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Transaction, Firm and Institutional Effects on Strategic Choices: Accelerated Startups? Outsourcing Decisions

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Abstract

This study examines how firm level contracting capabilities and institutions shape entrepreneurial firm's governance decisions related to growth (insourcing vs. outsourcing). By integrating Transaction Costs, Resource Based View and New Institutional economics theories we illuminate the relevance of contracting capabilities and institutional distance in shaping buy vs. make decisions. Combining three different datasets we create a panel that includes 469 domestic and foreign startups participating of an international acceleration program. After analyzing 705 meetings and 2,118 governance decisions we find that institutional distance and contracting capabilities encourage startups' outsourcing. As a growth strategy, outsourcing allows startups to mitigate transaction and bureaucratic costs. Interestingly, we found that compared to domestic firms, foreign firms facing greater institutional distance rely on outsourcing strategies only to certain extent; once they have outsourced a handful of times hiring seems a suitable option for foreign firms. Our findings suggest that beyond the transaction level of analysis, firm and country level characteristics are relevant predictors of governance decisions, and that capabilities and institutions deserve additional consideration in the study of firm's strategic choices related to growth.

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INTRODUCTION

What shapes a firm's growth strategic choices? One of the most fundamental questions in the field of strategy has to do with firm's governance decisions. Among many decisions firms need to make, governance choices (Williamson, 1975, 1985), such as outsourcing or insourcing decisions (e.g. buy or make) are key, because organizing activities internally (integrating activities within a firm) and externally (externalizing activities by using the market) are two alternative strategic choices that have been found to shape firm's performance (Leiblein, Reuer, & Dalsace, 2002) and accumulation of resources to develop competitive advantages (Barney, 1991; Dierickx & Cool, 1989).

From a practical stand point, the relevance of outsourcing decisions has increased in recent years given the geographical and technological dispersion of knowledge (Leiblein et al., 2002; Teece, 1992) and the quick pace of technological change that new firms face. Responding to the fast paced environmental trends for growth, outsourcing practices have grown explosively (Bertrand, 2011; Bertrand & Mol, 2013), becoming one of the most popular ways firms disaggregate activities (Jensen & Petersen, 2013; Leiblein et al., 2002; Mol & Brewster, 2013). Here we define insourcing as "the decision to hire an employee that becomes part of the company's personnel", and outsourcing as "the procurement of activities from independent suppliers" (Bertrand & Mol, 2013: 751). Startups in particular increasingly use outsourcing (Hitt, Ireland, & Lee, 2000; Terjesen & Bhalla, 2009) to perform non-core supporting activities. Outsourcing helps startup companies face initial resource limitations and capability barriers (Bhalla & Terjesen, 2013) such as scarcity of talent, and limited operational know how. For

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example, outsourcing activities allow entrepreneurial firms to be flexible in quickly obtaining these capabilities while economizing on resource requirements (Baker & Nelson, 2005). Because they face unique challenges, resource limitations and capability barriers are even more pronounced for international startups (Oviatt & McDougall, 2005), here defined as startups that have moved operations abroad. Here we posit that, as a governance decision, outsourcing practices can help mitigate the costs faced by entrepreneurial ventures going abroad by limiting the costs of resource commitment required for growth.

Due to its theoretical and practical importance (Leiblein & Miller, 2003), causal explanations for strategic choices (Child, 1972) related to governance have been addressed from different theoretical perspectives. Whereas Transaction Cost Economics theory (TCE) (Coase, 1937; Williamson, 1991) maintains that governance choices are shaped by asset specificity, frequency, and uncertainty conditions, the Resource Based View perspective (RBV) (Barney, 1991) argues that firm level variation in capabilities and resources also drive these decisions (Leiblein & Miller, 2003; Poppo & Zenger, 1998). At a broader level, New Institutional Economics theory (North, 1990; Williamson, 1998) suggests that country level institutions are important in explaining firm's boundaries (Hill, 1995). While many scholars have explained governance decisions taking one of these perspectives, recent calls have addressed the importance of integrating them, connecting micro and macro considerations to find more complete answers to governance questions (Mayer & Salomon, 2006; Meyer, Estrin, Bhaumik, & Peng, 2009; Peng, Li Sun, Pinkham, & Chen, 2009). To the knowledge of the author, those researchers who have include firm and institution level variables have focused on case studies (Bhalla & Terjesen, 2013), large companies (Arruñada, Vázquez, & Zanarone, 2005), regulated

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industries (Fabrizio, 2011) and traditional mature sectors such as manufacturing and construction (Brahm & Tarzijan, 2014; Delios & Henisz, 2003; Mol & Brewster, 2013). Startup companies have been excluded from these analyses, usually due to data limitations (Terjesen & Bhalla, 2009). This can be a shortcoming because governance decisions by small companies may differ from decisions by larger firms (Bigelow & Argyres, 2008).

In this paper we aim to unravel the firm and institution level factors that shape outsourcing decisions for technology startups in an international setting, specifically highlighting the importance of an overlooked type of bureaucratic cost, the costs of resource commitment (Folta, 1998; Luo, 2004, Williamson, 1985). We argue that outsourcing decisions are driven by cost assessments; however, transaction and bureaucratic costs are not only dependent on transactions' characteristics, but they are also a function of country level institutional distance (Gaur & Lu, 2007; Kostova & Zaheer, 1999) and firms' superior contracting capabilities (Argyres & Mayer, 2007). Specifically, we posit that these costs may increase as institutional distance (distance between home and host country environment) increases, and may decrease as firms develop contracting capabilities. Furthermore, we argue that one of the mechanisms that explain the cost fluctuation is the cost of resource commitment (Folta, 1998; Luo, 2004; Williamson, 1985). In subfields where investment is exploratory and revenue streams are unpredictable, limiting the costs of committing resources to activities that may add little value is important (Folta, 1998). As a consequence, we propose that outsourcing may be the preferred growth strategy when: a) firms face greater levels of institutional distance (which increases the cost of committing resources); b) firms have developed superior contracting capabilities that

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reduce the costs of using the market (i.e. outsourcing capabilities); c) firms experiencing institutional distance develop superior contracting capabilities.

To test our hypotheses, we use data from the population of startups that participated in a Chilean government-run international acceleration program over the period 2010-2014. Similar to many acceleration programs, this accelerator provides funding and a six month long cooperative group-like experience for an international cohort of entrepreneurs. Up to March 2014, about 900 startups have joined the program and moved into Chile. Because we are interested in the nature of growth decisions, we consider only those firms that have performed outsourcing or insourcing decisions during the six months that the program lasts. Our final sample corresponds to 469 startups from 51 countries that held 705 meetings and executed 2,118 governance decisions related to insourcing and outsourcing over the six-month period in which they were located in Chile.

This research contributes in several ways. First, it contributes to strategy by expanding the understanding of the drivers of governance decisions. Here we explore an overlooked type of cost that might affect firm boundary choices, that is the cost of resource commitment. While we agree with other authors in that institutional distance may shape transaction costs, we add that bureaucratic costs also deserve consideration when evaluating the effect of institutional distance in governance decisions. We suggest that institutional distance shapes the assessment of transaction and bureaucratic costs, and ultimately influences startups' governance structure decisions. Particularly, this study contributes to international business and global strategy by exploring the effect of institutional distance on governance decisions. Second, we contribute to RBV by explaining how firm level variation shapes firms' strategic choices related to

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governance. Specifically, we show how contracting capability development determines optimal governance choices by shaping firms' cost assessment. Hence, we expand beyond TCE tenets, and argue that it is not only the characteristic of the transaction, but also differences across firms, that shape firm growth. Third, we respond to the call made by a number of authors (Mayer & Salomon, 2006; Meyer et al., 2009; Meyer & Peng, 2005; Wright, Filatotchev, Hoskisson, & Peng, 2005; Yamakawa, Peng, & Deeds, 2008) to utilize an integrative perspective that includes transaction, firm, and environment level variables to explain governance decisions. Specifically, we contribute to the institution based view of business (Meyer et al., 2009; Peng et al., 2009) by including institutions as a central lever of strategic choices related to growth. Fourth, we shed new light into the unexplored and novel context of entrepreneurial startups that have participated of an accelerator program. Whereas the studies on outsourcing decisions related to new firms' operating in highly dynamic environments are scant (for an exception, see Bhalla & Terjesen, 2013), studies on startups that have been through accelerator programs are in their nascent stages (Cohen & Bingham, 2013). Because accelerated firms are a growing phenomena, understanding the drivers for their strategic decisions related to growth matters. Finally, we offer relevant implications for practice, theory and future research.

In the following sections we elaborate our hypotheses based on existing theory, considering the three theoretical perspectives mentioned above and their corresponding interactions. Then, we introduce the specific entrepreneurial context in which our study takes place, followed by the data, variables and models, and empirical analysis of our study. Next, we address our main results, and finally we close with a discussion of our main findings, contributions and limitations of the present study.

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THEORY AND HYPOTHESES

Institutions and Governance Decisions

The New Institutional Economics (Williamson, 1998) theoretical perspective argues that institutions shape the environment in which organizations act and compete. Institutions are key in supporting the effective functioning of the market, lowering the costs and risks that firms bear when engaging in market transactions (Meyer et al., 2009). Institutions, formal and informal, are the rules of the game that regulate the game that economic actors play (North, 1990). Institutions provide the structure in which economic exchange takes place, defining acceptable behaviors and sanctions for those who do not comply. Whereas well-devised institutions can reduce transaction costs and increase market efficiency, ill devised institutions may have the opposite effect, increasing transaction costs and decreasing market efficiency (Soto, 2007). Country level institutions are relevant for governance decisions because they can lower transaction costs (Williamson, 1985) and minimize the costs of committing resources by creating an environment where transaction parties can interact free from the risk of contractual hazards and opportunism.

Because institutions influence the costs of alternative organizational forms (Williamson, 1985) ADD KHANAAND PALEPU , they have important explanatory power for governance decisions, being widely used to explain a number of them, such as entry mode, diversification strategies , and ownership structures. Whereas national level institutions have been used to explain particular business strategies (Hoskisson, Wright, Filatotchev, & Peng, 2013; Khanna & Palepu, 2000; Meyer et al., 2009), less attention has been devoted to studies that consider institutional factors as drivers for outsourcing decisions. As an economic phenomenon,

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outsourcing decisions are deeply influenced by institutions, and consequently by transaction costs. For example, Arruñada et al. (2004) shows that European institutions shape truck's companies' preferences towards subcontracting, instead of hiring employees. Other studies (Arruñada et al., 2005; González-Díaz, Arruñada, & Fernández, 2000) also reaffirm the prevalence of subcontracting in European countries (i.e. Spain) due to institutional constraints. All in all, these authors show that a stricter set of labor (e.g. employment security laws) and tax law institutions increase the costs related to internalizing (i.e. hiring employees), by making employee termination costly and difficult; consequently shifting the parameters that otherwise would have suggested vertical integration as a preferred governance structure. Mol and Brewster (2013) argue that firms outsourcing decisions are also driven by costs of search and evaluation, which are higher when firms have limited access to an ample supply base. They find that local and foreign firms outsource less than multinational firms, but their hypotheses predicting that firms facing larger cross-cultural distance outsource less were not fully supported. Here, we offer an alternative explanation to their findings. Overall, the limited number of studies addressing institutions and outsourcing show that the institutional framework can influence outsourcing decisions. Building on previous research, in this study we aim to unravel the specific mechanism by which institutional distance and capabilities shape outsourcing decisions.

Costs of Resource Commitment, Institutional Distance and Governance Decisions

Transaction Cost Economics (TCE) suggests that governance decisions are a result of comparing transaction costs to bureaucratic costs (Coase, 1937; Geyskens, Steenkamp, & Kumar, 2006; Williamson, 1975, 1985). Among the number of costs that a firm needs to face, here we emphasize the importance of an overlooked type of bureaucratic cost, the cost of

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committing resources (Folta, 1998; Williamson, 1985). The costs of resource commitment are a particularly relevant for 1) new firms (Folta, 1998), and firms that move into new markets (Delios & Henisz, 2000); 2) firms in technological subfield (Folta, 1998); 3) firms in domains where “pure equilibrium contracting” (Williamson, 1991) does not fully apply; 4) firms facing high levels of exogenous uncertainty. Different from transaction costs, the bureaucratic cost of resource commitment can make using the market more attractive. The costs of resource commitment are usually assessed against the needs for administrative control (Folta, 1998; Mody, 1993; Williamson, 1985). Whereas internalizing activities provides more administrative control, copes with opportunism, and reduces transaction costs, it requires higher levels of commitment from the company. Committing to hire full time employees (insourcing), for example, increases the bureaucratic costs and internal coordination for a startup (e.g. time, secure money for long term payment, learn to write and terminate contracts, etc.). While outsourcing may sacrifice administrative control relative to insourcing, it also provides the advantage of economizing on committing to resources of uncertain value. In circumstances of limited availability of resources, such as in the world of technology startups, these advantages may overwhelm the benefits of reducing transaction costs by internalizing. Previous research has found that a particular type of environmental uncertainty, technological uncertainty (Geyskens et al., 2006; Walker & Weber, 1984), shapes firms' costs of resource commitment (Folta, 1998). Firms in industries facing higher levels of technological uncertainty are more prone to rely on flexible governance structures that allow them to switch partners with better capabilities (Balakrishnan & Wernerfelt, 1986), avoiding to be locked into a technology (Folta, 1998; Geyskens et al., 2006; Heide & John, 1990). Based on these findings, we believe that in contrast

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to local firms, foreign startup firms facing higher levels of environmental uncertainty may be more prone to outsource.

In order to assess how environmental uncertainty shapes outsourcing decisions we draw from the strategic management literature the construct of institutional distance (Kostova, 1997), which takes into account the difference or similarity between host and home country institutions, as a company expands internationally. Building on this construct, researchers have focused in defining it (Kostova, 1997), exploring measurement issues, implications for legitimacy (Kostova & Zaheer, 1999), and transference of organizational practices (Kostova, 1999). In this paper we are particularly concerned with the regulative dimensions of institutional distance, and its implications for outsourcing decisions. Researchers (Davidson, 1980; Kogut & Singh, 1988; Luo, 2004) have suggested that institutional distance shapes entry choice for corporations that expand internationally. Transferring these findings to the world of international startups, here we suggest that startup firms facing greater levels of institutional distance may be more vulnerable to higher levels of environmental uncertainty, which can translate in higher transaction and bureaucratic cost structures. In this paper we argue that institutional distance not only increases transaction costs, but also increases the bureaucratic and internal coordination costs for a startup, such as the costs of resource commitment. A lack of understanding of the host country regulations makes outsourcing less costly than hiring, complementing the effect that institutional distance has on transaction costs.

We agree with TCE researchers (Geyskens et al., 2006) in that , in the absence of asset specificity, environmental uncertainty leads to flexible growth structures; we add that bureaucratic costs in the form of resource commitment costs may amplify this relationship.

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Extant research (Folta, 1998; Kogut & Singh, 1988) has already shown that, in expanding internationally and facing higher levels of environmental uncertainty, technology companies prefer flexible governance structures (such as joint ventures and minority direct investments) to internalization (acquisition). In line with previous research, we suggest that in the case of technology startups looking to grow by bringing new personnel into the company would use similar strategies, prioritizing outsourcing over insourcing. Institutional distance, then, should create disincentives to commit, increasing the value of delaying any type of activity that requires incurring costs of committing resources. Outsourcing, then, is a strategy to reduce and delay bureaucratic costs when the value of bringing someone into the company is still uncertain. Hence, we hypothesize:

Hypothesis 1: Institutional distance is positively related to startups' outsourcing.

Dynamic Capabilities and Governance Decisions

The resource-based view (RBV) of the firm builds on Penrose's (1959) ideas to explain firm's growth and heterogeneity among them. Building on these ideas, Nelson and Winter (1982) extend this theory by suggesting that beyond physical and human resources, firms also develop valuable organizational routines, also called capabilities (Teece & Pisano, 1997). Capabilities are considered firm specific skills (Teece, 1981) that are usually hard to articulate and costly to transfer; invisible assets that firms develop and carry through their human capital (Amit & Schoemaker, 1993). Capabilities also relate to the productive efficiency of a firm, the more skilled and experienced it becomes, the more efficient it is in executing particular activities (Brahm & Tarzijań, 2014). They provide an answer to the question of how to achieve competitive advantages in contexts of fast technological change (Teece & Pisano, 1997). Firm

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capabilities are cumulative, developing over time as organizations perform these routines (Nelson & Winter, 1982). Capabilities affect firms' boundaries because as capabilities evolve, governance decisions are adjusted. Whereas many authors have studied how capabilities are a critical driver to explain differences in performance among firms (Barney, 1991; Nelson & Winter, 1982), little attention has been devoted to explore how capabilities can also be a critical driver to explain governance decisions (Mayer & Salomon, 2006). Only in recent years researchers have focused in this relationship (Argyres, 1996; Leiblein & Miller, 2003; Leiblein et al., 2002), showing that capabilities shape governance decisions, and that this work can in fact complement the traditional transaction cost approach to governance.

Transaction Cost Economics theory portrays that transaction costs are a main driver for governance decisions. However, it does not consider that companies develop governance capabilities that can reduce the impact of transaction costs, and the costs of resource commitment. Governance decisions may not only be shaped by transaction costs, but also by firms' capabilities able to reduce these costs (Argyres, 1996). Here, we refer to organizational capabilities, more than other type of resource based or technological capabilities. Organizational capabilities relate to organizational learning, and they can be relevant for strategic behavior (Gulati, 1999). Organizational learning researchers (Levinthal & March, 1993) assert that firms build organizational capabilities from experience, and consequently they are prone to repeat these experiences, refining their capabilities. Among many organizational capabilities, contracting capabilities (Argyres & Mayer, 2007) are particularly important (Brahm & Tarzizán, 2014; Gulati, 1999; Mayer & Salomon, 2006). Firms with more experience writing contracts in uncertain environments develop contracting capabilities. Highly developed contracting

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capabilities can reduce transaction costs because previous experience facilitates the process of searching, evaluating and terminating contracts. Firms that have developed these types of capabilities can also reduce the costs of measurement, being more experienced at assessing the quality of the work developed by new comers. By shaping transaction costs, contracting capabilities have an influence on governance decisions related to growth, such as outsourcing and hiring decisions (Fabrizio, 2011).

RBV theory, then, suggests that firms' contracting capabilities condition their ability to outsource transactions (Fabrizio, 2011). Firms that have developed contracting capabilities (Argyres & Mayer, 2007) related to outsourcing have also developed the skills needed to reduce transaction costs related to outsourcing. Consequently, these firms may be more likely to outsource than firms with fewer contracting capabilities. In the world of technology startups, contracting capabilities are particularly valuable because they allow founders to outsource non-core supporting activities (Dossani & Kenney, 2006), such as marketing expertise, software development, webpage design, and accounting, among others. Firms are said to be likely to outsource when the capabilities they require are abundant outside of the boundaries of the firm, and when the contracting hazards, need for internal coordination, and risk of appropriation are minimal (Leiblein et al., 2002). In the world of technology startups, vendors for these activities are in large supply outside of the firm, with low contracting hazards, low cost, and minimal risk of appropriation for these ventures.

The ability to write and enforce contracts with terms aligned to transaction costs and hazards allows entrepreneurial firms to develop outsourcing contracts when transaction costs would have suggested internalization. Thus, we hypothesize:

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Hypothesis 2: Contracting capabilities are positively related to startups' outsourcing.

Institutions and Capabilities

In addition to studying how institutional distance shapes firms' growth, researchers have explored how capabilities developed through time and experience influence growth strategies. Responding to the call by a number of authors, (Meyer & Peng, 2005; Wright et al., 2005; Yamakawa et al., 2008), and following Meyer et al. (2009) we bring together institutions and resource based view considerations to explain strategic choices.

Contracting capabilities developed to compete successfully in a home country environment may be not deployable in a new host country (Delios & Henisz, 2000). For example, contracting capabilities to outsource specific activities in the home country might not be applicable in a host country, where the rules and regulations related to employment and doing business are different. Also, the development of knowledge that provides access to an ample supply base is particularly relevant for outsourcing decisions (Kotabe & Mol, 2009). The network of suppliers that has been developed in a home country environment is not easily transferable to the host country. Having experience of trading with trusted suppliers minimizes the costs of search, evaluation, monitoring and enforcing contracts (Rangan, 2000). Companies that have developed broader contracting capabilities, including knowledge related to the supply base, are expected to face lower transaction costs (Mol & Brewster, 2013; Rangan, 2000) than firms without these skills. For that reason, we suggest that developing contracting capabilities related to outsourcing should be even more important for firms facing greater institutional distance. By explicitly considering mechanisms by which contracting experience affects outsourcing decisions, and by analyzing how different levels of capability development moderate the

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relationship between institutional distance and governance decisions, we can make specific predictions of the costs of such growth decisions (Delios & Henisz, 2000). The greater the difference between home and host country institutions, the higher the levels of environmental uncertainty experienced by a foreign firm, and the more urgent its need to economize in committing resources. In the same line of reasoning, developing the capabilities to reduce resource commitment may be especially important when the distance between home and host country institutions is large. Contracting capabilities reduce the threat of opportunism, and the ex post costs related to insourcing. Having developed contracting capabilities suggest more experience and more efficiency in executing a specific task (Brahm & Tarziján, 2014). Outsourcing, then, should be the preferred governance structure for a firm that has already developed these contracting capabilities. These skills become even more important for firms facing greater institutional distance. Foreign firms naturally face higher transaction costs than startups starting operations domestically, hence, developing contracting capabilities seems to be even more important for international firms. The interaction between institutions and capabilities sheds light to the institutional based view of business strategy (Peng, 2003) by providing a fined grain understanding of the relationship between institutions and capabilities in predicting governance strategies. Thus:

Hypothesis 3: The positive effect of institutional distance on startups' outsourcing is larger for firms with greater contracting capabilities.

METHODS

Context

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Seed-accelerators are a new phenomenon that has emerged as a unique type of early stage investors, one that aims to fill in the funding gap for new startups. The first accelerator was started in Silicon Valley in 2005; today there are more than 2,000¹ of them around the world, most of them are usually backed by private investors (angels and VCs) aiming to foresee novel opportunities, or governments interested in attracting startups as a means to foster entrepreneurial ecosystems. The success of these novel organizations is explained by their ability to accelerate growth by filling in a funding gap and providing a friendly and cooperative group-like educational experience for a usually international cohort of entrepreneurs that are selected into a program. While accelerators have become a hot topic in the popular press (e.g. Chafkin, 2009; Geron, 2012; Stross, 2012), academic research on accelerators remains embryonic (Cohen & Bingham, 2013). Accelerators are a rich empirical setting that provides the opportunity to explore high growth entrepreneurial startups and how they make growth decisions. Due to the novelty of the accelerator phenomena, limited research has been published using accelerated startup's data. We seek to contribute to this literature by drawing the attention to governance decisions for domestic and foreign companies that have participated of a government funded accelerator program.

Launched in 2010 by the Chilean government, Startup Chile is a leading government funded accelerator program. Up to March of 2014, more than 900 startups and 2,000 entrepreneurs from more than 72 different countries have teamed up and joined this program in nine different waves; each startup received US\$40,000 in seed funding with no equity obligations. In exchange, the team members committed to reside in Chile during a period of six

¹ <http://www.economist.com/news/special-report/21593592-biggest-professional-training-system-you-have-never-heard-getting-up-speed>

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months, and engage in learning and marketing oriented activities to achieve company growth and create awareness of the program. This setting is particularly appropriate to test our hypotheses because the heterogeneity of the sample provides us with enough variation in terms of firm and country level differences, allowing us to compare domestic and international startups from a large number of countries. Whereas Startup Chile is particularly big in terms of the number of startups it accepts in each cohort, our findings are generalizable to startups that have not participated of this program, because moving internationally and finding cheaper ways to grow is a global trend common to technology startups all over the world. Developing contracting capabilities and facing challenges and costs related to institutional distance are common challenges for startups, irrespective of their participation of an accelerator program.

Data

Data for our empirical analysis has been obtained from three different data sources. First, we obtained archival data from the Index of economic freedom, developed by the Heritage Foundation (Kane, Holmes, Kim R., & O'Grady, 2007). Started in 1995, this report provides accurate information related to the evolution of institutions across 186 countries. It provides ten categories that are scaled from 0 to 100, with higher numbers indicating greater economic freedom for individuals' and firms' freedoms in a country. Researchers in economics, management and public policy have extensively used this index, using it in its aggregate form (Chan, Isobe, & Makino, 2008; Easton & Walker, 1997), or based on individual institutions (Meyer et al., 2009; Shinkle & Kriauciunas, 2012).

Second, data on startups' background and strategic decision-making has been directly obtained by the leading author from the Chilean government, and executives running the

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accelerator program. The database contains information at the individual and company level. These data were collected using different techniques, for example, the data related to the application process was obtained through a standard questionnaire created by the accelerator program to screen each company as part of the selection process. From this questionnaire we obtained company and individual level data for the universe of companies accepted in the accelerator program until March 2014. From this data we have learned that the companies we are studying are mainly technology companies.

Third, information on growth decisions was obtained through a database that recorded face-to-face reporting meetings that executives of the program maintained with each startup. Once accepted into the accelerator program each startup team met at least one time with program executives to report their needs and achievements, it is from these meetings that we obtained insourcing and outsourcing decisions they made while in Chile. Funded and supervised by the program's advisors, these companies can either outsource or insource people to perform specific professional activities (e.g. marketing, design, technology development and sales) needed to grow. Since our dependent variable is the ratio of outsourcing, we removed from the sample all of those companies for which no growth was reported during the six months in which they were participating of the program. In addition to the sources of secondary data, we also met in several occasions with Startup Chile and CORFO officials to clarify questions and increase our confidence in the validity of our results.

Our final sample corresponds to 705 meetings and 469 startups in our full sample model, reporting 2,118 strategic decisions related to growth by insourcing and outsourcing (1,379 of them being outsourcing). In our sample, each company held between one and five meetings

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during the six months that the program lasted, and the average number of meetings was 1.5. The firms in our sample belong to an ample range of developed and developing economies, whereas fifty one countries are present in the sample, especially representative (more than 40 firms) are startups coming from U.S, UK, Canada, India, Argentina, Brazil and Canada, beyond the Chilean firms that represent about 25% of the sample. Due to the international nature of our sample, it provides us with appropriate conditions to test how between and within firm, and country level factors shape startups' strategic choices for growth when deciding between outsourcing and insourcing.

Main Variables and Model

The analysis of our data explores how governance decisions (i.e. insourcing vs. outsourcing) by technological startups can be influenced by institutions, capabilities, and their interaction. Specifically, we test our hypotheses by exploring how startups' contracting capabilities and institutional differences between home and host country environments affect the "make vs. buy" decision on human capital. Following Fabrizio (2012), we depart from the transaction level of analysis. Here we run our analysis and estimations at the firm-meeting level, capturing startups' outsourcing decisions as a function of variations in startups' capabilities (that build over time) and institutions, along with other control variables.

Dependent variable. Consistent with our hypotheses and following previous studies (Mol, 2005; Mol & Brewster, 2013) we define our dependent variable, *outsourcing (OUTS_R)*, as a ratio. It was calculated as the total number of outsourcing transactions reported in a meeting, divided by the total number of transactions (insourcing and outsourcing) reported in that meeting. Whereas other papers have operationalized outsourcing as a binary variable (Jain &

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Thietart, 2013), we prefer a ratio measure because it provides fine grained detail of the extent to which an entrepreneurial firm is more or less prone to outsource, instead of if it has outsourced at all (which is what is captured by a binary variable).

Independent Variables. *Contracting capabilities* (Argyres & Mayer, 2007) relate to experience (Gulati, 1999; Mayer & Salomon, 2006), a consequence of the process of learning. The more a startup relies on external contractors, the more experience it gains, and the higher is the level of contracting capabilities it develops. Organizational learning researchers (Parmigiani & Holloway, 2011), also interested in measuring these constructs, have operationalized it as accumulated output (i.e. experience). Following prior research (Argote & Miron-Spektor, 2011; Brahm & Tarziján, 2014; Gulati, 1999) we measure contracting capabilities based in the *cumulative number of tasks performances*; in our case, the number of outsourced people a startup reports in a specific meeting. Because we do not have data on startup hiring or outsourcing behavior previous to entering the program, we have taken a conservative approach by lagging this variable for all our firms, in order to capture how these capabilities acquired through prior experience affect firms' strategic decision making. As capabilities signal experience gained through time, this variable (*CAPAB*) is continuous and cumulative.

Institutional distance (Kostova, 1997) is a construct that has been used to measure the difference or similarity between host and home country institutions (Gaur & Lu, 2007). Since we are focusing in predicting what drives human resource acquisition, theoretical considerations suggest that our concept of institutional distance should focus on regulative institutions that influence the labor market. Here we follow those authors (Blumentritt & Nigh, 2002; Fuentelsaz, Garrido, & Maicas, 2014; Meyer & Peng, 2005; Shinkle & Kriauciunas, 2012) concerned with measuring

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the regulatory efficiency collected by the Index of Economic Freedom. We built *Absolute Institutional Distance (AID)* including measures for labor freedom, business freedom and monetary freedom; similar to other authors, we lagged this variable by two years. Following Kogut and Singh (1988), AID was constructed using the euclidean distance between host and home country institutions. Initially we operationalized *AID* as a proxy that takes the *absolute value of institutional distance* between home and host country. Whereas for domestic startups the value of *AID* would be zero, this variable takes positive and higher values as the distance between startups' host and home country institutions increases. Since the distribution of this variable was not normal (ranging from 0 to 75), we decided to be conservative and transform it into a categorical variable. *AID*, then, takes the value of 1 for domestic firms (base value in our regressions); 2 for firms with an absolute institutional distance between 0.1 and the mean value of 8; 3 for those firms with a value between 8 and 16; and 4 for firms with an institutional distance larger than 16.

Control Variables. At the firm level we included time invariant and time varying variables. Among time invariant variables we control for *cohort (COHORT)* because belonging to certain cohort may influence startups decisions in terms of what is the best growth strategy. We also introduced *industry dummies (INDUSTRY)* to control for unobserved heterogeneity. Whereas most startups in our sample are technological startups, they serve different thirteen different markets. Industry fixed effects may capture permanent unobserved differences across industries that could influence the outsourcing ratio. A *No Spanish* variable (*NO_SPANISH*) was introduced as a binary variable to distinguish firms whose team members speak the host country language from those that do not. *Score to enter (SCORE)* refers to the score obtained by the

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startup at the time of application. Since outsourcing is a trend among technology startups, there are reasons to believe that startups with higher score and better preparation may be more prone to outsource. Finally we add a binary variable (*MALE*) to signal the *gender* of the leader (CEO) of the startup accepted in the acceleration program. *Arrival Stage (ARRIVAL_STAGE)* refers to the stage of advancement on the life cycle of a startup at the time of application, an ordinal variable that ranges from 1 to 4. Different stages demand different growth strategies. *Startup age at application (STARTUP_AGE)* is a variable that reports the number of months a startup has been around before applying to the acceleration program.

We also control for time variant variables, aspects of the firm, program and industry that may shape outsourcing decisions and that can change between meetings. First, we include *Program Executive (EXEC) dummies*. This is a categorical variable that indicates the identity of the executive in charge of holding the meeting with the startup. Nine different executives held the progress meetings with the startups. *Project Stage of Advancement (PROJ_ADV)* is a categorical measure ranging from 0 to 3, signaling the stage in which the startup was at the time of the meeting, compared to the stage it was at the time of application. *Business Incorporation (BUSS_INCORP)* is a dummy variable that reflects if the startup has been formally incorporated, in Chile or abroad, or not. Incorporated businesses may be in more advanced stages, being probably more prone to grow.

Estimation Technique

The dataset has a time series and a cross section dimension, opening opportunities to obtain more precise estimates due to a larger sample size (i.e. lower standard errors), and also understand how certain effects, such as contracting capabilities, evolve over time. Panel data

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presents advantages over cross sectional studies, however, it brings up the possibility of dealing with time invariant effects, also known as unobserved heterogeneity (Semykina & Wooldridge, 2010). In order to sort out this problem, fixed and random effects appear to be two common tools to address it. After running the robust version of the Hausman test, and Breusch and Pagan Lagrangian multiplier test for random effects (xttest0 in STATA), we conclude that fixed effects is appropriate. However, given the structure of our data, this is not an option because we have time dependent covariates. The characteristics of our dataset poses two main violations of ordinary least square models (OLS). Since some of our independent and control variables are time variant, and that all observations are collected within a period of six months, we followed authors facing similar challenges (Boudreau & Jeppesen, 2014; Patel & Chrisman, 2014; Philippe & Durand, 2011; Yang, Zheng, & Zhao, 2014), and chose feasible generalized least squares (FGLS) as an estimation technique that fits panel data linear models, and that can be used when the dependent variable is a ratio (Berry, 2006), and when the panels are unbalanced (Berry, 2006; Patel & Chrisman, 2014; Philippe & Durand, 2011). This model is appropriate because it addresses potential autocorrelation within panels, cross-sectional correlation, and heteroskedasticity across panels (Semykina & Wooldridge, 2010; Yang et al., 2014). We tested our hypotheses using *STATA 12*; we incorporate commands that estimate even if observations are unequally spaced in time, which is our case.

RESULTS

Main Results

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Table 1 reports the means, standard deviations, and correlations among the variables we have used to test our hypotheses. Consider that the correlations among the main effects are not problematic.

Insert Table 1 around here

Table 2 presents the FGLS estimations. Model 1 presents our baseline model only including control variables. Model 2 and 3 add the main effects for testing the impact of *Absolute Institutional Distance* (Model 2) and *Contracting Capabilities* (Model 3) on a startups' *outsourcing ratio*. Model 4 adds the interaction terms between the *AID* and *Contracting Capabilities*.

Insert Table 2 around here

Among the significant controls in Model 1, we observe that the negative sign for *arrival stage* indicates that startups that arrive into the program at later stages are less prone to outsource than startups in earlier stages. This is also confirmed by the negative term on *business incorporation*, signaling that startups that have not yet been incorporated are more prone to outsource than those that are properly registered. This behavior supports our statements arguing that outsourcing may be a preferred strategy for firms higher degrees of uncertainty, such as startups in earlier stages, when the cost of committing resources can determine the true existence of a company. This model also shows that firms whose team members *do not speak Spanish* are more prone to outsource than startups led by Spanish-speaking team members. We believe that

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not speaking the country language adds to institutional distance, making it even more important to keep a lower cost structure. The urgency to economize in resource commitment is even more important for firms that have no knowledge of the local language. In Model 2 we entered the variable *Absolute Institutional Distance (AID)*. We found a positive and significant relationship ($b=0.039, p < 0.01$) between Absolute Institutional Distance and Outsourcing Ratio; this is, the larger the distance between home and host country institutions for a startup, the more prone it will be to outsource. The AID coefficient is also positive and significant in Model 4 ($p < 0.01$). Using *STATA 12* we run the margins command and confirm that the effect of *AID* on outsourcing was significant at all levels of institutional distance, supporting Hypothesis 1 in that higher levels of institutional distance are positively related to higher levels of outsourcing. In Model 3 we entered the explanatory variable Contracting Capabilities (*CAPAB*). Its positive and significant coefficient ($b=0.054, p < 0.01$) confirms that as startups learn and incorporate contracting capabilities for outsourcing, they lean more towards this particular growth strategy. The *CAPAB* coefficient is also positive and significant in Model 4 ($p < 0.01$). Hence, we confirm a positive relationship between Contracting Capabilities and Outsourcing ratio, supporting Hypothesis 2. Finally, Model 4 introduces the interaction effect between Contracting Capabilities and Absolute Institutional Distance. Whereas the coefficients are significant at all levels of Absolute Institutional Distance, different from what we hypothesized, the coefficient for the interaction is negative at all levels of institutional distance ($p < 0.01$). We also run the same model with *AID* as a continuous variable and obtained very similar results ($b=-0.002, p < 0.01$). Aiming to confirm our results we run the margins command and observe that the effect of capabilities on outsourcing is significant at all levels of institutional distance. This suggests that the positive

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effect of Absolute Institutional Distance on Outsourcing Ratio is not necessarily strengthened by Contracting Capabilities. To illustrate these results, we plotted the moderating effect of Contracting Capabilities on Outsourcing Ratio (see Figure 1) for different levels of AID.

Insert Figure 1 around here

Figure 1 illustrates that initially, as predicted, domestic startups (AID=1) outsource less than foreign startups (shown by a positive coefficient for all levels of AID, and a higher intercept for foreign startups, as seen in Figure 1). However, this trend is only sustainable until a startup has outsourced about six times (contracting capabilities (lagged) =5). The negative coefficient of the interaction shows that the slope for domestic startups is steeper than for foreign startups (the slope of the regression line for the domestic startups' group is 0.0984, which is the coefficient for capabilities). The negative interaction term, then, is the difference in slopes between the domestic and each of the foreign groups. As shown in Figure 1, after having outsourced about six times, Chilean startups will be more prone to outsource than international startups facing institutional distance. Hypothesis 3, then, is only partially supported, or supported only until startups have outsourced about six times. This interesting result will be further addressed in the discussion section.

Additional Models and Robustness Checks

Aiming to confirm the robustness of our results we performed a number of sensitivity analyses. First, we ran our main model operationalizing the Absolute Institutional Distance (AID) variable as a continuous variable. The fact that this variable was not normally distributed only made our main effects smaller, yet the results remain the same in terms of significance and

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sign of our variables. Second, aiming to understand the true difference between domestic and foreign firms we created the variable labeled Institutional Distance (*ID*). The *ID* variable is a dummy variable that takes the value of 1 if the startup has internationalized (i.e. it comes from a foreign economy to establish operations in Chile), and the value of 0 otherwise (i.e. a Chilean startup operating in its domestic market). A negative coefficient for the interaction tells us that after outsourcing a handful of times, domestic firms are more prone to outsource than foreign firms. The explanation for this phenomenon would be the same as the one for the interaction in our main model, and will be addressed in the discussion section. Third, we conducted a number of robustness checks by running our main model by using different estimation procedures. For example, we replicated our FGLS analysis by using a XTREG, obtaining similar results to what we had for our main models. Additionally, we operationalized our dependent variable as a dummy variable (*OUTS_binary*) that assumed a value of 1 if the transaction *j* in time *t* reported that at least one individual was outsourced by the firm, and zero otherwise. This operationalization also kept our results consistent. Finally, we ran a Probit model, obtaining less sophisticated but very similar results.

DISCUSSION

Our analysis highlights the importance of going beyond TCE considerations to explain firms' growth choices; here we include firm and institution level considerations to find explanations to startups' outsourcing decisions. A strong support for Hypothesis 1 shows that when startups go international, institutional factors play a key role in shaping outsourcing decisions. We believe that greater distance creates disincentives to commit, increasing the value of delaying any type of activity that requires incurring in costs of committing resources.

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Irrespective of that the institutions in the home country are stronger or weaker than in Chile, facing greater levels of institutional distance suggest that firms would prefer a growth structure that delays costs when the value of bringing someone into the company is still uncertain. Consequently, we found that outsourcing is the preferred growth strategy for startup firms facing larger levels of institutional distance. We also looked into firm level factors, such as contracting capabilities, and confirm that they also play a role in shaping outsourcing decisions. In line with organizational learning arguments (Levinthal & March, 1993), our results show that firms that have relied on outsourcing as a growth strategy in the past seem more prone to lean towards it when bringing new personnel into the company. This tendency is common across domestic and foreign firms. We were initially puzzled by the negative sign of our interaction effect. However, a deeper analysis that included talking to program executive suggests that the moderating effect of contracting capabilities is different for domestic and international firms. Whereas foreign firms are more inclined to outsource than domestic firms, Chilean firms are more inclined to repeat the outsourcing behavior. It is not immediately obvious why international firms are less inclined to outsource after having outsourced a handful of times. Why would they not take advantage of the contracting capabilities they had developed? A possible explanation for this behavior can be related to the costs of search and evaluation suggested by Mol and Brewster (2013). Whereas domestic companies have an advantage in terms of the network of trusted suppliers from which they can outsource, international startups moving to a new country face costs of searching and evaluating new suppliers in the host country. This is, contracting capabilities may be limited by the fact that they are embedded in a startups' home country, and are not easily transferable to a host country. We went ahead and communicated with program

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executives to confirm these results; they reaffirmed our findings and mentioned that foreign companies were in fact limited by their knowledge of local sources of outsourcing. Hiring locally, then, would be a strategy used by foreign firms to overcome some of these liabilities. To summarize, our results suggest that focusing exclusively on one of the dimensions that shape outsourcing decisions is too restrictive. Beyond transactions characteristics, we showed that country and firm level factors play a key role in determining the growth strategy for a startup firm. Specifically, our findings underscore the importance of taking into account a) institutional distance and its implications for transaction costs and costs of resource commitment, b) contracting capabilities as a mechanism able to reduce a startups' cost structure, and c) the interaction between capabilities and institutional distance, which trigger a different effect for domestic and international firms.

IMPLICATIONS AND LIMITATIONS

In this paper, we focused on the question of the boundaries of the firm in the context of growing technology startups. Consistent with extant research (Mol & Brewster, 2013; Rangan, 2000), we argue that outsourcing decisions are driven by transaction cost considerations. The first contribution this article makes is to add that bureaucratic costs should also be taken into account in this cost assessment that precedes outsourcing decisions. The costs of committing resources early on in the life of a startup are as important as transaction costs; this article expands the understanding of the costs of resource commitment (Folta, 1998; Luo, 2004; Williamson, 1985) by bringing up new determinants that shape this overlooked type of cost. Looking into what are the mechanisms that drive these costs is part of our second contribution. In line with other authors promoting an integrative perspective in strategy (Mayer & Salomon,

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2006; Meyer et al., 2009; Meyer & Peng, 2005; Wright et al., 2005; Yamakawa et al., 2008), we move ahead from transaction level characteristics, and take into account firm's contracting capabilities and institutional distance. We contribute to Resource Based View and expand the contracting capabilities literature to a context where it has not yet been applied. We confirm that in the world of startups, contracting capabilities play a key role in shaping growth choices. Through our institutions' lens we make interesting additions to the work on global strategy, we show how domestic and foreign firms differ when it comes to decide between growth strategies. Our findings suggest that foreign startups are more inclined to outsource, due to cost considerations. However, domestic startups have the ability to connect to a local supply of outsourcing resources that does not exist for foreign counterparts, shifting the parameters of what we initially expected. With this, our work contributes to discussions related to costs structures for global outsourcing (Bertrand & Mol, 2013; Mol & Brewster, 2013). Finally, our contributions are offered in an unexplored empirical setting, the context of technology startups that have participated of an accelerator program. Whereas our theoretical considerations are generalizable across startups that have or have not participated of an acceleration program, we are proud to shed light into a new context populated by new firms' operating in highly dynamic environments.

Naturally, our findings come with some limitations. First, in order to measure institutional distance we relied on country level indexes. Whereas this is the norm in most multiple country studies, we acknowledge that institutions can vary within a country. Within country institutional differences are not being considered in this study. Second, in order to account for differences across firms we relied on data entered by the executives, after collecting

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it during each meeting. Different understandings among executive might have created subtle differences in our results, whereas we control for executive, we believe that having an identical judgment among all of them might have provided better results. It would have been great if they reported the specific activity that was being contracted in each meeting. Third, all of the startups considered in this study were making decisions in the context of their six-month stay in Chile. Being one of the leading countries in Latin America, we wonder if the growth decisions made by startup firms might have been the same if they were located in a region where country level differences were less dramatic. Fourth, whereas institutional distance may also consider normative and cognitive institutions, we decided to solely focus in regulative institutions, we preferred depth to breath, aiming to unravel if institutions related to labor market would shape outsourcing decisions. Further research is needed to understand if other types of institutions have also an effect on outsourcing decisions.

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Transaction, Firm and Institutional Effects on Strategic Choices: Accelerated Startups' Outsourcing Decisions

Table 1. Spearman correlation matrix and descriptive statistics

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Outs	1.00												
2 cohort	-0.10*	1.00											
3 exec	-0.19*	0.23*	1.00										
4 industry	0.07	0.05	-0.05	1.00									
5 no_spanish	0.20*	-0.10*	0.06	0.09	1.00								
6 score	-0.08	0.26*	0.17*	-0.06	0.08	1.00							
7 male	0.05	-0.07	-0.07	0.05	0.03	-0.04	1.00						
8 arrivalstg	-0.14*	0.03	0.07	-0.09	0.02	0.21*	0.00	1.00					
9 stageadvan~t	0.05	-0.03	-0.12*	-0.01	-0.05	-0.15*	-0.01	0.41*	1.00				
10 buss_incorp	-0.01	-0.02	-0.17*	0.05	-0.08	0.05	0.07	0.26*	0.06	1.00			
11 startup_age	-0.03	-0.03	0.03	0.06	0.04	0.08	0.05	0.47*	-0.08	0.28*	1.00		
12 aid	0.21*	-0.13*	0.02	-0.01	0.65*	-0.05	-0.01	0.04	-0.01	-0.08	0.00	1.00	
13 capab	0.36*	0.02	0.01	-0.03	0.04	0.02	0.12*	0.03	0.11*	0.11*	0.08	0.05	1.00
Obs	705	705	705	543	705	688	662	618	705	583	704	705	705
Mean	0.68	4.00	4.18	5.79	0.58	3.66	0.82	2.28	0.96	0.57	1.67	8.74	1.67
Std. Dev.	0.42	2.25	2.51	3.97	0.49	0.42	0.38	0.82	1.07	0.49	0.78	7.19	1.93
Min	0.00	1.00	1.00	1.00	0.00	2.60	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Max	1.00	9.00	9.00	13.00	1.00	4.83	1.00	4.00	4.00	1.00	4.00	17.00	6.00

*indicates significance at the $p < .05$ level of confidence

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Table 2: Feasible Generalized Least Squares (FGLS) estimation of Outsourcing Ratio

	(1) Controls	(2) Inst. distance	(3) Contracting capabilities	(4) Full model
VARIABLES				
Cohort dummies	yes	yes	yes	yes
Executive dummies	yes	yes	yes	yes
Industry dummies	yes	yes	yes	yes
No_spanish	0.177*** (0.0168)	0.122*** (0.0232)	0.148*** (0.0167)	0.0430* (0.0250)
Score	-0.0313* (0.0181)	0.00892 (0.0216)	-0.00348 (0.0261)	0.0265 (0.0290)
male	0.00115 (0.0196)	-0.00316 (0.0183)	-0.0612** (0.0238)	-0.0227 (0.0190)
Arrival Stage	-0.0288*** (0.0100)	-0.0324*** (0.0109)	-0.0584*** (0.0108)	-0.0697*** (0.0106)
Advancement	-0.00428 (0.00654)	0.00558 (0.00892)	-0.0234** (0.0109)	-0.0354*** (0.00997)
Business Incorporation	-0.0398*** (0.0149)	-0.0508*** (0.0159)	-0.0685*** (0.0169)	-0.0514*** (0.0170)
Age	-0.0170* (0.0101)	-0.00629 (0.0104)	0.00500 (0.0104)	-0.00407 (0.00960)
Inst. Distance		0.00561*** (0.00156)		0.0160*** (0.00204)
Capabilities			0.0538*** (0.00379)	0.0739*** (0.00623)
Inst.Distance x Capabilities				-0.00282*** (0.000569)
Constant	1.016*** (0.0606)	0.842*** (0.0789)	0.960*** (0.0914)	0.761*** (0.107)
Wald Chi 2	43355.37	7467.44	4089.86	6470.7
Startups	261	261	261	261
Obs. per startup	1.55	1.55	1.55	1.55
N	405	405	405	405

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Outsourcing Decisions

Figure 1:

