Latent System Dynamics within Corporate Venture Capital Firms

by

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ABSTRACT

At the current pace and scale of sociotechnical progress, incumbent firms must seek out alternatives to traditional R&D in order to protect their current market position. By deploying corporate venture capital, many firms have leveraged the nimble, resourceful, and efficient nature of start-ups to inject compelling innovations into their core business lines. However, this arrangement must be constructed and cultivated carefully in order to optimize potential returns. Technological product or platform integration must be planned and executed, and value networks should be interleaved wherever possible. This paper asserts that the most effective corporate VCs have adopted these distinct practices, and further contends that these CVCs should view investment funding as a cost of doing business (rather than seeking long shot returns). These investors are inherently directing cash flow to an agile development workforce riding at the forefront of trends and technology, over which they maintain some level of strategic control.

A series of interviews were conducted in order to capture the direct and indirect objectives, philosophies, and operations of corporate venture capital firms. Rather than simply validating or refuting the above hypotheses, this paper also qualitatively examines the insights and implications of the respondent data. Through the course of the analysis, numerous operational coherency issues were discovered, which are explored and discussed using principles from system dynamics, innovation theory,
and management literature. Historical evidence and outside empirical studies were also leveraged to further highlight and underscore some of these key discoveries.

Thesis Supervisor: Alex “Sandy” Pentland

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1 Introduction

This paper explores, rather than defines, tactics and strategies associated with successful corporate venture capital investment practice. The central hypotheses were developed after a thorough review of academic literature and numerous empirical studies, and were later qualitatively evaluated based on interviews of officials from 16 corporate venture capital firms spanning multiple industries. While the focus will remain on the dynamics of corporate VC firms, some underlying assumptions must first be addressed:

1. Corporate R&D projects are becoming an obsolete means of driving commercial innovation due to their low success rates and insular biases.
2. New entrant firms, or start-ups, are more likely to produce discontinuous or disruptive commercial innovations than their incumbent counterparts.
3. Incumbent firms must invest in, engage with, and integrate outside innovation to sustain and extend their market position.

1.1 Fading Effectiveness of Corporate R&D

During a panel discussion in January of 2016, Scott Lenet, Co-Founder and President of Touchdown Ventures, described venture capital as the most risky asset class (Lenet, Global Corporate Venturing and Innovation Summit, 2016). Scott’s voice here was meaningful, as an entrepreneur and 25 year veteran of venture capital. However, when considering the growing costs and mounting challenges facing commercial research and development projects (The Industrial Research Institute, 2015), it’s fair to contend that the class of assets and expenditures associated with corporate R&D projects is even riskier. Such a sentiment conceivably ignores the advantages of government-sponsored R&D grants and subsidies, regulatory exemptions, and other incentive programs that offset the impact of potential
losses. However, as discussed later in this paper, the success of corporate investment in R&D or venture capital is far more than a function of cash returns or IRR.

For the sake of this preliminary discussion, R&D project success will be defined by projects that cycle through the entire research and development process, and become either fully implemented or publicly commercialized. Consequently, unsuccessful projects are simply terminated at some point prior to general commercial availability or full-scale implementation. Following this very basic and binary approach, it is estimated that only 10% of R&D projects are successful (Raelin & Balachandra, 1985). Other research suggests that 90% of the successful projects, in the form of new products brought to market, failed to meet their business objectives in a given year (Balachandra & Friar, 1997). In other words, it’s estimated that only 1% of corporate R&D projects will actually meet their business objectives.

There are three principal explanations for the attenuating success rates of corporate R&D projects. First, despite streamlined operations and a refined customer sensitivity, established firms are hindered by a downward vision and short-sighted development trajectory (Christensen, 1997). Projects are thus a product of organizational biases, culture, and philosophy. Even when successful, these projects often result in only incremental improvement to existing products or services. A second obstacle to R&D project success is the accelerating scale and pace of technological innovation. Skills are quickly evolving, automation is perpetually improving, and existing technologies are being assembled in new and creative ways (Brynjolfsson & McAfee, 2014). A conventional commercial R&D process, such as the one demonstrated below in Figure 1, is inherently far too protracted and inflexible to operate in this environment. A more adaptive process, which elicits feedback early and often, would be better served to keep pace here. A final major impairment to R&D project success is the growing decentralization of corporate resources. Firms are becoming less vertically integrated, frequently outsourcing and utilizing networks of suppliers and contractors (The Economist Newspaper Ltd., 2007). Research divisions are
being fragmented and collapsed, coalescing researchers and developers within business units to assume roles on less comprehensive projects.

![Diagram of commercial R&D process stages]

**Figure 1 – Example Stages of a Commercial R&D Process (Raelin & Balachandra, 1985)**

1.2 New Entrants (Start-ups) Driving Innovation

Economist Joseph Schumpeter famously noted that “it is not the owner of the stage-coaches who builds railways” (Schumpeter, 1934). He was imparting the notion that innovation, within a given industry, was more likely to come from an industry outsider than from a prominent incumbent. It is important to note that innovation in this context could be either discontinuous or disruptive innovation. While generally employed interchangeably in colloquial discussion, each derivative is notably distinct. Discontinuous innovation, or radical innovation, utilizes a new set of engineering or scientific principles. It often opens up whole new markets and potential applications (Henderson & Clark, 1990). Disruptive
innovation may not necessarily involve dramatic scientific advancement. It could be driven by the subtle reconfiguration of existing technologies in a new and creative manner. Though, like its peer, disruptive innovation creates new markets and value networks, and ultimately displaces an earlier innovation (Christensen & Raynor, 2003).

In this discussion, *industry outsiders* are not only new entrants to a given market. They’re nimble upstart firms, often referred to as *start-ups*, or start-up companies. Large, incumbent firms intent on crossing into a new market or industry are noteworthy, but remain functionally analogous to the endemic companies within that given industry. Start-ups are markedly advantaged by their size and developing position. Empirical evidence suggests that larger organizations are more likely to struggle with employee efficiency, morale, and motivation (Alnuaimi, Robert, & Maruping, 2010). Maintaining a desirable work environment, where talented and creative individuals freely exchange information, is one of the core tenets of “constructed advantage” (De La Mothe & Mallory, 2006). Start-ups are also generally endowed with an “attacker’s advantage.” Incumbent firms operate within a closed value network, guided by their existing customers’ needs, existing procurement channels, and known competitors (Christensen & Rosenbloom, 1995). The implications of this are effectively captured by a familiar adage, often attributed to Henry Ford, “If I had asked people what they wanted, they would have said faster horses” (Vlaskovits, 2011). Ford would have been implying the importance of operating outside the confines of a closed value network. It is the unencumbered start-up firm, without prior bias or influence, which is empowered to innovate most effectively.

Quantitatively validating the assertion that start-ups innovate more effectively than incumbent firms is a challenging task. It may seem intuitive to compare and contrast the patent portfolios and patent filings of each. However, this approach does not adequately measure the quality and significance of the innovations being produced by these firms. Start-ups also often defer filing for patents until they acquire sufficient cash reserves to afford patent protection. A study of more than 10,000 firms founded
after 1997 estimates that 64% of the newly established firms initially held no patents. That number declined to 18% after firms received venture investment (Graham, Merges, Samuelson, & Sichelman, 2009). Patent holdings are thus a better indicator of the size and maturity of a company, rather than signaling the strength or number of innovations it produces. 73% of firms that filed for patents between 2009 and 2011 had at least 50 employees (OECD, 2013). Larger, more mature companies produced more patents. This does not mean that larger, more mature companies are necessarily better at innovating.

It is perhaps more useful to look at the continuation (or survival) rates of start-ups compared to the continuation rates of R&D projects carried out by incumbent firms. As mentioned earlier, 90% of the R&D projects at incumbent firms were terminated or failed prior to their completion. One longitudinal study of 4,928 start-up companies established in 2004, revealed that only 37% of the companies had failed by 2009 (Coleman, Cotei, & Farhat, 2013). 58% of the remaining firms were still operating independently. A less optimistic empirical study of 11,259 new U.S. technology ventures from 1991 to 2000, yielded a 21.9% survival rate after 5 years (Song, Podoynitsyna, van der Bij, & Halman, 2008). Though, it is important to note the overlap with the “dot-com bubble” and the market crash of 2000. A third study sampled data from 19,434 start-up companies, which observed an approximate failure rate of 31% from the subset sampled (Hall & Woodward, 2007). All three studies assert better continuation rates for start-ups than for R&D projects carried out by incumbent firms. Given their superior continuation rates, it is a reasonable assertion that start-ups are producing products and services with greater novelty and performance than that of corporate R&D.

1.3 Incumbent Firms Forging Partnerships to Preserve Their Market Position

The concept of incumbent firms integrating and leveraging external resources to protect or sustain their market position is nothing new. J.P. Morgan’s acquisition of the Carnegie Steel Company at
the dawn of the 20th century arguably exhibits the first modern age corporate buyout on record (Hannah, 2011). Private deals licensing intellectual property between firms, technology transfers between firms, joint venture agreements, and other types of partnerships have transpired throughout much of the past century. McNally provides a nice dissection of these various types of inter-firm relationships below in Figure 2. Despite its current renaissance, corporate venture capital has remained a less common practice among incumbent firms. A mere 10% of the Fortune 2000 are currently operating corporate venturing groups (Lenet, 2015).

<table>
<thead>
<tr>
<th>Collaborative relationship</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing relationships</td>
<td>One firm, usually the large, manufactures products for the other</td>
</tr>
<tr>
<td>Customer-supplier relationships</td>
<td>Long-term relationships with vertically related companies</td>
</tr>
<tr>
<td>Licensing agreements</td>
<td>One firm is granted access to the other’s patents or technology for a fee</td>
</tr>
<tr>
<td>Client-sponsored research contract</td>
<td>The small company is paid to conduct research into particular products or processes for another company</td>
</tr>
<tr>
<td>Marketing/distribution agreements</td>
<td>Agreements whereby one firm markets and distributes the other’s products</td>
</tr>
<tr>
<td>Collaborative R&amp;D</td>
<td>An agreement to collaborate on the development of specific products or processes</td>
</tr>
<tr>
<td>Large firm–small firm joint ventures</td>
<td>Formation of an independent third enterprise—assets are contributed by both parties, who also share risks</td>
</tr>
<tr>
<td>Venture capital investments</td>
<td>Minority equity investment by the large company in the smaller firm</td>
</tr>
<tr>
<td>Venture nurturing</td>
<td>As well as finance, the large company provides the small firm with advice and expertise in areas such as marketing, manufacturing and research</td>
</tr>
<tr>
<td>Sponsored spin-outs</td>
<td>Minority equity investment by the large company in a small firm which originated within the large company</td>
</tr>
<tr>
<td>Personnel secondment</td>
<td>Informal collaboration involving swapping of personnel between firms</td>
</tr>
<tr>
<td>Learning opportunities</td>
<td>Informal agreements where companies educate each other about products, processes and techniques</td>
</tr>
</tbody>
</table>

*Sources:* Compiled from Contractor and Lorange, 1988; Forrest, 1990; Shan, 1990; Gilbert, 1991; Forrest and Martin, 1992; Sandham and Thurston, 1993; Rothwell and Dodgson, 1994

*Figure 2 - Types of collaborative relationships between large firms and small firms (McNally, 1997)*

Corporate venturing provides two distinct advantages over other types of business development or corporate partnership, which are depicted below in Figure 3. Firms that participate in corporate venturing are afforded the opportunity to audit and examine a broad number of start-ups and new
entrants operating within their domain. This can provide a crucial framework to understand market trends, identify potential competitors, acquisition targets or partners, and dispel impending disruption by monitoring such innovations from their inception. Firms that engage in corporate venturing may also gain deep insights into the operations of their portfolio companies by taking board seats and maintaining active communication channels with their start-ups' management teams.

![Diagram](image)

*Figure 3 - Insights and Breadth of Corporate Venturing (Lenet, 2015)*

Corporate venturing is not the only option to gain insights and combat potential disruption, but it is one of the most effective methods. The same obstacles and limitations threatening corporate R&D are threatening the very existence of incumbent firms. The average (and projected) lifespan of firms in the S&P 500 index is exhibited below in Figure 4. Large, incumbent firms that once enjoyed an average of 50-60 years of prosperity are now projected to last just over 10 years (Lenet, 2015). Today's most prominent players in the market are expected to watch their market position slowly dissipate as they succumb to these powerful macro-scale developments and trends. Threats such as increasing competitive intensity, shorter windows of opportunity, and the pace and scale at which technology is pushing forward are far too formidable to be rivaled by one firm acting alone.
Some incremental innovation is certainly happening from within these incumbent firms, but it is generally insufficient to sustain their market position over the long term. Selectively forging collaborative relationships with high potential start-ups enables incumbents to harness some of these innovative forces, and close competency gaps that can develop over time as sociotechnical progress marches forward. These partnerships also afford incumbents an opportunity to participate in new and emerging markets that they might otherwise miss due to lack of foresight in the product development process.

Nonetheless, simply engaging in venture capital and providing funding for start-ups is not enough. The CEO and corporate management team must fully commit and follow through to leverage and utilize their newly available strategic knowledge and resources. Attempted integration of the firms' value networks is essential, and the partnership should be cultivated over the long-term, unless such a partnership proves unproductive and futile. Such circumstances are bound to happen as with any corporate partnership, but the effective ones will prove particularly powerful and advantageous for the
The term *corporate venture capital* is used to describe a structured relationship between two firms, in which a large incumbent firm takes an equity stake in a smaller entrepreneurial firm (McNally, 1997). In contrast to other types of corporate relationships and alliances, the impetus to engage in corporate venture capital may not be for purely strategic gains. Firms may also seek financial gains. According to the academic work of Kevin McNally, corporate organizational structure, fund structure, and inter-organizational behaviors are key indicators of a firm’s ultimate objectives. McNally notes that if a firm directly (internally) manages its own fund, or ad-hoc practice, it is generally indicative of the firm’s primary interest in strategic gains. Likewise, indirect (external) management of a firm’s fund is generally indicative of the firm’s primary interest in financial gains (McNally, 1997). While it is conceivable a firm may desire to strike a balance between strategic and financial gains, an optimal strategy is to identify and coalesce around a single fundamental objective. Hybrid strategies are at worst bound to inevitable failure, and at best bound to suboptimal performance (Utterback, 2015).

The focus of the central hypotheses, methodologies, and accompanying research is directed towards firms that directly (internally) manage their own fund or ad-hoc investments. As such, there is an underlying assumption that these firms should focus their attention on achieving strategic gains. That is not to say that such firms should not welcome financial gains, but such rewards should be considered incidental and nonessential to any measured success.

2.1 Hypothesis A: The primary objective of investing is to maintain market position
As mentioned in the introduction, incumbent firms are under increased duress -- not only from competition but also from macro-scale issues, such as the increased rate of socio-technical progress. It is commonplace for firms to form alliances and strategic partnerships to combat such challenges and disruptive forces. A number of academics have attempted to describe the strategic approaches of such partnerships. McNally cites the work of Edward Malecki in describing a window strategy and an options strategy. Both strategies describe a firm making minority equity investments so that it may identify and monitor the forefront of trends, technologies, and business models being developed externally (McNally, 1997). Each strategy simply carries with it a different scope and breadth from which to view the world outside the firm.

In a generic sense, any strategy a firm employs here is simply intended to maintain (and perhaps extend) the firm's market position. When a company engages in corporate venture capital, it is an acknowledgement that they must form strategic relationships outside the firm in order to combat these macro-scale issues threatening their market position. Threats such as increasing competitive intensity, shorter windows of opportunity, and the pace and scale at which technology is pushing forward are far too formidable to be rivaled by one firm acting alone. Protracted research and development cycles, insular biases, and stagnant culture are major impediments in such a dynamic and rapidly evolving environment.

2.2 Hypothesis B: Investments are really an expense for funding an adaptive workforce

In alignment with Hypothesis A -- that the primary objective of investing is strategic: to preserve and expand a firm’s market position -- investments should be viewed as a cost of doing business. Financial returns and financial gains are not the primary goals of investing and, as such, expectations and reaction to financial gains and losses should be tempered. If a firm wishes to obtain financial gain through corporate venture capital, it should look to indirectly (externally) manage its fund. Indirect investment provides a firm with access to a far larger portfolio of companies in which to invest, greater
diversification in terms of markets and regions, and leverages the experience and relationships of seasoned institutional venture capitalists driven exclusively by financial returns (McNally, 1997).

Firms preserving and expanding their market position using corporate venture capital are also inherently aiding and managing disruptive innovation, rather than being potentially victimized by it. The work of Ramdorai and Herstat (2015) is particularly provocative in this context:

Two inherent qualities of disruptive innovations differentiate them from other discontinuous innovation.

1. Lack of financial attractiveness: Christensen argues that disruptive innovations appear financially unattractive for companies to pursue, relative to their mainstream investments for three main reasons:

   I. Profit margins for disruptive innovations are typically lower.

   II. Companies are unable to correctly estimate the size of the market for disruptive innovations since these innovations create completely new markets.

   III. Companies tend to pursue large markets; however, markets for disruptive innovations are initially much smaller than mainstream markets and cannot provide volumes that make the business interesting for companies.

2. Incompatibility with existing value network: Christensen uses the concept of value networks to explain attacker’s advantage in commercializing disruptive innovations. Value networks are defined as the collection of upstream suppliers, downstream channels to market, and ancillary providers that support a common business model within an industry. Disruptive innovations do not fit into the embedded value networks of the organization and new market disruptive innovations typically create new value networks with new performance attributes.

   These inherent qualities of disruptive innovations make them unattractive for established firms and they often fail to commercialize them (Ramdorai & Herstat, 2015).

Therefore, seeking financial gains is somewhat counterintuitive to this continued market penetration strategy. Opportunities to invest in, or partner with, smaller upstart firms producing disruptive innovations will inherently look financially unattractive to the incumbent firm under most circumstances.

   It is conceivable that firms would adopt alternative lenses through which to view investment opportunities, but it remains imperative they focus on the primary investment objective: perpetuating market penetration. The primary benefit for large, incumbent firms to partner with smaller firms is to leverage the small firms’ intrinsic adaptability. Small firms benefit from having minimal bureaucracy,
decentralized decision-making, and higher efficiency in utilizing professional-technical specialists than larger firms (Hull & Slowinski, 1990). This makes small firms advantaged over larger firms in responding to the challenges presented by the current pace and scale of technological innovation. As such, when incumbent firms invest in start-ups, they are also investing in an adaptive workforce (with which they are partnered) operating at the forefront of trends and technologies.

2.3 Hypothesis C: Use of institutional VC practices should be minimized by corporate VCs

At the accelerating pace and scale of sociotechnical progress, following many institutional VC practices is becoming increasingly inhibitive in the corporate venture capital world. A certain level of systematic due diligence must be applied, but the evaluative pre-investment process should not consume more time than necessary to gauge whether a particular partnership has valuable, distinctive strategic potential. Hassan and Leece describe a typical diligence process as including data collection, internally calculating risk and return, and then applying suitable valuation methods to compute the approximate value of the start-up company. While this might not sound particularly problematic on the surface, it can be a lengthy, tedious, and time-consuming process to collect and extract relevant information during the diligence process (Hassan & Leece, 2007).

Hassan and Leece further assert that data from private, unquoted companies (i.e. start-ups) is often asymmetrical and may contain significant gaps due to entrepreneurs providing only information they deem relevant and attractive to gain funding. This can lead VCs to apply extensive and overbearing scrutiny of the information, and perform exhaustive reviews of the unquoted company’s business plan (Hassan & Leece, 2007). VCs may also opt to mitigate their risk by establishing funding tranches or imposing rigid milestones. Aside from being considered generally unattractive deal terms to an entrepreneur, such terms can also elongate the pre-investment process and later weaken potential strategic benefits to working with a smaller, more adaptive firm.
A comprehensive empirical study of more than 11,000 new U.S. technology ventures established over the course of a decade provides key insights into the critical success factors of new technology ventures. The study identified 24 possible success factors, all of which would be part of a typical VC diligence process. 8 of the 24 factors were found to have significant positive correlation with start-up success rates. Only half of those factors were outside the direct control of a potential investor: founders’ experience with marketing, founders’ experience in the industry, firm age, and size of the founding team. Factors such as founders’ R&D experience, founders’ prior experience in entrepreneurship, and environmental dynamics (i.e. competition intensity and market heterogeneity) showed no correlation with venture success or failure (Song, Podoynitsyna, van der Bij, & Halman, 2008).

It’s fair to contend that there is room to scale back on the VC diligence process here, especially when there is reduced emphasis on financial returns. As reiterated by other corporate venturing practitioners, the diligence focus should be placed on the founders’ talent, experience, and motivation (Chung, 2016). Further evaluation is also certainly warranted in cases of technology-centered partnerships. However, operating beyond these proposed limits provides seemingly diminishing returns and may, in fact, prove detrimental to the strength and duration of the interfirm partnership.

2.4 Hypothesis D: Platform/product integration between firms is fundamental to success

In order for a large firm and small firm to form a symbiotic relationship, the two must coalesce around a single value network. The value network may be the incumbent firm’s existing value network, or some combination thereof with components established by the small, upstart firm. A small firm can inject higher levels of innovative efficiency and improve development mobility for a large, incumbent firm. In turn, the incumbent must provide complementary resources in the form of access to its marketing network, product and development facilities, or perhaps simple credibility within the marketplace (McNally, 1997). The benefit here is twofold: utilization of the incumbent’s existing value
network provides a means of growth and opportunity for the small firm, and use of this network perpetuates its own growth and stability.

This type of symbiotic partnership also creates a broader macro-level benefit to the large firm, which is the essence of Hypothesis A. In order for the large, incumbent firm to preserve its market position, it must grow and augment its existing products (or platform) to reach new customers, or bring new products or services to existing customers. Having the small firm leverage the incumbent’s platform is key to successful integration of the small firm’s new technology, propagation of that technology to a large and often fervent customer base, and the organic growth and evolution of the incumbent’s platform itself. This practice also builds shared interests and business objectives between the firms.

Both incumbents and start-ups can mutually benefit from sharing and transferring resources, while still maintaining operational independence that allows each to perform to its full potential (Botkin & Matthews, 1992). Operating in this manner affords both firms a form of sustainable competitive advantage that could not otherwise be achieved with each acting independently (Hull & Slowinski, 1990). The value and competitive advantages created by such a structured, symbiotic partnership is demonstrated below in Figure 5.

Table 1.5 Advantages of large firm–small firm collaboration

<table>
<thead>
<tr>
<th>Advantages for large firms</th>
<th>Advantages for small firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>New product development opportunities</td>
<td>Access to finance</td>
</tr>
<tr>
<td>Increase/broaden company range</td>
<td>Access to management expertise</td>
</tr>
<tr>
<td>Provide customers with better service</td>
<td>Access to new markets for products</td>
</tr>
<tr>
<td>Financial gain</td>
<td>Increase size of distribution networks</td>
</tr>
<tr>
<td>Window on new technologies</td>
<td>Product development assistance/access to technical expertise</td>
</tr>
<tr>
<td>Provide solutions to technical problems</td>
<td>Potential sales to partner</td>
</tr>
<tr>
<td>Window on new markets</td>
<td>Gain credibility</td>
</tr>
<tr>
<td></td>
<td>Access to further funding from sources beside partners (e.g. EC)</td>
</tr>
</tbody>
</table>

Source: Based on Lawton Smith et al., 1991: 462

Figure 5 – Advantages of Large Firm-Small Firm Collaboration (McNally, 1997)
2.5 Hypothesis E: “Success” is a function of continued market penetration

If financial gain is the primary objective of a corporate venturing organization then success, in its simplest terms, is a function of cash returns and IRR. For the strategically minded investor, success is more challenging to define, and even more challenging to quantify. In alignment with hypotheses A and B, the relative success of an investment should be measured by the investing firm’s continued (or expanded) market position. Success is thus a function of the delta between the firm’s market position prior to an investment and their market position at some point in time after an investment. In this context, return on investment (ROI) accumulates over time, rather than holding a temporal state or value as would a stock or bond. If the investee company (the small firm, or start-up) fails, ROI simply stagnates, but the investing company still captured that progressive strategic value during the course of their partnership with the small firm.

It is conceivable that any concept of success is irrelevant if investing is simply a cost of doing business in a dynamic, global marketplace (Hypothesis B). However, resources and expenditures still need to be periodically evaluated as to whether they are useful and practical to a particular firm. If investing is not aiding in deepening a firm’s market penetration, they will almost certainly consider restructuring (or possibly terminating) their venture capital operation. This evaluative process involves ongoing qualitative analysis of the incumbent firm’s position in a specific market sector, the structure and relationship dynamics of the large firm-small firm partnership, and the transfer of resources (in the form of technology, information, or people) from the small firm to the large firm that may directly impact areas of the large firm’s business. From there, quantitative signals or measurable outcomes may be identified and tracked to provide a reasonable estimation of an investment’s ultimate success or failure. This is clearly easier said than done.

Market position, or market share, is a ranking of a company in terms of its sales volume or profits relative to that of its competitors in the same market or industry. It is a popular and familiar
metric to most corporate executives. Further, its utility is underscored by a well-known study published in the Harvard Business Review asserting strong links between market share and ROI (Buzzell, Gale, & Sultan, 1975). The study confirms that market share is a clear indicator of profit impact from a particular strategy or action. In this case, tracing an investment’s overall profit impact to the incumbent firm’s bottom line. In this context, the direct financial returns from an investment are complementary and gratuitous, but not a hard requisite for a strategically minded investor.

3 Methodology

A series of interviews were conducted in an effort to capture unrehearsed and unfiltered data about the day-to-day operations and imperatives of corporate venture capital (CVC) firms. The interview process was structured to elicit the indirect objectives and philosophies held by key members of each organization. Individual confidentiality and aggregation of results was also assured so that respondents could provide authentic personal responses without consideration of potential consequences or professional conflicts.

Participants consisted of core members from 16 corporate venturing firms, spanning a broad and diverse collection of industries. The lifespan and experience of the CVC firms was also well-rounded, extending from firms less than 1 year old to CVC firms in business for more than a decade. While the sample size demonstrated a fair attempt at polling a representative sample of the corporate venturing community as a whole, a larger sample size certainly would have added further confidence and emphasis to the results of the study. Outside empirical data and case study were later interleaved to supplement and underscore the results of the interviews.

3.1 Intermediate Objectives & Procedural Flow

The conducted interview format provided for loose and open qualitative discussion focused around a number of central themes. The reason for this guided format was to capture and aggregate key
pieces of information from each of the firms while still allowing the conversation to drift in an extemporaneous manner. These themes (or lines of questioning) were sequentially laid out, as follows:

1. What was the corporation hoping to accomplish by engaging in VC?
2. How was the corporate VC structured? Who were the key stakeholders, and how were they informed and incentivized?
3. What was the corporate VC’s approach and course of action prior-to, during, and after an investment was made?
4. What constituted a “successful” investment?

These themes may appear rather trite and obvious, but the intent was to incite discussion and extract some of the more subtle and unspoken dynamics at play within each organization. In addition, each participant was given basic, high-level knowledge of the research. Though, the exact hypotheses and ambitions of the study were obscured in an attempt to prevent biasing or leading each of the respondents.

3.2 Data Collection and Analysis

As mentioned, individual participant and firm identities were concealed, and the results were aggregated into a format that prevented distinct or obvious identification of any one respondent. The assembled results were then analyzed in the context of the central hypotheses, using qualitative methods to evaluate their general support or repudiation of these assertions. As will be discussed, the data was somewhat disjointed and revealed some unexpected emergent issues which became the later focus of the research. After an exhaustive analytical review in the context of the hypotheses, the data will then be supplemented with historical evidence and outside empirical studies to further refine and identify these key issues plaguing many (but not all) of the corporate venture capital firms.
4 CVC Interview Results and Discussion

The results from the interviews will be discussed in an open qualitative fashion and supplemented, where possible, with available empirical data from comparable studies. As will be discussed throughout this section, and in latter parts of the paper, much of the data is disjointed and reveals significant coherency issues between firms’ stated objectives and substantive actions. As a general matter of course, the results will first be laid out with some preliminary commentary. Deeper analysis and assessment of the potential causes of this phenomena will follow.

4.1 Corporate Objectives and Motives for Investing

While the conducted interview format provided for loose and open qualitative discussion, the conversation was generally focused around a number of central themes in order to capture and aggregate key pieces of information from each of the firms. The first theme, or imperative, was to understand what the companies engaging in venture capital funding were attempting to do. What was the corporation explicitly expressing as their objective in the corporate venturing space? Many of the selected firms’ websites did not adequately convey their investment thesis. Their websites were riddled with platitudes about changing the world and advancing society – which are wonderful things – but do not articulate why the corporation was choosing to fund specific technology startups in specific market sectors. The next best alternative was to ask an agent, or representative, of the corporation. Their responses are recorded below in Figure 6.
Only 13% of respondents expressed financial gain as their primary objective. In contrast, 38% of respondents expressed an interest in partnering with small firms and start-ups to create some sort of eco-system or symbiotic market relationship. Both of these segments provided strong evidence in support of Hypothesis A. Corporations were generally not engaging in venture capital for purely financial gains; they were rather looking for a complimentary partnership in which they maintained some level of strategic control. This partnership would presumably aid in expanding the incumbent’s market position. The remaining firms expressed interest in evaluating and learning from new technologies, and monitoring other markets outside of their core business. These objectives also provided evidence in support of Hypothesis A, but perhaps more loosely than those unambiguously looking to create an eco-system. These firms were looking to gain strategic knowledge in order to make business decisions and take self-directed action to maintain (and possibly expand) their market position.
100% of the respondents also expressed their intent to primarily invest in areas relevant to their core business, which further supported Hypothesis A. The large incumbent firms intended to partner with small entrepreneurial firms that possessed complementary technologies or were operating within a pertinent domain. In other words, the incumbents were seeking start-ups that had a competency or technology that filled a void in the incumbent’s existing value network. This is a key behavior of a strategically minded corporate investor seeking to advance their market position (Botkin & Matthews, 1992). The same respondents also indicated a secondary investment channel, comprised of potential investments that were more opportunistic and focused on adjacent markets. It is important to note that intent to invest in these secondary markets still supports Hypothesis A, so long as the incumbent’s eventual intent is to enter and operate within these adjacent markets. Failure to shift into these new markets signals that the investors may be primarily seeking financial gain by making maverick investments in unrelated markets.

4.2 Organizational Structure and Composition

The second theme, or imperative, was to understand how the corporate venture capital unit was constructed. This would aid in understanding which individuals were involved in executing the company’s mission, their level of autonomy in executing that mission, and who might otherwise augment or override that mission. Aside from identifying the key players and their hierarchical structure, this was invaluable data in identifying and understanding the implicit objectives of the corporate venture capital unit. The majority of corporate venture capitalists (87%) explicitly stated that financial gain was not their primary objective. This majority overtly conveyed a strong interest in strategic gains, each with their own distinctive tactical motivations. Failure to construct and incentivize the organization in a manner conducive to achieving these strategic goals would imply an overriding implicit objective driving the organization away from its corporate edict. The first organizational component examined in
this context was VC compensation structure, which could induce and incentivize contradictory behavior, if not structured carefully. The collective data is charted below in Figure 7.

![Corporate VC Compensation Structure](image)

- "Standard" Corporate Salary
- Not reported
- Corporate Salary (w/ bonus tied to financial gain)
- VC-like compensation (management fee + carried interest)
- Some other blended structure tied to financial gain

**Figure 7 - Compensation Structure for Corporate VCs**

56% of respondents indicated they received a "standard" corporate compensation package from their parent company. They received a base salary as an exempt employee of the corporation and, depending on the respondent's position and tenure, received some sort of periodic bonus. The bonus could be tied to individual, organizational, or company-wide performance metrics; it was never directly tied to the financial performance of any companies in which the incumbent had invested. This respondent segment provided evidence in support of Hypotheses A, B, and E. These corporate venture capitalists were incentivized to apply thoughtfulness and restraint to make measured strategic investments, rather than inconsequentially pursuing longshot financial returns with each new deal. With compensation tied to individuals' tactical execution and company-wide profits and revenue, success for these investors was thus aligned with the notion of continuing and expanding the parent company's market position.
In contrast, 32% of respondents indicated that their compensation was directly tied to the financial performance of the companies in which the incumbent had invested. The structure and mechanics of the compensation of individuals in this segment were each correspondingly unique and distinct. Some corporate VCs received a share of future profits, referred to as carried interest. Others received incentives or bonuses that acted like carried interest, referred to as shadow or phantom carry. Most utilized a blended structure, consisting of both a corporate salary and a periodic bonus tied to cash returns and IRR from the company’s investment portfolio. What is particularly interesting here is that only 13% of the corporate VCs interviewed had indicated their primary objective was financial gain. That implies 19% of the VCs whose primary objectives are strategic are implicitly incentivized to pursue riskier deals, with greater potential for financial gain, over ones that may be more strategically attractive. It is conceivable that this compensation structure is simply designed to allure top talent to the firm to manage the venture capital operation, but it carries with it the unintended consequence of incentivizing investors to ignore or manipulate the corporate objective of primarily pursuing strategic gains. The CEO, or corporate sponsor of the venturing organization, must reject any arrangement that potentially incentivizes conflicting or inconsistent behavior.

The second component examined in the context of understanding the corporate venturing organization’s structure and composition was identifying the executives through which the organization reported. During the course of the interviews, it quickly became apparent that there was no standard or typical reporting structure. Some organizations reported in through the parent company’s CEO, or a senior member of the executive board. Many others reported through the Chief Financial Officer, Chief Marketing Officer, Chief Technology Officer, or through Vice Presidents of Corporate Strategy or Business Development. There were no trends or apparent groupings from which to draw conclusions. This observation was further complemented by an independent cross-industry survey of 91 corporate venturing groups. The results from that examination are summarized below in Figure 8.
While there is no definitive correlation between any of the hypotheses and this asymmetric data, assumptions can be made about additional implicit forces acting on the investment team levied by the specific organization’s leadership. For instance, a group reporting in through the Chief Financial Officer is inherently driven to seek financially attractive deals. Financial gain may indirectly take precedence over strategic gain, despite the parent company’s stated objectives. Thus there may be tacit manipulation or discounting of the organization’s stated objectives due to an individual’s personal biases and job-related operating constraints. This potentially disjointed relationship between the corporate venturing unit’s selected leadership and the corporation’s ultimate objectives will be discussed in greater detail in the sections that follow.

4.3 Execution and Tangible Action: Before Investment

The third theme of the interviews was focused around understanding what the corporate venture capital team was actually doing. This was increasingly pertinent having now established what firms intended (or desired) to do, and what factors might implicitly bias or augment those intentions. As mentioned, corporate venture capital describes a structured relationship between two firms, in which a
large incumbent firm takes an equity stake in a smaller entrepreneurial firm (McNally, 1997). That structured relationship has multiple abstract phases spanning its duration: a pre-investment phase, a post-investment phase, and a growth and engagement phase. There are distinct actions and imperatives during each of these phases, which will be examined here in greater detail. Presumably there is also an “exit” (or termination) phase where the smaller entrepreneurial firm disengages from the large incumbent. That phase will be discussed in greater detail in the following section.

During the pre-investment phase, firms will apply a diligence process to minimize their risk and ensure the venture investment (or partnership) is mutually beneficial. Institutional venture capitalists, whose primary goal is financial gain, are generally focused on reducing their financial risk here. Corporate venture capitalists, most of whom maintain their primary goal is strategic gain, should maintain a focus on reducing their strategic risk. There is some overlap when applying due diligence in either scenario, but the corporate VC should likely deploy a different, more lightweight set of parameters through which to evaluate a potential investment. One such parameter should focus around the start-up’s technology, and its potential integration or incorporation into the incumbent’s existing value network.

100% of the respondents that participated in the interviews indicated that they employ a due diligence process indistinguishable to that of an institutional VC. Further, they elongated that diligence process by applying additional lenses through which to examine the potential investment. Those lenses included things such as product health and safety, ethics and compatibility with corporate image, and deep technical vetting through the incumbent’s own engineering and development ranks. This data refuted Hypothesis C, which asserted that corporate VCs should utilize an abbreviated but refocused diligence process to combat the very forces they were attempting to overcome through their investment practice. Slowing and complicating a potential investment while attempting to keep pace with the accelerating rate and scale of technological innovation was seemingly counterintuitive.
Further, many corporate VCs also mentioned applying a strategic filter to their pre-investment evaluation process. Though, labeling this filter as *strategic* was slightly misleading, since this was merely an assessment of whether the start-up was operating in a space relevant to the incumbent, and had a technology or competency that was complementary to the incumbent. This “filter” also appeared to be relatively malleable, and subject to loose justification based on some of the aforementioned implicit forces acting on the investment team. Again, this is something the CEO, or corporate sponsor, must rein in and control. Otherwise they will further fuel these emergent coherency issues, which begin to develop as a recurring theme in the comparative examination of the VCs’ stated objectives and eventual concrete, tangible actions. These inconsistencies will be discussed further in the sections that follow.

In addition to examining the due diligence process applied by corporate VCs, it was also relevant to examine in which stages a corporate VC would primarily invest. The results from the interviews are summarized below in Figure 9. 50% of respondents stated they invested primarily in early-stage companies, a tendency that supports Hypothesis B. As strategically minded investors, these respondents were more willing to accept potential financial losses in return for forging early strategic partnerships with companies where they could establish control and engagement channels. Early investment into these start-ups also aligns with the notion that the incumbents were trying to ride the proverbial wave of new technologies, rather than hitch their wagon to an older technology that may have already permeated select markets. More mature start-ups or technologies may still be attractive to a strategic investor, but these start-ups are often better suited for acquisition or some other type of interfirm partnership.
It is worth noting that 31% of respondents indicated a stage-agnostic, or balanced, approach to investing. This would imply that this subset of investors is at least implicitly seeking financial gain, evidenced by their approach to managing their investment portfolio. Organizations motivated by financial gain would look to balance the stages in which they invest to hedge against the inherent risk in early-stage companies. For these organizations, later-stage investments are common and can provide reasonable financial returns in lieu of control and early engagement with the start-up. Also recall that 32% of respondents were compensated based on the financial returns on their earlier investments. There is notable correlation between the percentage of investors being compensated this way and the percentage of investors managing a balanced portfolio. This further signals that some corporate VCs, whose directives are to invest strategically, are tacitly driven to emphasize financial gain ahead of strategic gain. Thus, another coherency issue emerges to add to the growing list.

The remaining 19% of respondents focused on mid-to-late stage start-ups. This was primarily due to the firms' presence in heavily regulated industries, such as the oil and gas sector. Both financial
risk and strategic risk are extremely high in early-stage companies in these sectors. Companies face long product development timelines, challenging regulatory approval, and field testing milestones that can impede a firm’s attempted entrance into the market. Even a strategically minded investor would typically deploy capital in later-stage companies here.

Another notable revelation that emerged through the course of the interviews was that most of the corporate venture capital groups also engaged in deal syndication. Syndication is a practice where multiple venture capitalists jointly invest in a small entrepreneurial firm (Brander, Amit, & Antweiler, 2002). Numerous models and empirical studies suggest that deal syndication is a useful and powerful instrument, which can be used to increase the net present value (NPV) of a start-up. Thus, when VCs jointly invest as a syndicate, their projected financial returns are greater, despite taking a smaller stake in the start-up (Garrison, 2005). This is essentially forfeiting some strategic control of a start-up in exchange for making the investment more financially attractive. Further, syndication can be used to deploy the collective intelligence and utility of the venture capitalists to add greater value to the start-up (Brander, Amit, & Antweiler, 2002). A more diverse and experienced management team is more likely to generate higher rates of return than that of a single investor.

Syndication can also be used to solicit outside opinions on whether or not a deal is attractive. Advice would typically be sought for deals that were higher risk, and presented greater levels of uncertainty to the investor (Brander, Amit, & Antweiler, 2002). It is notable that all of the corporate VCs engaging in deal syndication indicated they frequently partnered with institutional VCs. Thus, the collective intelligence on whether or not a deal was attractive would primarily emphasize potential financial gain. Even if corporate VCs partnered exclusively with other corporate VCs, syndication diminishes the large incumbent firms’ respective control and influence over the small entrepreneurial firm. Strategic gains are undoubtedly diminished when firms choose to partner on investments, a notion which refutes Hypothesis B. Further, all of the literature that examines the benefits of partnerships
between large firms and small firms fails to examine the potential effects of involving more than two firms (McNally, 1997) (Botkin & Matthews, 1992). The large incumbent firms may bear conflicting objectives, their value networks may not sufficiently overlap, and they may desire incompatible outcomes. The CEO, or corporate sponsor, of a strategically-minded VC team should encourage independent and unilateral engagement with these start-ups, rather than outsourcing opinions and diluting their control and access to the firm.

4.4 Execution and Tangible Action: After Investment

The post-investment phase commences once the investment has been executed, and the large incumbent firm and small entrepreneurial firm have agreed on terms for their structured partnership. McNally remarks that there is considerable variation in the form and frequency of engagement between firms at this stage. In the case of corporate VCs with primarily strategic objectives, engagement is far more common. It often involves taking at least one board seat to monitor all facets of the start-up's organizational and technological progress, and establishing a hands-on role in cultivating and further developing the start-up (McNally, 1997). 75% of the survey respondents indicated that they will take either a board observer seat or a full board seat with every investment. The full results of the survey are exhibited below in Figure 10.
There were distinct motivations behind each firms’ individual strategy in regards to board seats. In general, full board seats were not taken (or rather, were not justified) when the incumbent failed to take a large enough equity stake in the start-up. Further, full board seats required a fiduciary duty to the start-up and carried greater legal liability for the individual, which could create complex and precarious dynamics for the corporate investor caught somewhere between their duties to the start-up and their duties to the incumbent firm. Board observer seats were slightly more common and desirable among the respondent corporate investors. Though board observers did not retain voting rights, and forfeited some other elements of control, they received the same information available to full board members. They were also afforded the right to speak at meetings, and many expressed their intent to remain outspoken board observers.

The 75% of respondents that took either a full board seat or a board observer seat supported both Hypotheses B and D. These investors wanted to engage and control the start-up, and leverage their resources in a manner complementary to the incumbent firm. Further, through their engagement and
monitoring of technological progress, the incumbent firms were in a better position to integrate the start-up’s technology into their existing value network. It is notable that 25% of respondents indicated they took no board seats. These investors severely limited their potential for strategic gain by failing to secure information rights, and establish a formal communication channel at the executive level.

The second concept examined in this phase was whether there was routine integration of the start-up firm’s platform or product into the incumbent firm’s existing value network. This integration could materialize in the form of conjoining physical components, the start-up producing a new product or service built on the incumbent firm’s platform, or some other type of immaterial cross-market relationship, such as the start-up providing the incumbent with sales channels into new markets. A corporate investor primarily driven by financial gain may still find it advantageous to integrate the start-up’s products or services in this manner, but habitual engagement of this magnitude would be uncommon due to the time and resources required to support such collaboration. The investor’s firm would need to commit to a more strategic approach, and thus realign its structure and objectives.

The survey responses are recorded below in Figure 11. 44% of incumbent firms indicated that there was ongoing integration of start-up firms’ products or services into their existing value network. 12% of respondents indicated they routinely engaged in joint development with start-ups to produce new, innovative products. Both of these segments provided strong support for Hypothesis D. The incumbent firms were funding start-ups with the intention of physically incorporating the start-ups’ products or services into their existing value network. As mentioned, the benefit here is twofold: utilization of the incumbent’s existing value network provides a means of growth and opportunity for the start-up, and utilization of this value network perpetuates its own growth and stability. These firms were engaging in activity to protect and expand their current market position.
19% of corporate VCs indicated they typically engaged in non-technical, immaterial relationships with the start-ups they had funded. The start-up may become a value-added reseller (VAR) of the incumbent firm's products, or may produce sales channels for the incumbent firm to engage in new markets. This type of relationship loosely supported Hypothesis D, as these firms were collaborating in a manner that was mutually beneficial. However, this type of partnership had weaker links and these symbiotic bonds could be broken fairly quickly and easily. It is also notable that 25% of firms had no product or service integration, and had no formal business relationship outside of the incumbent's equity stake in the start-up. Corporate investors making no tangible effort to collaborate with the start-ups they had funded can only be presumed to be exclusively seeking financial gain. These respondents provided strong evidence in opposition to Hypothesis D.

4.5 Execution and Tangible Action: Long-Term Growth and Engagement

Long-term sustained mutual interest and continued engagement between incumbent firms and the start-ups they funded were essential tents of the research, but were challenging to quantify and
define. Discussion and further exploration of these topics was largely a qualitative endeavor. Many of
the firms that were interviewed expressed a strong interest for the start-ups to “stand on their own”.
The incumbent firms did not desire long-term perpetual engagement and direct involvement in the
business operations of the start-ups. They wanted the start-ups to become self-sustaining autonomous
organizations, presumably eventually filing for an IPO, after the incumbent had extracted their desired
strategic gains from the partnership. Thus, at least on the surface, a desirable outcome was not an early-
life acquisition of a start-up with high financial returns.

In agreement with the notion that incumbents desired for these start-ups to “stand on their
own”, the majority overtly expressed it was unfavorable and uncommon to acquire one of the start-ups
they had funded. Full details of the interview responses are recorded below in Figure 12. 69% of
respondents expressed they had never and will never acquire one of their start-up partners. Another
19% of respondents stated they would consider acquisition only under specific circumstances, such as
the start-up producing a technology that had become invariably vital to the incumbent firm’s core
business. Both of these segments provided support of Hypothesis B. Despite their long term
commitment, the incumbent firms desired to partner with and invest in a fast-moving, flexible
workforce that had the potential to expand their current market position. However, this did perhaps
signal evidence against Hypothesis D. If a long-term planned commitment to integrate and acquire the
start-up wasn’t at least a consideration, it would seem the incumbent didn’t view that integration as
critical to its inter-firm relationship.
In contrast, 12% of respondents indicated they frequently expected to acquire their start-up partners. Respondents in this segment all came from heavily regulated industries, where the incumbent firms were typically making later-stage investments due to the inherent risk and uncertainty in early-stage companies. In these cases, the incumbent stated the investment was a precursor to likely acquisition. The intent was to monitor whether the start-up's technology was able to demonstrate the necessary traction and capability to perform in the market. It may be justifiable to consider respondents in this segment supporting Hypotheses B and D, since there were plans to incorporate the start-up's workforce and technology into the internal stocks of the incumbent. However, to do so would ignore the lack of long-term sustained commitment by the CEO, or executive sponsor, of the corporate venturing team. Further, this dynamic fails to adequately maximize the benefits and returns from working with a smaller, more entrepreneurial firm. It weakens the partnership and primarily serves as a mere window strategy to gauge the utility of potential acquisition. This general implications of the M&A behavior of this small segment remains inconclusive in the context of the hypotheses.
Nevertheless, the actual acquisition rates of start-ups by their corporate investors correlated quite well with the survey data. This was one area where the incumbents’ intended actions, however misguided, effectively corresponded with their material actions. A comprehensive report of the corporate venturing landscape revealed that M&A activity between the small entrepreneurial firms and the incumbent that provided earlier funding is extremely low. Further, M&A activity between these parties has actually continued to decline over the past decade. The relevant data from that report is exhibited below in Figure 13.

**Percentage of companies acquired by existing corporate venturer**

**US dominates by number of companies acquired**

<table>
<thead>
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<th>Region</th>
<th>Number of companies</th>
<th>CVC</th>
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<td>2,160</td>
<td>83</td>
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| Source: CVC (1997-2014) / EY Insights-Team with Martin Haemmig | Data: DowJones / VentureSource |

*Figure 13 - Percentage of Start-ups Acquired by Existing Corporate Investor (Haemmig & Battistini, 2015)*

One notable wrinkle is that acquisition of start-ups by firms that did not provide earlier investment is actually quite high. Data adapted from WilmerHale’s 2015 Venture Capital Report, below in Figure 14, reveals that roughly 80-90% of all start-up “exits” over the past decade have been in the form of M&A. Combining the data from this report with Haemmig and Battistini’s corporate M&A data,
reveals that most corporate funded start-ups are actually acquired by other corporations. This does not directly affirm or refute any of the hypotheses, but it does signal that corporate VC investment is predominantly used as a temporary mechanism for extracting value from a large firm-small firm relationship. Once that financial or strategic return on investment is perceived to have peaked, the incumbent firms providing funding are content to allow their relationship to terminate or expire, rather than pursue further business development and executive engagement with the start-up. The motivations driving these M&A decisions are markedly different than those driving venture investment decisions.

Other forms of engagement, such as the incumbent sharing intellectual property or technology licensing, would occur further downstream, and were negotiated independent of the venture investment deal terms. In many cases, the corporate venture capital organization would not even involve themselves in such discussions, as they were outside the operational purview of the investment team. However, having the two organizations interacting by sharing resources and information further

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*Figure 14 – Breakdown of all Start-up Exits: % of IPOs vs % of M&A (WilmerHale, 2015)*
supports Hypothesis D. These incumbent firms were seeking further collaboration and technological integration with the start-ups to protect and expand their market position.

4.6 Measuring and Reviewing Investment Performance

The final theme of the interviews was focused around understanding how the corporate venture capital team measured the relative success of their investments. This was a particularly intriguing topic due to the emergent coherency issues between the firms’ stated objectives and substantive actions. This divergence was due in part to some of the earlier structural inconsistencies, such as the organization of the management team and dividend laden compensation arrangements with the corporate investors. When these factors were present, investors were implicitly biased to take action in the interest of maximizing their own earnings and further appeasing their direct management team’s broader ambitions.

Performance assessment and distinguishing what actually constitutes success had the potential to be another counteracting force here. Proper alignment with corporate objectives was crucial. The ultimate determinant of success should be whether or not the corporate investors met the corporate objectives. The relative degree of success is then based on the investment team’s performance in achieving those stated objectives. For a strategic investor, assessing investments based on cash returns and IRR is contradictory to their cause. Cash returns should be commended and welcomed, but should be considered an ancillary metric when measuring whether or not a particular investment was truly successful. In accordance with the notion that these companies were investing to maintain and expand their market position, Hypothesis E contended that “success” is thus a function of whether or not that market position has improved.

While sampling what corporate VCs actually used to measure success, many of the participants exposed additional coherency issues as implicated above. The full results are compiled below in Figure 15. 50% of respondents indicated that they measured success based on the cash returns and IRR of
each investment. Recall that only 13% of the firms expressed financial gain as their primary objective.

Even more confounding is that only 32% of investors were implicitly guided to seek financially attractive deals through their compensation. This would imply that investors directed to pursue strategically attractive deals, with no reward for even considering potential financial gain, ultimately assessed the performance of their investments based on financial returns. This practice was totally antithetical to what was both explicitly and implicitly pressed on the corporate venturing team.

Investment Performance KPIs

![Pie chart showing investment performance KPIs]

- Financial Gain / Financial Returns
- Qualitative / Perceived Strategic Gains
- Other (Engagement Level, Tech Deployment, etc.)
- Undetermined

Figure 15 - Corporate VC Performance KPIs used in Measuring the “Success” of an Investment

Another 25% of respondents used qualitative analysis to gauge their perceived strategic gains. While this was an apparent step in the right direction, by prioritizing strategic gain over financial gain, relative success in this context was entirely subjective and potentially liable to manipulation or misrepresentation. Aside from the subjective nature of the exercise, it also raised questions as to who should contribute to generating such data. Who should then be responsible for assessing the data’s validity and final outcomes? What if the venture capitalists’ opinions differed from those of upper
management? These weren’t easy questions to answer. Incontrovertible facts and quantifiable data were clearly the preferred option, if they could be applied to strategic gains.

12% of the survey respondents were trying to do just that – to quantify the seemingly unquantifiable. These corporate venturing organizations created internal metrics to track things such as engagement with their start-up partners, the number of signed contracts and joint agreements, the number of joint patents filed, and whether the start-up was able to hit key development milestones. There was no template or standard for companies developing and utilizing these performance metrics. Some were better than others, but all were suited to guide and constrict any qualitative discussion with the corporate VC leadership team.

The final 13% of respondents indicated that they were simply too early in their existence to gauge whether or not any of their investments had been successful. When pressed for what type of indicators or metrics they intended to use, all conceded that they were still trying to figure that out. These corporate VCs had existed for less than 24 months, and were still grappling with identifying how to properly benchmark their investments. While certainly an issue for newcomers, many veterans of the corporate venturing space were also still searching for the appropriate criterion.

Of all corporate VCs that were surveyed, only one respondent actually affirmed Hypothesis E. A member of the segment generating their own internal KPIs had developed a methodology for measuring each start-up’s impact on their overall business. This approach started with a bi-annual sorting exercise, where each of the start-ups were categorized based upon the structure of their relationship with the incumbent. The categories included companies that were generating revenue directly for the incumbent, enhancing an existing product developed by the incumbent, enhancing the incumbent’s productivity, developing a new technology as an innovation partner, or were enabling new business for the incumbent. A dollar amount was then assigned to each group based upon the direct contribution from each of the start-ups. For instance, if a start-up was purchasing equipment from the incumbent,
that revenue was assigned to the respective category comprised of start-ups that were generating revenue directly for the incumbent. Those specific dollar amounts were then normalized with operating earnings. From there, the team was able to approximate the percentage of revenue that directly resulted from the incumbent’s relationship with (investment in) each of the start-ups. If the incumbent had grown its revenue and market share – expanded its market position -- they had the ability to determine how much of that was due to the efforts of the corporate venturing organization.

5 Discussion of Coherency Issues

Limited and fragmented support for the Hypotheses produced mostly inconclusive results. The majority of the firms expressed a desire to primarily achieve something other than financial gain. However, many firms rewarded their investors for pursuing financial gain, and further reviewed their relative performance based upon the financial returns from their earlier investments. The prior discussion provided some explanation for this phenomena: mainly the implicit biasing of the investment team induced by a variety of environmental factors. It is here that these emergent coherency issues will be discussed in greater detail.

5.1 Rating the Overall Coherence of Corporate Venture Capital

The overall coherence of the participating corporate venturing organizations was rated based upon their responses to the preceding industry survey. Each company’s internal coherence was rated on a scale from 1 to 4. A score of 4 was awarded to companies whose objectives, actions, and KPIs were fully aligned. A score of 3 was awarded to companies with minor coherency issues, such as a mismatch between their stated objectives and the KPIs used to review performance. A score of 2 was awarded to companies with moderate coherency issues, with a misalignment of multiple factors while still maintaining a mostly consistent overriding objective. These companies might state they are primarily interested in strategic gain, but all other action and assessment is consistent with a company pursuing
A score of 1 was awarded to companies with major coherency issues, where there was virtually no consistent approach or objective being followed.

Grouping the firms by age, or the number of years they had managed a formal venture capital operation, revealed a direct correlation between firm maturity and the likelihood of diminished operational consistency. Younger corporate VCs, operating for less than 5 years, generally had only minor coherency issues. More mature corporate VCs, operating for 10 years or longer, generally had significant coherency issues. One potential explanation for this phenomenon is the presumption that firm strategy intrinsically drifts over time. Company politics, cultural shifts, staff turnover, management changes, and other factors will continuously adjust and revise a group’s present objectives. Without openly and explicitly addressing these intrinsic changes, any perceived operational alignment weakens and attenuates further over time. A second potential explanation is that these more mature VCs were among the first in the corporate venturing domain. They were established prior to any real precedent, academic research, or strategic literature being published. Thus, younger firms were advantaged by their ability to leverage this collective knowledge from prior empirical evidence and case study. They were better positioned to properly structure and coordinate their corporate venture capital operation.

Full detail of this age-based segmentation is exhibited below in Figure 16.

<table>
<thead>
<tr>
<th>Age of CVC</th>
<th>n</th>
<th>Score (mean)</th>
<th>Score (median)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>5</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>5-10 years</td>
<td>5</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>10+ years</td>
<td>6</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>2.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

*Figure 16 - CVC Coherency Ranking Based on Firm Age*
Grouping the firms by industry also revealed some surprising sector-specific trends. Industries facing heavy regulation and standards governance ranked lower than firms in relatively unregulated industries. Corporate venture capital firms operating in spaces like software, media, and retail boasted higher levels of operational coherence. One potential explanation for this phenomenon is that the barrier to entry is lower in these relatively unregulated industries. It is easier for start-ups to enter, and thus investment opportunities for corporate VCs in these sectors are more plentiful. It is easier for firms to remain focused on their stated objectives, rather than stretching themselves to identify potential deals. It is certainly conceivable that corporate VCs facing fewer investment opportunities would override (or ignore) their firm’s objectives in the interest of sustaining their potential deal flow. A second possible explanation stems from the earlier age-related segmentation. Firms in these heavily regulated industries are also generally more mature, and thus more likely to suffer from operational coherency issues. Full detail of this industry-based segmentation is exhibited below in Figure 17.

<table>
<thead>
<tr>
<th>Industry of CVC</th>
<th>n</th>
<th>Score (mean)</th>
<th>Score (median)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software / Enterprise IT</td>
<td>3</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>Hardware / Semiconductor</td>
<td>5</td>
<td>2.4</td>
<td>2.0</td>
</tr>
<tr>
<td>Heavy Industry / Industrial Supply</td>
<td>3</td>
<td>2.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Chemical / Oil &amp; Gas</td>
<td>3</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Other (Media, Retail)</td>
<td>2</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>2.6</td>
<td>2.5</td>
</tr>
</tbody>
</table>

*Figure 17 - CVC Coherency Ranking Based on Firm Industry*

Other types of segmentation were certainly possible, but provided little clarity as to what was driving these coherency issues. For instance, 10 of the corporate VCs invested with money effectively taken directly from their firm’s balance sheet. The other 6 corporate VCs invested from a dedicated
fund, structured similar to that of an institutional VC, where each of the firms acted as the corporate VCs sole limited partner (or LP). While utilizing a dedicated fund structure could conceivably signal greater commitment to the corporate VC operation, it really proved to be nothing more than a distraction. The average scores for these two groups were 2.6 and 2.5 respectively. There was essentially no difference in operational coherence between firms that invested directly from the balance sheet or from a dedicated fund.

5.2 Further Evidence from Empirical Data

One of the obvious shortcomings of the conducted interviews was the relatively small sample size. 16 corporate venturing groups from a variety of industries represented a fair attempt at polling a representative sample of the corporate venturing community as a whole. Nonetheless, a larger sample size would have added further confidence and emphasis to the results of the study. To further supplement this modest respondent pool, empirical data from an independent cross-industry survey of 91 corporate venturing groups will be examined in tandem here.

The most basic and glaring inconsistency existed between the firms' stated objectives and which factors they used to measure performance. As discussed in Section 4.6, the ultimate determinant of success should be whether or not the corporate investors met the corporate objectives. However, the results of the earlier survey exposed a major divergence. Only a small percentage of firms (13%) expressed their primary objective was financial gain, but half of all firms used cash returns and IRR to gauge their relative success or failure. The participants of the independent survey further underscored the coherency issue here.

The respondents' stated objectives, exhibited below in Figure 18, were essentially indistinguishable from those captured and discussed earlier in Section 4. Only a very small segment expressed their primary interest was financial gain. The remaining majority expressed an interest in supporting and evaluating complementary technologies, or creating an ecosystem to broaden their
market reach. With these stated objectives, it made little sense for firms to gauge their performance by directly measuring the financial returns from each investment.

What type of corporate investor best describes you?

- We back companies which provide operating efficiencies for our industry
- We look for potential products and solutions for our company to sell
- We build ecosystems that provide markets for our company's products and solutions
- We back companies with the potential to enter new markets
- We are purely financially focused

* Figure 18 - Independent Survey of Corporate VC Primary Objectives (Global Corporate Venturing, 2016)*

These same respondents’ chosen performance metrics are exhibited below in Figure 19. Roughly 45% of the firms utilized cash returns as a primary or secondary performance metric. Roughly 80% utilized IRR here, with 45% utilizing IRR as a primary measure. This misalignment clearly created conflicting objectives for the investment team, which would undoubtedly preclude any opportunity for optimal returns (financial or strategic).
This operational inconsistency is further exacerbated by factors such as compensation and corporate LP stakes. Limited partners, or LPs, are the providers of capital in the institutional venture capital world. LPs can be wealthy individuals, pension funds, insurance companies, or other corporations. It was a surprising revelation to discover that some corporate venture capital groups actually accepted external LP stakes, exhibited below in Figure 20. Inviting outside investors to participate in a corporate venturing operation also invited outside pressures and forces to act on the investment team. The opportunity for strategic gain to reach the LPs was exceptionally low, therefore most were presumably interested in financial gain. Regardless of what objectives a corporation might claim to hold, the LPs were conceivably overriding those objectives with their own financially grounded motivations.
As mentioned, another potentially conflicting motivation relates to investor compensation. The earlier survey discussed in Section 4.2 outlined that roughly half of all investors received a “standard” corporate compensation package that was not tied directly to financial gain. Conversely, 32% of respondents indicated that their compensation was directly tied to the financial performance of the companies in which they had invested. Though, only 13% of the corporate VCs interviewed had indicated their primary objective was financial gain. That implied 19% of the VCs whose primary objectives are strategic are implicitly incentivized to pursue riskier deals, with greater potential for financial gain, over ones that may be more strategically attractive. Once again, this is where coherency issues begin to develop.

J. Thelander Consulting submitted a comprehensive corporate VC compensation report, whose results are summarized below in Figure 21, with the aforementioned independent cross-industry survey. Their data also backed the findings of the earlier survey discussed in Section 4. Only 11% of respondents received carried interest, shadow or phantom carry. However, the overwhelming majority (96%) received a cash bonus based on individual performance review. Overlapping this data with the data exhibited in Figure 19 reveals a large, similar percentage of corporate VCs at least partially compensated
based on the financial returns of their investment portfolio. These employees are compensated to seek out deals that are primarily financially attractive, regardless of corporate mission statement or vision. Thus, we have the emergence of another coherency issue where investors are being told to do one thing while being implicitly incentivized to do another.

![Figure 21 - Independent Survey of Corporate VC Compensation (J. Thelander Consulting (JTC), 2015)](image)

These are just a few of the factors that have induced and exacerbated some of the emergent coherency issues in corporate venture capital. There are countless examples of operational inconsistency sprinkled between the earlier survey of Section 4 and the independent survey discussed here. One such company conveyed starting their corporate venturing practice to market themselves as being more innovative and forward-thinking, but then operated in relative secrecy and declined to disclose any of the start-ups in which they had invested. Another firm indicated a desire to partner with start-ups with the intention of monitoring adjacent markets, but then neglected to take a board seat and effectively relinquished their rights to valuable insights and information. The data was clear; there was an indisputable systemic issue with operational coherence effecting many of the corporate venturing organizations across the industry.

5.3 Deal Syndication among Corporate VCs

One of the more subtle operational coherency issues relates to deal syndication among firms. It has become relatively commonplace in the venture capital world for multiple firms to partner on deals. There are numerous reasons to do this, and most come down to forfeiting some strategic control of a particular start-up in exchange for making the investment more financially attractive. While this
practice, in itself, could signal a coherency issue for a strategically-minded investor, there are many other aspects that make the practice even more erroneous.

Aside from potentially enhancing the financial outcome of a deal, any VC may opt to invest with a syndicate to hedge against downside risk, build a reputation for themselves by partnering with higher profile firms, and aid in deal flow. However, for most corporate investors whose motives are primarily strategic, partnership comes at significant cost. Aside from relinquishing some control and access to the start-up, these corporate investors also enter into a partnership with other investors who may have conflicting objectives. Their value networks may not sufficiently overlap. Their opinions of what constitutes success may differ. They also run the risk of other strategic missteps, such as revealing long-term technological interests to a competitor.

As mentioned in section 4.3, most of the corporate VCs that participated in the interviews revealed they did frequently partner with other VCs (both institutional and corporate) when making investments. The Global Corporate Venturing (GCV) organization records co-investment activity on their GCV Analytics platform. A snapshot from 2015, exhibited below in Figure 22, charts deal syndication activity among numerous big names in the corporate venturing world.

One notable trend is that all of the corporate investors in this chart have co-invested with financially-driven institutional venture capitalists. There is a clear conflict of interest between these co-investors, at least in cases where the corporate firm maintains a strategic objective. If a start-up is quickly acquired after an investment at a higher valuation, that is a big win for the institutional investor. However, the corporate investor expended significant resources with very little opportunity to elicit any strategic gain. The ancillary financial reward is nice, but the corporate investor has failed to fulfill their tactical objective.

Another notable item is that some of the corporate co-investors come from the same industry, and might even be considered competitors in certain markets. For instance, Intel is seen frequently co-
investing with companies such as Qualcomm and Samsung. It is conceivable that these companies could quarrel over certain decisions, such as the ultimate direction for a particular technology. This relationship could become even more contentious if one of the investors desires to acquire the start-up outright.

As evidenced here, there are plenty of conflicts and examples of operational coherency issues when discussing deal syndication among corporate venture capital firms. Syndicates can be useful in evaluating high-risk deals, and making investments more financially attractive in exchange for relinquishing some operational control. However, these benefits are entirely unnecessary to a
strategically-minded corporate investor. These corporate VCs are more financially risk tolerant since they can extract strategic gains even from failing enterprises. They may lose out on financial returns when a company goes under, but they still gain insights into the types of challenges that failing company faced, their supply chain issues, their product adoption rates, etc. This also brings into question the use of a traditional institutional VC diligence process, which, in many cases, corporate investors are elongating and making more bureaucratic. Though this does not really play a role in the major coherency issues mentioned above.

5.4 M&A of Start-ups by their Corporate Investor

As discussed in Section 4.5, roughly 70% of corporate VCs indicated that they had no interest in potential acquisition of the start-ups they had funded. Empirical data logged by Haemmig & Battistini, exhibited earlier in Figure 13, further underscored this notion. Over the past 2 decades, less than 4% of start-ups based in the US, Europe, and China were acquired by a company whose VC arm had provided earlier funding (Haemmig & Battistini, 2015). It is also notable that the frequency of acquisition by corporate investors has continued to decline in recent years. On the surface, this might not seem like a coherency issue at all. These corporate VCs are certainly following their stated intentions. However, considering the primary objectives of the majority of investors (generating a symbiotic partnership in the interest of improving their market position), it is illogical that investors would desire an eventual divergence between firms. This signals lack of commitment and acceptance of the inter-firm partnership.

Further, this implicates a desire by the corporate investors to prioritize financial gain over strategic gain. Many investors expressed a desire for the start-ups to “stand on their own”, reaching some sort of liquidation event such as IPO or M&A by another firm. These types of events enable the corporate VC to harvest the investment, retaining cash and potential profits from the earlier financing. Roughly 80-90% of all start-up liquidation events over the course of the last decade have ended in M&A
by another firm (WilmerHale, 2015). It is confounding that the incumbents with an existing relationship, symbiotic value networks, and strategic control of the start-up would allow for a potential competitor to acquire the start-up and sever that relationship.

As remarked by Botkin and Matthews, one of the key advantages of forging entrepreneurial inter-firm relationships is maintaining the ability to expand the partnership if things are working well. It is a method for the large firm to position itself for possible future expansion (Botkin & Matthews, 1992). Other tenets to maximizing the strategic return from such a partnership include emphasizing collaboration and creating a long-term cohesive vision (Botkin & Matthews, 1992) (McNally, 1997). Failure to cultivate this type of relationship signals a divergence from strategic intentions, and a drift towards implicitly conjuring financial returns.

6 Conclusions

The central Hypotheses were developed under the precepts of academic literature on organizational behavior, corporate partnerships, and innovation theory. While institutional venture capital is generally considered an investment business built around the tenets of financial gain, corporate venture capital remains a very different beast where even financial losses can present positive outcomes to the participating incumbent firms (those operating corporate VC outfits). Thus, the following Hypotheses were developed and validated using an exploratory interview methodology paired with substantive empirical data:

Hypothesis A: The primary objective of investing is to maintain market position
Hypothesis B: Investments are really an expense for funding an adaptive workforce
Hypothesis C: Use of institutional VC practices should be minimized by corporate VCs
Hypothesis D: Platform/product integration between firms is fundamental to success
Hypothesis E: “Success” is a function of continued market penetration
The derived content from the interviews, summarized in detail throughout Section 4, was disparate and provided generally inconclusive results. The majority of corporate VCs stressed their primary objective was strategic gain, but each firm applied unique and often disjointed practices in achieving that goal. There is substantial support for the notion that most corporate VCs were attempting to take action in the interest of maintaining (and expanding) their market position. Investing in innovative entrepreneurial firms provided a means to develop and incorporate new technologies that were otherwise inconceivable to the firm’s internal development ranks. However, the leftover Hypotheses around organizational behavior and what was actually being done in practice remained contentious and debatable.

The dispute was due to a fundamental incoherency between firms’ stated objectives and their substantive actions. As exhibited below in Figure 23, the Hypotheses applied primarily strategic emphasis on all aspects of the corporate venturing operation. The corporate VC’s primary objectives, generally established by the CEO or corporate sponsor, were closely aligned with the strategic assertions of the Hypotheses. However, a number of factors such as board strategy and organizational structure provided moderate discord with the firms’ stated objectives. Other factors such as investor compensation, performance assessment, and ‘exit’ expectations (the CVC’s preferred form of liquidation event) provided a deeper, more profound discrepancy with the firms’ objectives. Each of the considered factors were examined and charted in the plot below. Points farther from the top left of the chart were at greater odds with the central Hypotheses and the majority of firms’ stated intentions.
In general, these coherency issues are a result of the corporate executives' lack of focus and resolve to make firm decisions on behalf of the corporate venturing organization. The CEO, or corporate sponsor, must establish a cohesive investment strategy that mitigates potential conflicts and implicit biases. Further, the executive must elicit feedback from stakeholders from across the corporation and make a decisive commitment to either partner with a start-up for the long term or abate the relationship until appropriate for the companies to completely diverge. A long-term commitment in this context is more than just providing follow-on funding. Technological product or platform integration must be planned and executed, value networks should be interleaved wherever possible, and eventual acquisition of the start-up by the corporate investor should be a regular consideration. If the purpose of these investments is to provide a strategic and innovative gap-filling competency, the eventual goal must be procurement and incorporation of that competency into the incumbent's internal stocks.
In addition, maximum gains can only be achieved when both the start-up and the large incumbent are acting in concert (Aoki, 1984). They must establish an interdependent relationship grounded in mutual trust with consistent goals. If the incumbent is trying to play both sides of the fence, extracting strategic returns while chasing financial gain, they will be left with a misguided partner incapable of providing optimal returns in either space. The CEO must establish trust and consistency by committing and deploying the appropriate resources from across the corporation. The corporate venturing team cannot act alone and effectively cultivate and harvest proper returns of any sort.

Botkin and Matthews assert that the CEO may fail to commit for a number of reasons. Liability and legal exposure is heightened for an incumbent when they are involved with a small start-up. Additionally, internal business units and development organizations often lack acceptance of externally developed innovations. This can slow or inhibit product or platform integration. There is also a degree of uncertainty when committing corporate resources to projects outside the complete control of the organization. CEOs may find it more palatable to sit back and wait for things to develop, rather than take decisive action and assume some level of risk. The start-up and the incumbent may also have intangible issues, such as cultural differences and differing perceptions of time. This can lead to mistrust and potential conflict if not properly addressed early (Botkin & Matthews, 1992) (McNally, 1997).

The interview responses and other empirical data suggests that many CEOs are succumbing to these inhibitive forces. Further, it signals these CEOs may not be completely focused on the corporate venturing operation, which is even more troubling. Each of the investment teams were given a high-level objective from management, but were addled by conflicting motivations. Teams instructed to pursue strategic gains were compensated and assessed based on financial returns. Some teams were not even taking board seats, which restricted their entitlement to strategic control and vital information. It is the fault of the management team to have such glaring inconsistencies to permeate corporate
venturing organizations. If not for lack of focus, then perhaps inexperience and lack of commitment would explain these seemingly arbitrary arrangements.

Venture capital is generally viewed as a mercenary business, but corporate venturing involves far more than just money and financial returns. It is a mechanism by which corporations can form collaborative relationships with small and innovative upstarts. Such a relationship provides an alternative path to that of traditional corporate R&D, which is proving increasingly ineffectual at the current pace and scale of sociotechnical advancement. Incumbents can leverage the nimble, resourceful, and efficient nature of start-ups to inject compelling innovations into their core business lines. However, this requires commitment and integration across multiple organizations within the incumbent firm. Business units, finance units, development organizations, and other stakeholders need to be brought into the fold, as necessary, to ensure the partnership is enacted effectively. Without this level of support and coordination from the executive office, the corporate venturing team is bound for failure — or, at best, middling returns that don’t optimize for either financial or strategic gain.

Over the past decade, only a meager 2-3% of start-ups were acquired by their corporate investor (Haemmig & Battistini, 2015). In other words, roughly 97-98% of corporate funded start-ups discontinued their collaborative relationship with their corporate investor, rather than having their product, technology, or service adopted and integrated into the investing firm’s core business. This is fundamental evidence of widespread failure by the CEO to commit and follow through after the initial investment has been made by the VC team. Aside from the implicit biasing of the investment team, there is an intrinsic indifference by the CEO to the companies in which the corporate VCs are investing. That is not to say the CEO is unaware of the actions and progress of the start-ups, but they are effectively standing on the sidelines for the duration of their inter-firm partnership.
References


