly critical of VC support (Rosenstein et al. 1993; Ehrlich et al. 1994; Barney et al. 1996; Zheng 2011; Yitshaki 2012). This is understandable given that seasoned CEOs may have accumulated enough knowledge of the market mode of governance. Although VCs' external

support could still appear valuable to experienced VCs, for example, because of bestowing greater legitimacy on their new ventures, the advantages of other aspects of VC support, such as providing contacts and network connections, may not seem as significant since seasoned CEOs may already have formed their own networks and gained market expertise. Furthermore, experienced CEOs may have even less patience, compared to novice CEOs, with the tremendous costs of VC assistance. Seasoned CEOs often have more choices in terms of venture financing and may object to imposition of VC control that could limit their decision-making flexibility, undermine their decision-making authority, and create coordination problems. For these reasons, one can expect that CEO experience will be negatively related to CEOs' appraisals of the total value of VC assistance. Hence:

Hypothesis 7: Experience will be negatively related to CEOs' appraisals of the total value of VC assistance.

Methods

Procedure and sample

A list of potential respondents was downloaded from Venture Xpert, a database of VC-financed new ventures maintained by Thompson Financial. The initial data-set included all new ventures located in California that obtained VC support from 2000 to 2008. However, we trimmed it down to new ventures located in counties around our University as these seemed more likely to respond to the invitation to take part in the survey. One thousand of such companies were contacted via email, and invited to participate in the study. Ninety-eight respondents completed the survey online, and another 8 asked to record their responses through a phone interview (an alternative offered in the invitation). Two respondents, though, did not answer some questions. Respectively, their records were removed from the final data-set. Thus, a sample of 104 valid responses from CEOs of VC-funded ventures was obtained resulting in the response rate of 10.4%.

The majority of the respondents were men (91%). CEOs varied in their levels of education: 34% of respondents were college graduates; 48% obtained a master's degree. Only one person had no college education. Seventeen had a Ph.D. The sample also varied in terms of venture development stage and level of performance: 26 companies were in initial stages; 55 in an expansion phase, 8 in a "bridge" phase, and the remaining 14 were in the process of being acquired. The majority of ventures were not yet profitable (72%). The remaining new ventures (28%) have achieved profitability. The sample also varied in terms of the perceived attainment of the milestones – the important landmarks, such as new product launch, set by VCs in consultation with portfolio companies to control the pacing of their business development. Specifically, 60% of CEOs reported that their ventures have achieved most of the milestones. Curiously, only 7% of CEOs stated that they have reached all the milestones. Finally, 33% of CEOs said they have achieved some of the milestones. This information about CEOs and their ventures is summarized in Table 1.

Measures

Following TCE logic as well as prior research (Gomez-Mejia, Balkin, and Welbourne 1990; Maula, Autio, and Murray 2005), we proposed that VC assistance can be divided into two main types: external support ('boundary spanning' or commercialization) and internal

Table 1. Descriptive statistics of sample ($n = 103$).

Variable	Mean	Std. dev.	Min	Max
CEO age	47.35	8.66	29	72
CEO years of Professional Experience	24.24	8.86	5	50
CEO years of Industry Experience	16.47	10.32	2	43
CEO years of experience with the Technology	8.66	7.40	1	38
CEO number of prior ventures launched	2.11	2.96	0	20
Venture growth rate (%)	22.31	143.04	0	1000
Venture % of equity owned by lead VC	33.82	19.50	5	70
Venture number of employees	105.76	348.28	2	3000

support ('managerial support'). VCs' external support helps new ventures understand how markets operate and become effective market actors. Following previous studies (Macmillan, Kulow, and Khoyleian 1989; Ehrlich et al. 1994; Barney et al. 1996), we measured VCs' external support with the three items: (1) our VCs assisted us in making strategic decisions; (2) our VCs assisted us in understanding market trends; and (3) our VCs assisted us in understanding competition. VCs' internal support helps new ventures create an effective organization. Similar to previous studies (Gomez-Mejia, Balkin, and Welbourne 1990; Ehrlich et al. 1994; Busenitz, Fiet, and Moesel 2004; Large and Muegge 2008; Rajchlova 2013), we measured VCs' internal support with the three items: (1) our VCs assisted us in making recruitment decisions; (2) our VCs assisted us in making dismissal decisions; and (3) our VCs assisted us in making operational decisions.

Prior research has shown that the main benefits of VC support include expediting ventures' rate of innovation and commercialization as well as helping new ventures build their network or ecosystem (Arthurs and Busenitz 2006; De Clercq and Sapienza 2006; De Clercq, Sapienza, and Zaheer 2008; Croce, Martí, and Murtinu 2013; Gerasymenko and Arthurs 2014; Dutta and Folta 2016). Respectively, we measured the perceived benefits of VC assistance with the following three items: (1) VC involvement has led to faster innovation; (2) VC involvement has led to faster growth of business network; and (3) VC involvement has led to faster venture growth. Based on studies that have identified the aspects of VC assistance that often provoked a negative reaction from CEOs (Gomez-Mejia, Balkin, and Welbourne 1990; Sapienza and Korsgaard 1996; Parhankangas and Landström 2004; Botelho and Jonathan 2006; Cumming and Johan 2007; Yitshaki 2008; Forbes, Korsgaard, and Sapienza 2010; Zacharakis, Erikson, and George 2010; Khanin and Turel 2015), we constructed the following three items of the perceived costs of VC assistance: (1) VC involvement has increased coordination problems; (2) VC involvement has decreased decision-making flexibility; and (3) VC involvement has decreased management authority.

We measured CEO evaluation of the value of VC support with one item ('Overall, I assess the assistance of our VCs as highly valuable'). This measure is commonly used in the literature (De Ruyter and Wetzels 1996). Finally, we measured CEO experience with the three items: (1) years of professional experience; (2) years of experience in the current industry; and (3) years of experience with the current technology (Ehrlich et al. 1994; Barney et al. 1996). Constructs and items are presented in Table 2.

Data analysis and results

SEM analysis was selected for assessing the proposed research model because it has the ability to estimate multiple paths simultaneously while taking the complexities of the

Table 2. The survey instrument.

Construct	Items
VCs' internal support	Our VCs have assisted us in making recruitment decisions Our VCs have assisted us in making dismissal decisions
VCs' external support	Our VCs have assisted us in making operating decisions Our VCs have assisted us in making strategic decisions Our VCs have assisted us in understanding the market trends Our VCs have assisted us in understanding competition
The perceived costs of VC assistance	VC involvement has increased coordination problems VC involvement has decreased decision-making flexibility VC involvement has decreased management authority
The perceived benefits of VC assistance	VC involvement has led to faster innovation VC involvement has led to faster growth of business network VC involvement has led to faster venture growth
CEO Experience	Years of professional experience Years of experience in the current industry Years of experience with the current technology
The overall (perceived) value of VC's assistance	Overall, I assess the assistance of our VCs as highly valuable

observed covariance structure into account, and separating error terms from latent variables in an efficient way. Our sample is relatively small. Nevertheless, SEM with sample sizes over 50 tends to generate reasonably high rates of proper solutions (Fan, Thompson, and Wang 1999). Although some scholars suggested that SEM on small sample models may slightly overestimate fit indices and yield low power to reject the null hypothesis (e.g., Kim 2005), other studies established that the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) are relatively insensitive to sample sizes, e.g., sample size explains less than 1% of the variation in these fit statistics (Fan, Thompson, and Wang 1999). Consequently, we examined all the fit indices, but paid particular attention to the CFI and RMSEA indices. To further alleviate potential concerns regarding the sample size in our study, a minimum sample size was calculated for obtaining the power of 0.90 (with $\varepsilon = 0.10$) for the RMSEA for a model with 94 degrees of freedom (i.e., our structural model), using the critical non-centrality parameters and formulas specified by Kim (2005). Based on this analysis, we concluded that we would need a sample of about 53 to obtain the needed power, and be able to make correct decision applying the RMSEA. The sample in this study is larger. Hence, the SEM is an appropriate technique in this case, provided that the CFI and RMSEA fit indexes are appropriate.

Several additional preliminary steps were taken. First, we developed an assessment of the potential effects of the two possible control variables, namely: venture stage and performance. We did not conduct this preliminary step, however, as part of SEM analysis. Due to the small sample size, testing multiple control variables in the SEM model would substantially increase the number of parameters to be estimated, reduce the degrees of freedom, and potentially lead to wrong inferences. To test these potential effects outside of the SEM model, a Multivariate Analysis of Variance model was conducted, with venture stage (initial/expansion/bridge/ acquisition) and profitability (yes/no) as fixed factors, and the model's measurement items (see Table 2) as dependent variables. Pillai's Trace values of 0.53 ($p < 0.78$) for stage, 0.23 ($p < 0.34$) for profitability, and 0.53 ($p < 0.80$) for their interaction indicated that there are no omnibus differences in the data-set along these dimensions. The responses did not vary much by stage, profitability, and their interaction. The next sections, therefore, report on the analyses using the entire data-set.

Table 3. Constructs' descriptive statistics, reliabilities,^a and correlations.

	Mean	Standard deviation	Range of item-to-total correlations	(1)	(2)	(3)	(4)	(5)	(6)
(1) VCs' internal support	4.39	1.50	0.57–0.72	0.81					
(2) VCs' external support	4.15	1.46	0.53–0.72	0.36**	0.79				
(3) Internalization: perceived costs	4.57	1.65	0.73–0.89	0.18	–0.24*	0.91			
(4) Externalization: perceived benefits	4.08	1.37	0.52–0.59	0.53**	0.59**	–0.25*	0.73		
(5) CEO experience	16.46	7.18	0.40–0.68	0.35**	–0.01	0.10	0.21*	0.73	
(6) The overall value of VC assistance	2.64	1.66	NA	0.29**	0.48**	–0.38**	0.45**	0.13	–

^aCronbach alphas bolded on the diagonal.

* $p < 0.05$.

** $p < 0.01$.

Because cross-sectional survey research can be biased due to the common method variance (Podsakoff et al. 2003), Harman's single-factor test (Harman 1967) was applied to ease this concern. An exploratory principal components analysis model with no rotation was specified and tested in SPSS. The results indicated that four components exist in the data. The first component captured only 29% of the variance. The second component captured another 20% of the variance, and the remaining two components captured only 18% of the variance. While this test is imperfect, it was concluded following prior research that it is unlikely that a single methods factor dominates the data. Although the common method bias may be present in our data, it is unlikely to distort the results of analysis (Podsakoff and Organ 1986).

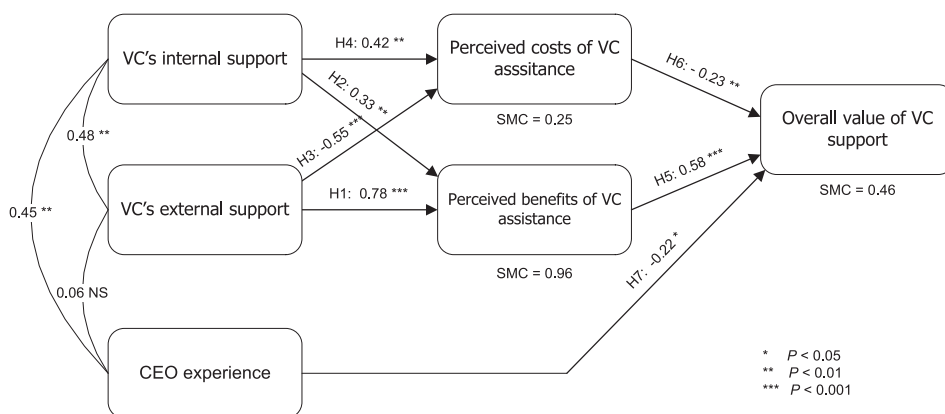
Model estimation

Consequently, the validity of the measurement instruments used in this study was assessed. Constructs' descriptive statistics (the first columns), reliabilities (on the diagonal), and correlations (underneath the diagonal) are outlined in Table 3. The results indicated that there is sufficient variation in the constructs, and that item-to-total correlations for all constructs exceeded the 0.35 threshold (Fornell and Larcker 1981). Table 3 also demonstrates that all measures were reasonably consistent and reliable because the Cronbach's alphas for all constructs were above 0.7.

The estimation of the model followed the two-step approach specified by Anderson and Gerbing (1988). Analyses were conducted with AMOS 23. First, a confirmatory factor analysis (CFA) model, which included the model's six constructs that were allowed to freely correlate with each other, was specified and estimated. The fit indices for this model are given in Table 4. As can be seen, the CFI and Incremental Fit Index were over 0.95. Together with a RMSEA value below 0.08, they indicate good fit (Hu and Bentler 1999). Moreover, the RMSEA was significantly below 0.05 ($p\text{-close} < 0.46$) and the standardized root mean square residuals (SRMR) was less than 0.08, which further indicates an excellent fit (Hu and Bentler 1999). In addition, because all factor loadings were significant at the $p < 0.001$ level, the model passed condition-9 tests (Kelloway 1998, 28–29). Given the viability of the CFA model, the structural

Table 4. Fit indices for the CFA and structural models.

	χ^2	df	<i>p</i> -val	χ^2 /df	IFI	CFI	RMSEA	<i>p</i> -Close	SRMR
CFA model	112.34	89	0.05	1.27	0.97	0.97	0.051	0.46	0.057
Structural model	123.64	94	0.02	1.32	0.96	0.96	0.056	0.35	0.061

**Figure 1.** Research model.

model was specified and estimated using the same procedure. The fit indices for this model are also given in Table 3. Again, the model had an adequate fit because the fit indices meet the abovementioned criteria (CFI and IFI > 0.95, RMSEA < 0.06, SRMR < 0.08, and factor loadings significant at $p < 0.001$). The standardized path coefficients and their levels of significance, inter-construct correlations, and the variance explained in endogenous constructs (SMC = squared multiple correlations) are presented in Figure 1.

The model lends support to all the hypotheses. VCs' external support and VCs' internal support explained a major portion of the variation attributed to the perceived benefits of VC assistance (however, VCs' external support explained a greater portion of variation than VCs' internal support). In contrast, VCs' external support and VCs' internal support explained only 25% of the variation in perceived costs of VC assistance. This implies that there may be other factors (e.g., personal relationships or VC status and reputation) that could affect CEOs' appraisals. CEO experience, combined with the perceived costs and benefits of VC assistance, explained 46% of the variation in CEOs' appraisals of the total value of VC assistance.

Post hoc analysis

The proposed theory and research model suggests that CEO experience will directly predict his or her evaluation of the total value of VC assistance. It is interesting to consider whether this effect could be mediated by CEOs' assessments of particular types of VC support and CEOs' evaluations of the costs and benefits of VC assistance. In order to test the possibility of such partial mediation, we employed the bootstrapping procedures (Preacher, Rucker, and Hayes 2007) available in AMOS 23 (200 resamples, bias-corrected 95% confidence intervals, p -values are two-tailed) as a means to estimate the significance of the indirect, mediated effect of experience on CEOs' appraisals of the total value of VC assistance. This procedure

is advantageous compared to alternative mediation testing approaches since it is not based on distributional assumptions (Cheung and Lau 2008). The results indicated that when an indirect set of effects is considered, the direct effect of CEO experience is still significant ($\beta = -0.25, p < 0.01$). The standardized indirect effects (bias corrected) of CEO experience were not significant $[-0.090, -0.329, p < 0.257]$. Hence, we can conclude that experience influences CEOs' assessments of the total value of VC assistance directly, rather than through the mediation of their assessments of VC support types and the costs and benefits of VC assistance.

Discussion

Numerous studies of VC assistance provided to portfolio companies generated long lists of various types of VC support derived empirically from surveys of VCs and entrepreneurs (Macmillan, Kulow, and Khoylian 1989; Macmillan, Kulow, and Khoylian 1989; Gorman and Sahlman 1989; Sapienza 1989, 1992; Ehrlich et al. 1994; Barney et al. 1996; Busenitz, Fiet, and Moesel 2004; Large and Muegge 2008; Rajchlova 2013). However, it is important to understand, from a conceptual perspective, first, why VCs need to provide such types of support to their portfolio companies, and second, why CEOs express such polar and ambivalent opinions regarding the perceived benefits and costs of particular types of VC support and the overall value of VC assistance. As we argued here, TCE complements other theoretical frameworks (e.g., agency theory, the resource-based view, knowledge-based theory, and resource dependence perspective) in addressing these key research questions.

In essence, TCE suggests that markets, hierarchies, and hybrids represent three distinct modes of governance (Williamson 1991, 2010). TCE assumes that autonomy (markets) and cooperation (hierarchies) represent the two extremes on the axis of governance; hence, hybrids combine autonomy and cooperation but are still inferior to the two key governance modes in terms of these defining characteristics (Williamson 1991). In our view, this perspective is useful for understanding VCs' role with regard to young entrepreneurial organizations that need to be professionalized. This can be achieved by teaching start-ups both how to operate in the marketplace (i.e., to externalize) and how to run an effective organization (i.e., to internalize). Respectively, VCs' value added can be created via external support seeking to increase new venture's ability to operate as an effective market actor and via internal support seeking to increase venture's ability to run an effective organization. Some previous studies have essentially contrasted external support described as boundary spanning (Gomez-Mejia, Balkin, and Welbourne 1990) or commercialization (Maula, Autio, and Murray 2005) and internal support described as managerial support (Gomez-Mejia, Balkin, and Welbourne 1990) or professionalization (Maula, Autio, and Murray 2005). However, applying TCE perspective provides deeper understanding, in our opinion, of the dual role VCs play in assisting their portfolio companies.

Specifically, alliances with VCs can be useful to new ventures, besides financing, if VCs can teach them effectively to professionalize via external and internal support. External support may include transferring knowledge to portfolio companies about market trends and competition, and helping them make strategic decisions and form a useful network (Macmillan, Kulow, and Khoylian 1989; Ehrlich et al. 1994; Barney et al. 1996; Large and Muegge 2008). In turn, internal support may include transferring knowledge to portfolio companies about the importance of strategic planning (setting milestones and monitoring

their achievement), making decisions about recruiting and dismissing employees, and setting up effective operations (Saetre 2003; Busenitz, Fiet, and Moesel 2004).

TCE perspective, however, does not only help develop a parsimonious model of VC assistance that advances our understanding of what VCs do (Gorman and Sahlman 1989; Sapienza 1992). It also helps explain the reasons for CEO discontent or at least a certain amount of ambivalence with regard to VC assistance. The problem, as we described it in this paper, is that as VCs help a start-up to internalize, they can smother inadvertently its entrepreneurial spirit by imposing too much red tape, and undermining CEO authority. This is what happens when an established company acquires a new venture: even as it buys an entrepreneurial entity for its innovativeness, it kills the goose that laid golden eggs through excessive control (Williamson 1985). This explains why CEOs are so wary about VC assistance, VCs' internal support, in particular. For all its undeniable benefits delivered, if VCs are good at what they do and portfolio companies have an adequate absorptive capacity, VCs' internal support may create immense costs.

This is not to say that VCs' external support is totally unproblematic. The inferiority of alliances compared to markets and hierarchies can also be traced to VCs' particular methods of venture externalization. No wonder, experienced CEOs do not value VC assistance as highly as nascent entrepreneurs. This is because seasoned CEOs can potentially externalize their start-ups more effectively than VCs as they may find new market partners that VCs could overlook or ignore due to their vested interests. This may be why there is no significant relationship between CEO experience and CEOs' assessments of VCs' external support (see Figure 1). However, even these seasoned CEOs apparently see some benefits in VCs' internal support. Hence, there is a significant relationship between CEO experience and CEOs' assessments of VCs' internal support (see Figure 1). At the same time, CEOs' assessments of VCs' external and internal support as well as CEOs' assessments of the benefits and costs of VC support do not mediate the effect of experience on CEOs' assessments of the total value of VC assistance. This could be because experienced CEOs are just as dubious with regard to VCs' internal support as other CEOs.

The main conceptual contribution of our study lies in that it broadens the range of conceptual frameworks that can be used to examine VC–new venture alliances. Specifically, we show that TCE facilitates our understanding of VCs' dual role with regard to new ventures, the potential harm that VCs may do to their portfolio companies, despite their best intentions, and hence, the reasons for conflicts between VCs and CEOs (Yitshaki 2008; Zacharakis, Erikson, and George 2010; Forbes, Korsgaard, and Sapienza 2010; Khanin and Turel 2015). This explanation of tensions in the VC–entrepreneur relationship is significantly different from the ones proposed by agency theory (VCs' and entrepreneurs' divergent goals and opportunism create conflicts of interests), resource-based view (lacking VCs' resources or insufficient resource fit between VCs and new ventures may undermine productive cooperation); knowledge-based theory (VCs may fail to provide adequate learning assistance to portfolio companies), and resource dependence perspective (VCs may seize excessive power in exchange for their support making entrepreneurs regret their previous arrangements). TCE suggests that as much as new ventures need to professionalize, hierarchy-based governance and cooperation-based governance may subvert new ventures' entrepreneurial spirit and flexibility.

From a practical standpoint, our findings explain why CEOs could be especially critical of successful VCs criticizing such VCs both for their incompetence and a lack of effectiveness

(Bengtsson and Wang 2010; Zheng 2011). Successful VCs could exhibit hubris in imposing their vision of venture professionalization, despite CEOs' objections and resistance (Gomez-Mejia, Balkin, and Welbourne 1990; Parhankangas and Landström 2004, 2006). Therefore, entrepreneurs that are able to choose among VCs need to assess how various VCs provide both external support and internal support. As much as CEOs may need VCs' external support, if VCs insist on providing internal support that may undermine new venture's entrepreneurial spirit and flexibility, an alliance with such effective but uncompromising VC may need to be avoided.

Limitations and directions for future research

The main limitations of this study have to do with that it examines the proposed broad theory regarding CEOs' characteristic ambivalence expressed in their evaluations of VCs' internal support as related both to perceived benefits and costs of VC assistance with a relatively small sample of VC–new venture alliances. Future studies could conduct more thorough empirical testing of the proposed theory with more representative samples that could allow capturing additional factors that may influence CEOs' assessments of different types of VC support, their benefits and costs, and the overall value of VC assistance.

There could be, of course, some additional factors that may influence CEOs' appraisals of VC assistance that our model does not capture. For example, some VCs may not be very good at transferring their knowledge to portfolio companies or there may not be a good fit between VCs' and new ventures' capabilities. Nevertheless, this study shows that VC support has its benefits and costs that entrepreneurs need to understand very clearly if they are fortunate enough to be able to choose among different types of financing.

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