Institutional Distance and Cross-Border Venture Capital Investment Flows
by Curt B. Moore, G. Tyge Payne, R. Greg Bell, and Justin L. Davis

Cross-border investments are an increasingly important part of venture capitalists’ portfolios. In order to better understand venture capitalists’ international investment decisions, we use dyadic pairings of European countries over a 10-year time span to examine how regulative, normative, and cultural-cognitive institutional differences are related to cross-border venture capital investment flows. Results demonstrate that increased normative and cultural-cognitive distance reduce cross-border investments, whereas regulative distance shows no relationship. Together, these findings suggest that institutional dimensions do influence venture capital investment decisions and that the type of distance can have differing effects.

Introduction

International entrepreneurship is a burgeoning field of inquiry and is defined as “the discovery, enactment, evaluation, and exploitation of opportunities—across national borders—to create future goods and services” (Oviatt and McDougall 2005, p. 540). Scholarly research in this area of study has demonstrated a number of outcomes of international entrepreneurship such as the introduction of innovative new products or processes (Acs and Audretsch 2003), increased levels of competition (Nickell 1996), and the creation of knowledge (Audretsch and Feldman 1996; Audretsch and Keilbach 2004). Evidence also suggests that venture capital (VC) investments are central to the levels of entrepreneurial activity occurring within and between nations by facilitating the increased exchange of assets, information, ideas, and other resources (Bruining and Wright 2002; Bruton et al. 2010; Kreft and Sobel 2005; Manigart 1994). However, despite VC’s apparent importance to entrepreneurial activities occurring among and between different nations, researchers have only recently underscored the key role that venture capitalism plays in the process (Alhorr, Moore, and Payne 2008; Bygrave et al. 2003; Wright, Pruthi, and Lockett 2005).

Venture capitalists have shown an increasing interest in crossing borders to gain access to investment opportunities. According to Gompers, Lerner, and Scharfstein (2005), approximately half of new VC funds in Asia and Europe originate from nondomestic sources. Furthermore, the share of VC inflows from nondomestic sources more than doubled in Europe from 1988 to 2003, whereas...
outflows from the United States almost quadrupled during the same time period (Wright, Pruthi, and Lockett 2005). This growth in international VC investing suggests that researchers should devote more attention to understanding the factors that impact cross-border venture capitalism. In particular, opportunities exist to explore the effects of institutional contexts on cross-border VC investing activities to inform both international management and entrepreneurship literatures. Addressing this identified gap, this paper empirically examines if and how cross-border VC investment flows are influenced by institutional differences between countries. VC flows are referred to here as the aggregated cross-border VC investments moving from traditional private equity/venture firms and corporate venture firms across country borders (Alhorr, Moore, and Payne 2008).

Viewed in the aggregate, a wide range of societal differences exists between countries (Henisz 2003). In attempts to tap foreign markets, many VC firms find they must consider these differences and make proper adjustments to maximize chances for success. Regulatory differences stemming from disparate legal infrastructures have been shown to influence the initial financing decisions of external investors and greatly impact business practices (e.g., Bell, Moore, and Al-Shammari 2008; Bruton, Ahlstrom, and Yek 2004; Smith 2010; Wright, Pruthi, and Lockett 2005). Foreign investing firms may also face challenges stemming from differences in language, lifestyles, cultural standards, consumer preferences, and purchasing power (Lu and Beamish 2001); such differences often have a significant bearing on the ability of firms to communicate and coordinate with host market firms. As a result, the challenges and adjustments associated with doing business in countries with dissimilar institutional environments represent significant costs (Ghemawat 2001). In turn, we explore how disparate institutions impact the international investment activities of VC investors.

Our study makes a number of contributions to extant research. Regarding entrepreneurship research, we contribute to the literature by empirically demonstrating how the investment decisions of venture capitalists are influenced by institutional factors, which has been acknowledged as an especially important area of international entrepreneurship research (Bruton, Fried, and Manigart 2005). Specifically, we add to the existing international entrepreneurship field by improving our overall understanding of the factors that inhibit or promote cross-border VC investment activity. This is important, and of growing concern, to both researchers and practitioners worldwide because VC investment is an important component for both individual entrepreneurs seeking venture capital and for country-level economic development, sustainability, and business growth (Bruton, Ahlstrom, and Yek 2004).

Our study also contributes to the burgeoning research on institutional distance and its effects on international trade. Work in this area has noted the importance of societal differences, and the challenges they impose, to international strategies and competition (e.g., Eden and Miller 2004). On a broader level, our study demonstrates that each of the three institutional dimensions is distinct from the others and can have differing effects. Therefore, our findings may suggest the need for more sophisticated studies if we are to better understand how these three dimensions contributed both independently and collectively to influence managerial decisions, particularly those involving entrepreneurial activities. In addition, we build on previous work examining the effect of institutional distance on multinational enterprises (MNEs) (e.g., Xu and Shenkar 2002) to develop an integrative framework to examine the variation in national institutional environments and how these differences may promote or inhibit VC investment flows across national borders. By examining all three dimensions of institutional theory (regulatory, normative, and cultural-cognitive) we are able to provide a richer explanation of cross-border VC activity than previous efforts, which are traditionally considered from an economic perspective. Also, we incorporate time and change into the theoretical and empirical models by utilizing longitudinal methods to the study of institutions at the country level.

**Theoretical Development**

Institutions provide guidelines for behavior and lend stability, regularity, and meaning to social life (Scott 2001). Friedland and Alford (1991, p. 232) specifically refer to institutions as "both supra-organizational patterns of activity through which humans conduct their material life in time and space, and symbolic systems through which they categorize that activity and..."
infuse it with meaning.” According to Scott (1995), three distinct dimensions of institutions exist; these dimensions have been empirically validated as being distinct (Busenitz, Gomez, and Spencer 2000). The first dimension, regulative, comprises the governing rules and laws within a society. The second dimension, normative, consists of social norms, values, beliefs, and assumptions about human behavior that are socially constructed. Finally, the cultural-cognitive dimension reflects the schemas, frames, and inferential sets that people use when selecting and ascribing meaning to information. The cultural-cognitive dimension is most closely associated with the culture of a specific country or region (Ahlstrom and Bruton 2006; Scott 2002).

Institutional distance is defined as the difference or similarity between home and host institutional environments (Kostova 1999). Generally speaking, institutional distance is the individual and collective differences between the regulative, normative, or cultural-cognitive dimensions of home and host markets. These distance measures impact the level of complexity firms experience in foreign markets, with high levels of distance hampering the chances of realizing intended strategies (Dobrev and Carroll 2003). To date, scholars have investigated institutional distance as it relates to the ability of MNEs to establish legitimacy in a host country (Kostova and Zaheer 1999), as well as the ability of parent firms to transfer organizational practices to foreign subsidiaries (Kostova 1999). Extant research also suggests that substantial institutional differences can affect which foreign markets are targeted (Luoostarinen 1980), the mode of entry into the new market (Kogut and Singh 1988), the adoption of organizational policies and practices (Kostova and Roth 2002), and performance (Zaheer and Mosakowski 1997).

Building on these previous studies, we argue that the decision by VC firms to invest in international markets is influenced by the degree of institutional differences between the home and host country environments. Particularly, we expect dissimilar institutional environments to create significant barriers in cross-border VC funding decisions because these differences could restrict the ability of venture capitalists to influence venture management and increase overall uncertainty regarding the venture. Indeed, the portfolio firm would likely be less successful if the venture capitalist is unfamiliar with the host institution as venture capitalists (1) serve as a key source of knowledge and experience; (2) are frequently involved in the strategic direction-setting of the portfolio firm; (3) serve as key external contacts for locating managerial recruits, professional service providers, or key customers; and (4) play a personal role as friends, mentors, and confidants to organizations receiving venture funding (Arthurs and Busenitz 2006; Maula, Auto, and Murray 2005; Sapienza and Gupta 1994; Sapienza, Manigart, and Vermeir 1996). However, such knowledge-based advantages are context specific and can vary across nations (Brouthers, Brouthers, and Werner 2008), thus limiting venture capitalists’ value if they lack understanding of the institutional environment within which the investment is made.

In sum, our general thesis is that higher levels of institutional distance will create barriers to cross-border VC investments. Support of this thesis is found more generally in recent related studies that demonstrate environmental differences factor into the commitment levels of VC firms toward portfolio firms and that these differences impact the venture capitalists’ ability to successfully perform their various roles in the organization’s development (Ahlstrom, Bruton, and Yeh 2007; Mäkelä and Maula 2006). Furthermore, qualitative and theoretical efforts surrounding institutional transaction costs (Orr and Scott 2008) and institutional friction (Shenkar, Luo, and Yeheskel 2008) foster a rich explanation for the manner in which environmental differences, such as the liability of foreignness, increase costs (Zaheer 1995). In the following section, we more specifically support our argument by discussing the distinct nature of regulative, normative, and cultural-cognitive institutions (Kostova 1999; Scott 1995) and how each individually relates to VC investments crossing national borders.

Regulative Distance
Societal differences are often most apparent in the formal rules and codes encompassing the regulative institutional environment. Codified rules present the formal constraints that shape human interaction and outline the rules of the game in a society. Eden and Miller (2004) described regulative institutions as the “may” and “may not” behaviors to which actors must adhere and indicated it can be the easiest element for outsiders to observe due to its...
codified nature. Likewise, Kostova and Roth (2002) suggest that host country regulations create coercive isomorphic pressures that firms must conform to and abide by in order to maintain legitimacy.

From a venture capitalist perspective, regulative institutions consist of the rules and laws that (1) provide support for new businesses; (2) reduce the risks for individuals starting a new company; and (3) facilitate entrepreneurs’ efforts to acquire resources (Barnett and Carroll 1995; Busenitz, Gomez, and Spencer 2000). Some of the regulative differences between societies that are more relevant to VC investment decisions include the ease with which new businesses can obtain licenses to operate (Djankov et al. 2002), the adequacy of court systems (Johnson, McMillan, and Woodruff 2002), patenting processes (Cohen et al. 2002), the protection of intellectual property (Lee and Mansfield 1996; Oxley 1999), the manner in which taxes are paid (Grubert and Mutti 1991), and the means and feasibility of business exit (Roberts and Thompson 2003).

Given that regulative institutional distance describes the differences in the general legal environments between home and host countries (Xu, Yigang, and Beamish 2004), more distant regulative institutional environments may work to heighten uncertainties and the projected costs venture capitalists incorporate into their investment assessments. For example, in contrast to the United States, most European countries tax capital gains at rates of 60 percent or more, hindering the formation and expansion of new ventures (Lerner, Hardymon, and Leamon 2008). Such a gap in how venture capitalists get rewarded in one country versus another may create enough uncertainty that investors may reduce their level of investment or be unwilling to invest altogether. Likewise, the success of many high-tech businesses depends on a fast and efficient patent and copyright system and the adequate enforcement of the laws governing intellectual property rights (Lerner, Hardymon, and Leamon 2008). So, though the European copyright system is widely viewed as one of the most efficient systems in the world, the patent process costs about $150,000 compared with $20,000 in the United States (Nuechterlein 2000; Singer and Stauder 2003); such differences can influence VC investment decisions tremendously.

The codes and rules comprising the regulative environment are also relevant to the VC firm itself as foreign regulations may be quite different than those in the home market and errors in noncompliance can be costly. Indeed, ignorance of local regulations frequently leads to “missteps and embarrassing misunderstandings” and may result in monetary penalties, fees, or fines (Orr and Scott 2008, p. 566). However, just as important, noncompliance with host market regulations may negatively impact the reputations of the VC firm among existing clients and among entrepreneurs looking to secure their services. So, despite the codified nature of regulative institution, attempts to learn and adhere to different legal requirements while simultaneously performing their strategic formulation, operational, and coaching roles (Baum and Silverman 2004; Sapienza and Gupta 1994; Sapienza, Manigart, and Vermeir 1996), may be seen as an overwhelming task to many venture capitalists. Indeed, many venture capitalists may conclude that compliance (and learning) expenses outweigh the benefits when evaluating portfolio firms founded in distant regulative environments. Thus, we expect higher levels of regulative distance between two countries to be associated with lower levels of VC flows from one nation to the other. We state this formally as:

**H1: There is a negative relationship between regulative institutional distance and venture capital flows between countries.**

**Normative Distance**

A country’s normative institutions consist of “social norms, values, beliefs and assumptions about human nature and human behavior that are socially shared and carried by individuals” (Kostova 1997, p. 180). So though a country’s regulative dimension describes “may” or “may not” behaviors, the normative dimension prescribes “should” or “should not” behaviors of businesses. The normative institution stipulates expectations for behavior that are both internalized by actors and reinforced by the beliefs and actions of those with whom they interact (Eden and Miller 2004, p. 201). Normative institutions incorporate the informally sanctioned social obligations of the type found in all societies. They are conceptions of appropriate actions, roles, routines, and scripts (Scott 2001). However, these conceptions are not simply anticipations or predictions but prescriptions of behavior. Indeed, informal norms, policies, and
codes of conduct can vary considerably to influence individual actions (Scott 2001).

The often unwritten and informal codes and societal norms of a country are particularly difficult for outsiders to learn, understand, and respond to appropriately. Hence, the normative institution seems particularly salient to venture capitalists attempting to enter and operate in distant markets (Eden and Miller 2004). Researchers have attributed venture success to the ability of venture capitalists to manage their portfolio companies (Gompers 1995), provide board oversight (Lerner 1995), and recruit key managers (Hellman and Puri 2002). However, there is considerable variation in the normative business practices from country to country. For example, normative differences may include the frequency of contract negotiation, what is considered corrupt, expectations regarding the transparency of organizational governance, and the importance of business networks (Gaur, Delios, and Singh 2007; Gaur and Lu 2007). Even for VC firms, normative differences exist. For instance, Bruton and Ahlstrom (2003) discuss how China’s accounting rules differ significantly from international accounting standards, making it difficult for venture capitalists to obtain and understand data about a company’s assets and accounts receivable.

It is quite likely that venture capitalists weigh the additional communication, coordination, and transaction costs when evaluating the viability of foreign new ventures originating in very distant normative institutional environments. Differences in standards and customs can act as a barrier to interaction among venture managers and their ability to implement strategies in portfolio firms. In fact, normative distance may heighten the likelihood that VC managers will have more frequent misunderstandings and disagreements with portfolio company executives regarding the strategic direction of the firm. Thus, we expect higher levels of normative distance to be associated with lower levels of VC inflows. We state this formally as:

\[ H2: \text{There is a negative relationship between normative institutional distance and VC flows between countries.} \]

Cultural-Cognitive Distance

Previous research has used “cultural distance” as a means of generally measuring cultural-cognitive differences in markets (e.g., Clark and Pugh 2001; Grosse and Trevino 1996). Cultural distance concepts have been applied to a broad range of research areas including foreign direct investment (Benito and Gripsrud 1992), firm performance (Grosse and Trevino 1996), international joint ventures (Gaur and Lu 2007), and the strength of network ties (Pothukuchi et al. 2002). However, as researchers have sought to more fully account for environmental complexity and differences across borders, the “cultural-cognitive” designation, such as we use in this manuscript, is now being more commonly used as just one dimension of the institutional distance construct (e.g., Gaur, Delios, and Singh 2007; Orr and Scott 2008).

The cultural-cognitive institutional dimension encompasses the knowledge sets and shared understandings possessed by the people within a country (Busenitz and Barney 1997). Scholars often see cultural-cognitive institutions as affecting and shaping social action by creating classification systems, specifying what is seen as similar and different, and by conferring identity to actors. The controlling forces shaping cultural-cognitive institutions do not depend on explicit rules but upon subtle, shared beliefs (Douglas 1986). Certain cognitive elements within countries, such as widely held beliefs and other assumed behaviors, provide a framework for everyday routines as well as the more specialized and codified knowledge and belief systems. These shared knowledge sets can become so widespread and common practice that they are key building blocks regarding how a society can have a shared social understanding (Busenitz, Gomez, and Spencer 2000).

We suggest shared understandings and cognitive schemas may play a significant role in VC investment behavior when venture capitalists evaluate foreign ventures. In related research, finance scholars have examined the cross-border diversification behaviors of investors and consistently demonstrated that despite the benefits available to investors, investors do not always exploit international diversification opportunities (e.g., De Santis and Gerard 1997; Grauer and Hakansson 1987). Instead, investors tend to allocate a relatively large fraction of their wealth to domestic equities—a phenomenon commonly called home bias (Obstfeld and Rogoff 2000; Tesar and Werner 1995). For instance, in a study using logic similar to that supporting Hofstede’s (1980) cultural distance construct, Grinblatt and Keloharju (2001) examined the holdings, purchases, and sales of
Finnish stocks of investors in Finland. They found that investors preferred to hold and trade stocks headquartered in nearby locations to those in more distant locations, thereby showing a negative relationship between distance and ultimate investments. In addition, the Grinblatt and Keloharju (2001) study found that investors preferred to hold and trade stocks of firms that shared their native language and had CEOs of similar cultural origin.

Previous research examining the venture capitalist–entrepreneur relationship also supports the argument that VC investors may be influenced by cultural-cognitive factors. Decisions to fund may be partially based on shared cognitive schemas between venture capitalists and venture firm managers. Indeed, “shared conceptions” (Berger and Luckman 1967), mutual understandings, shared role definitions, and common expectations may not only reduce the initial investment uncertainty but may also help both the venture capitalist and a foreign new venture throughout the entire venture backing process. In addition, low levels of cultural-cognitive distance may aid knowledge diffusion processes between the venture capitalist and a foreign new venture. Shepherd and Zacharakis (2001, p. 130) alluded to this idea in their discussion of entrepreneur confidence, which is the perceived level of certainty that a “partner will pursue mutually compatible interests in the relationship, rather than act opportunistically.” Similarly, Payne et al. (2009) demonstrated that a greater degree of entrepreneurial confidence is associated with higher levels of financing from venture capitalists.

According to these studies, perceived differences between two countries’ cultural-cognitive institutional environments impacts international VC investment behaviors. Venture capitalists will likely show preference for foreign ventures in which they perceive a greater level of shared understanding, culture, and logic. Thus, we expect higher levels of cultural-cognitive distance to be associated with lower levels of VC investments between countries. We state this formally as:

\[ H_3: \text{There is a negative relationship between cultural-cognitive institutional distance and VC flows between countries.} \]

Sample and Measures

This study uses data on 16 European countries from 1996 to 2005. European countries provide a context with rich differences in histories, regulatory traditions, norms, and cultures. Furthermore, a large number of institutional changes have occurred in Europe over the past decade, which produces variance across the multiple time periods and multiple country dyadic pairs that represent VC investments from one European country to another. In fact, despite increasing regional integration between many European countries, venture capitalists do not view Europe as a unified market (Lerner, Hardymon, and Leamon 2008).

The 16 countries utilized in our study were those with available data regarding the institutional distance measures as well as those that shared VC transactions. In cases where no VC investments were apparent between two European countries, we made the more conservative decision to not include those country dyads in the analysis.\(^1\) The final sample is composed of dyadic combinations of these 16 countries in each year that there was evidence of cross-border VC investments; this resulted in 1,037 dyads across the 10 year time span \((n = 1,037)\).

Independent Variables

We calculated the three dimensions of institutional distance for our sample using the procedures outlined in recent studies by Gaur et al. (Gaur, Delios, and Singh 2007; Gaur and Lu 2007). Following these and related studies on institutions, country-level measures were obtained from the World Competitiveness Yearbook (WCY) (e.g., Begley, Tan, and Schoch 2005; Chacar and Vissa 2005). The WCY

\(^1\)As an alternative, we could have assumed that in these cases the VC investments were zero rather than missing. When we analyzed the data based on this assumption (in these cases the VC investments between the countries would equal zero), we experienced no substantive changes in the results and only moderately higher levels of significance due to the increased sample size. Because some countries are not represented for every year, our panel data set is unbalanced. Unbalanced panel data did not pose any significant problems given our use of a mixed linear model (Bliese and Ployhart 2002; Ployhart, Holtz, and Bliese 2002; Singer and Willett 2003).
provides detailed data and rankings regarding the ability of nations to create and maintain an environment that sustains the competitiveness of enterprises. The WCY provides coverage of 300 competitiveness criteria that relate the economic performance, government efficiency, business efficiency, and infrastructure in 61 countries.

For the regulative and normative dimensions of the institutional environment, we followed Gaur and Lu (2007) and Gaur, Delios, and Singh (2007), who based their measures on Scott's (1995) conception of the regulative and normative pillars. Scott differentiates regulative from normative by describing normative institutions in terms of how things should be done and what is considered legitimate within an institutional environment. Regulative institutions are described as formal systems to set rules, monitor, and sanction, organizational activities. Following Gaur et al. (Gaur et al. 2007; Gaur and Lu 2007), we used the following items to capture the characteristics of a country's regulative environment: (1) antitrust regulation; (2) intellectual property protection; (3) judicial system efficiency; (4) government fiscal policy toward debt measures as the total foreign debt as a percentage of gross domestic product (GDP); and (5) government fiscal policy in regard to inflation by including inflation. For the normative dimension, we also followed Gaur, Delios, and Singh (2007) and Gaur and Lu (2007) utilizing the following seven items: (1) government's responsive to economic challenges; (2) the level of bureaucratic corruption (reverse scored); (3) government's attitude toward economic realities; (4) transparency of government to citizens; (5) political risk (reverse scored); (6) degree to which government bureaucracy hinders economic development (reverse scored); and (7) independence of local authorities.

Finally, for the cultural-cognitive dimension of the institutional environment, we employed Hofstede's measure (1980) because of its extensive use in previous studies (e.g., Kogut and Singh 1988; Shane 1992). Again, specifically following Gaur, Delios, and Singh (2007), we used the cultural dimensions of Power Distance Index, Individualism, Masculinity, and Uncertainty Avoidance Index to develop our cultural-cognitive variable. The measurement properties of the three dimensions of the institutional environment are presented in Table 1.

The internal consistency measures (standardized reliabilities were computed using Cronbach's alpha) for the three constructs ranged from 72.3 percent to 87.18 percent, demonstrating internal reliability (Nunnally 1978). The high levels of variance extracted of the reflective measures (minimum = 53.98 percent) provide evidence of convergent validity (Cannon and Perreault 1999). We used the Fornell and Larcker (1981) method to assess the discriminant validity of the constructs, in which we found that that the variance shared between each construct and its measures is higher than the variance shared between the construct and other constructs in the model.

For all three distance measures (i.e., regulative, normative, and cultural-cognitive), we used the Kogut and Singh (1988) distance formula. Essentially, this formula calculates the overall separation between two countries utilizing a set of variables. The following index is used for each measure and results in a distance measure for each type of distance in our hypotheses (i.e., regulative, normative, and cultural-cognitive):

\[
\text{Distance} = \sum_{i=1}^{k} \left[ \left( I_{ij} - I_{ik} \right)^2 / \sigma_i \right] / b
\]

In the formula, \( I_{ij} \) stands for the index for \( i \)th institutional dimension and \( j \)th country, \( \sigma_i \) is the variance of the index of the \( i \)th institutional dimension, \( k \) indicates the target country of the VC inflow, and \( b \) represents the number of items for the particular type of distance (i.e., regulative, normative, and cultural-cognitive). Thus, larger values in the regulative, cultural-cognitive, or normative distance calculations indicate greater separation between the country where the VC funds originated and the country that received the VC investments.

Dependent Variable

Wright, Pruthi, and Lockett (2005) uses the term cross-border venture capital flows to represent the international flow of capital and ideas by VC firms making investments across national borders. Based on their definition and the work of Alhorr, Moore, and Payne (2008), we defined our dependent variable as the amount of VC flows between two European countries. We operationalize cross-border VC flows as the percentage of a home or source country's VC investment into a target European country, by computing the ratio of the VC invested by a
source country into the host country. We collected information regarding VC investments from SDC Platinum, a comprehensive database developed and maintained by Thompson Financial Corporation. Venture Economics, for inclusion in the SDC Platinum database, collects data on VC investments in Europe by soliciting information from multiple organizations such as the British Venture Capital Association (BVCA) and the European Venture Capital and Private Equity Association (EVCA). Hence, the database contains only those transactions that meet criteria considered “standard industry practices” or “standard venture capital” by the private equity industry in Europe.

Standard VC investments do not include angel investing or investments made by family or friends. Additionally, VC investments consist not only of primary investments in preseed and seed-staged organizations but also

---

Table 1
Construct Measurement Properties

<table>
<thead>
<tr>
<th>Item #</th>
<th>Country-Level Characteristics</th>
<th>Standardized Reliability</th>
<th>Variance Extracted</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulative distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rd1</td>
<td>Antitrust Regulation</td>
<td>87.18 percent</td>
<td>63.76 percent</td>
<td>0.866</td>
</tr>
<tr>
<td>rd2</td>
<td>Intellectual Property Protection</td>
<td></td>
<td></td>
<td>0.845</td>
</tr>
<tr>
<td>rd3</td>
<td>Judicial System Efficiency</td>
<td></td>
<td></td>
<td>0.856</td>
</tr>
<tr>
<td>rd4</td>
<td>Fiscal Policy (Debt)</td>
<td></td>
<td></td>
<td>0.899</td>
</tr>
<tr>
<td>rd5</td>
<td>Fiscal Policy (Inflation)</td>
<td></td>
<td></td>
<td>0.678</td>
</tr>
<tr>
<td>Normative distance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nd1</td>
<td>Responsiveness to Economic Challenges</td>
<td>81.12 percent</td>
<td>68.45 percent</td>
<td>0.844</td>
</tr>
<tr>
<td>nd2</td>
<td>Bureaucratic Corruption*</td>
<td></td>
<td></td>
<td>0.799</td>
</tr>
<tr>
<td>nd3</td>
<td>Government Attitude toward Economic Realities</td>
<td></td>
<td></td>
<td>0.866</td>
</tr>
<tr>
<td>nd4</td>
<td>Transparency of Government to Citizens</td>
<td></td>
<td></td>
<td>0.743</td>
</tr>
<tr>
<td>nd5</td>
<td>Political Risk*</td>
<td></td>
<td></td>
<td>0.711</td>
</tr>
<tr>
<td>nd6</td>
<td>Bureaucratic Hindrance to Economic Development*</td>
<td></td>
<td></td>
<td>0.601</td>
</tr>
<tr>
<td>nd7</td>
<td>Independence of Local Authorities</td>
<td></td>
<td></td>
<td>0.555</td>
</tr>
<tr>
<td>Cultural-cognitive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cd1</td>
<td>Power Distance Index</td>
<td>72.30 percent</td>
<td>53.98 percent</td>
<td>0.843</td>
</tr>
<tr>
<td>cd2</td>
<td>Individualism versus Collectivism</td>
<td></td>
<td></td>
<td>0.566</td>
</tr>
<tr>
<td>cd3</td>
<td>Masculinity</td>
<td></td>
<td></td>
<td>0.544</td>
</tr>
<tr>
<td>cd4</td>
<td>Uncertainty Avoidance Index</td>
<td></td>
<td></td>
<td>0.921</td>
</tr>
</tbody>
</table>

*Reverse Scored.

---

2Informal investments, which include support from friends and family, have been found to be a major source of funding for early-stage entrepreneurial ventures (e.g., Bygrave et al. 2003). In 2002, informal funding to new firms in 37 countries was estimated at $298 billion, compared with $59 billion from formal VC investments (Reynolds et al. 2002).
include later stage mezzanine funding and bridge loans. The central characteristic of the investment is that it not be a secondary public market purchase. Finally, the BVCA and EVCA guidelines are quite similar and congruent with U.S. industry practices, and they represent the vast majority of private equity and VC providers for the United Kingdom and continental Europe, respectively. Thus to be included in the database, SDC Platinum requires no minimum or maximum amount of investment, only that the investment is not a public market purchase.

Control Variables
Several control variables are utilized to account for alternative explanations of the pattern of cross-border VC investments among European countries. Specifically, we use three country-level variables to control for the overall differences between countries in terms of economic growth, political regime, and overall business environment. We obtained information for these variables from the statistical office (Eurostat) of the European Union (EU), the International Monetary Fund, the World Bank, and the World Trade Organization.

GDP Change. Trends in international trade suggest that more developed countries are more likely to invest or trade with other more developed or wealthier countries (Direction of Trade Statistics Yearbook 2004). Therefore, we use the annual percentage change of the GDP of the target countries to account for the relative wealth of a country. GDP growth captures the overall economic improvement and wealth of a nation and allows us to control for this effect of economic wealth on cross-border VC investments.

Foreign Direct Investment (FDI) and Balance of Payment (BOP). BOP and the FDI figures signify the amount of international economic activities of a nation. These two variables are used in this study to control for the intensity of a country’s involvement in international trade and investments. Several studies have empirically demonstrated the importance of BOP and FDI to economic growth, suggesting its potential to influence venture investment flows (e.g., Bengoa and Sanchez-Robles 2003; Borensztein, De Gregorio, and Lee 1998).

Political Regime. Within the European community, there is diversity in the political regime among the countries, especially given the changes occurring in the eastern European nations since the fall of the communist bloc. Political regimes impact the forms and patterns of investment strategies exercised by individuals and organizations (Hyder and Abraha 2006). For example, a democratic government has been linked with higher level of foreign investments, whereas postcommunist regimes are less attractive locations for foreign investments (Jensen 2003). Therefore, we include a variable to control for the effect of political regimes on VC investment patterns of a country during the period of study. This variable is dichotomous where “1” indicates that the country was formally a communist country and “0” indicates that the country was not formally under a communist political regime.

By way of summary, Table 2 offers a list of all the variables used in the study and their respective definitions.

Research Method and Analysis
The European economic environment experienced a great deal of institutional change during our time frame (1996–2005) in terms of markets, institutions, and laws (Direction of Trade Statistics Yearbook 2004; Manigart et al. 2000; Wright, Pruthi, and Lockett 2005). Given that we are examining the VC flows to the same 16 countries over a period of 10 years, the data are characterized by repeated measures both in terms of year and in terms of countries. When data are collected on the same set of subjects over a period of time, observations are expected to be correlated and have nonconstant variance (Johnson and Wichern 2002). These observations consequently can result in spurious results due to violations of ordinary least squares (OLS) regression assumptions (Beck and Katz 1995).

Because of repeated observations on years and countries, we employed a linear mixed model design. Linear mixed models expand the general linear model so that data are permitted to exhibit correlated and nonconstant variability in error terms using parsimonious covariance structures, without the limiting assumption of sphericity of the covariance matrix and resulting necessary corrections (West, Welch, and Galecki 2007, p. 3). In other words, the mixed linear model provides the flexibility of modeling not only the means of the data but also their variances and covariances.

The mixed linear model we use in our analyses is a version of a multilevel linear model.
random coefficient model (Bliese and Ployhart 2002; Ployhart, Holtz, and Bliese 2002), or hierarchical linear model (Bryk and Raudenbush 1992). We use a general linear mixed model in order to deal with violations of independence and constant variance that tend to inflate standard errors (Krull and MacKinnon 2001). This is accomplished by specifically modeling the heteroscedasticity and autocorrelation among error terms. We chose an autoregressive error covariance structure because we expected the error covariances to decline over time, such that the error terms in observations occurring in near time periods were expected to covary more than observations occurring in distant time periods. Although the autoregressive structure is “strict” (Singer and Willett 2003, p. 262), it significantly improved our model’s fit more so than the compound symmetry, heterogeneous compound symmetry, or Toeplitz covariance structures.

**Results**

Table 3 contains the correlations between variables, whereas Table 4 contains the results of the mixed models. The first model in Table 4 contains only the control variables utilized in the analysis; here, change in GDP \((b = 0.009, p < .10)\) show a significant impact on VC flows \((-2\text{log L} = 42906, p < .05)\).

In Model 2, we tested H1, which predicted a negative relationship between regulatory distance countries and cross-border VC
investments. H1 was not supported given the nonsignificant beta coefficient, suggesting that countries with dissimilar regulatory environments are not related to cross-border VC investments. In Model 3, we tested our second hypothesis, which predicted a negative relationship between normative distance and cross-border VC investments. The results in Model 3 support H2, as we found a statistically significant, negative relationship between normative distance and cross-border VC investments ($\beta = -0.434, p < .05$). Thus, it appears countries with dissimilar normative environments are associated with lower levels of cross-border VC investments. Model 4 provides support for H3, which argued that cultural-cognitive distance between countries would be negatively related to cross-border VC investments ($\beta = -0.117, p < .001$). Finally, we combined all three distance measures in a single model to predict cross-border VC investments. The empirical results from Models 2, 3, and 4 were further

<table>
<thead>
<tr>
<th>Variable</th>
<th>$M$</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>653.291</td>
<td>690.319</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOP</td>
<td>−0.36</td>
<td>5.814</td>
<td>−0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FDI</td>
<td>26.688</td>
<td>35.151</td>
<td>−0.62</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political regime</td>
<td>0.004</td>
<td>0.066</td>
<td>−0.06</td>
<td>0.01</td>
<td>0.05</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulatory distance</td>
<td>0.988</td>
<td>1.324</td>
<td>−0.02</td>
<td>0.001</td>
<td>0.12</td>
<td>−0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative distance</td>
<td>1.551</td>
<td>1.551</td>
<td>0.13</td>
<td>0.05</td>
<td>−0.03</td>
<td>−0.04</td>
<td>0.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural-cognitive distance</td>
<td>0.1391</td>
<td>1.142</td>
<td>−0.14</td>
<td>0.06</td>
<td>0.04</td>
<td>0.11</td>
<td>0.13</td>
<td>−0.05</td>
<td></td>
</tr>
<tr>
<td>Cross-border inflows</td>
<td>0.047</td>
<td>0.101</td>
<td>0.13</td>
<td>0.06</td>
<td>−0.05</td>
<td>0.04</td>
<td>−0.03</td>
<td>0.14</td>
<td>−0.15</td>
</tr>
</tbody>
</table>

*Correlations greater than 0.14 or less −0.14 are significant at the $p < .01$ level.

*bCorrelations greater than 0.11 or less than −0.11 are significant at the $p < .05$ level.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Controls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>0.147†</td>
<td>0.1526†</td>
<td>0.2142†</td>
<td>0.3854†</td>
<td>0.4191†</td>
</tr>
<tr>
<td>GDP change</td>
<td>0.009†</td>
<td>0.0092†</td>
<td>0.0092†</td>
<td>0.0089†</td>
<td>0.0098†</td>
</tr>
<tr>
<td>BOP</td>
<td>0.002</td>
<td>0.0015</td>
<td>0.0020</td>
<td>0.0018</td>
<td>0.0017</td>
</tr>
<tr>
<td>FDI</td>
<td>−0.001</td>
<td>−0.0005</td>
<td>−0.0011</td>
<td>−0.0006</td>
<td>0.0001</td>
</tr>
<tr>
<td>Political regime</td>
<td>−0.096</td>
<td>−0.1038</td>
<td>−0.1236</td>
<td>0.1253</td>
<td>0.0961</td>
</tr>
<tr>
<td>Hypothesized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: regulatory distance</td>
<td>0.0076</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2: normative distance</td>
<td></td>
<td>−0.4342 *</td>
<td></td>
<td>−0.0228 *</td>
<td></td>
</tr>
<tr>
<td>H3: cultural-cognitive distance</td>
<td></td>
<td></td>
<td>−0.1171***</td>
<td>−0.1132***</td>
<td></td>
</tr>
<tr>
<td>−2log L</td>
<td>42906*</td>
<td>42905.2</td>
<td>42901.1*</td>
<td>42881.1***</td>
<td>42870.4*</td>
</tr>
</tbody>
</table>

†$p < .10$.
*$p < .05$.
**$p < .01$.
***$p < .001$. 

Table 4
Mixed Model Results
supported in the combined model (Model 5), in which we found that both normative and cultural distance reduce cross-border VC investment, whereas regulative distance had no significant effects on cross-border VC investment. Finally, given the large correlation between FDI and BOP, we ran all of our models with each variable removed. We found no appreciable differences in these models, such as changes in signs of significances.

Discussion

Our study makes a number of important contributions. First, our study contributes to research on institutional theory, particularly the burgeoning research on institutional distance. Recent work in this area has noted the importance of societal differences, and the challenges they impose, to entrepreneurship, international expansion strategies, and business competition (e.g., Eden and Miller 2004; Ghemawat 2001; Yong and Zahra 2012). Principally related to this study, Gaur et al. (Gaur et al. 2007; Gaur and Lu 2007) have demonstrated the importance of institutional distance to international strategies and subsidiary performance using a large sample of Japanese MNEs. Our study further contributes to this literature as it reveals the tendency of venture capitalists to invest in ventures founded in countries with similar normative and cultural environments. However, the regulative distance measure showed an insignificant relationship to VC investment levels. This suggests the need for more research to determine if the regulatory factors truly do not impact decisions, or if there are underlying contingencies involved. Additionally, a logical next step in this line of inquiry would be to examine if these variables were related to venture performance. Such a study might follow Gaur, Delios, and Singh's (2007) example, which demonstrated that in more institutionally distant countries, subsidiaries had higher rates of survival if the parent firms maintained higher levels of ownership.

On a broader level, our study demonstrates how each of the three institutional dimensions is distinct from the others, and future research should position these dimensions as such. In other words, our study supports the idea that the three dimensions can also be applied to institutional distance and that they have different and potentially divergent effects. Therefore, our findings suggest the need for more sophisticated studies if we are to better understand how these three dimensions contributed both independently and together to influence managerial decisions. For instance, approaching the institutional distance constructs from a configurations perspective may lend additional insight into these issues (Payne 2006; Short, Payne, and Ketchen 2008). Such a study could look at the three dimensions as an interrelated group rather than a single continuous distance variable.

Primarily, the present study contributes to the extensive research on venture capitalism, which is of growing concern to both researchers and practitioners worldwide. Research has theoretically argued for the importance of institutions to VC investing behaviors (e.g., Bruton, Fried, and Manigart 2005), and our study represents an important theoretically and empirical examination of this relationship. As such, the implications for venture capitalists, and entrepreneurs seeking VC funding, are extensive. Venture capitalists, when considering any investment, must evaluate the market potential of business ideas and assess the abilities of existing management to listen, accept, and enact the strategic directions offered by VC managers. Though evaluating the prospects of new ventures is never an easy process, an assessment may be particularly difficult when a foreign portfolio firm is based under different normative or cultural-cognitive institutional environments. Given the codified nature of regulative environments, they do not appear to be significant barriers for VC managers. Thus, the explicit nature of foreign laws may function to reduce reservations that VC managers have in their ability to fully enact venture strategies. As is the case for many firms attempting to conduct business in international markets, a degree of risk is present in the ongoing investments decision and monitoring activities of VC firms engaged in cross-border investments. As was reflected in the results of our second hypothesis, venture capitalists may perceive heightened levels of difficulty with enacting and implementing strategies when normative environments are very different from their own. This is similarly true for our results regarding the cultural-cognitive distance relationship to VC investments crossing borders, as stated in the third hypothesis. Here, we suggest that perceived differences between the investors and the entrepreneurial leadership of the target foreign new venture inhibit the VC funding decision. These findings support previous
research on MNEs and the need for specific knowledge about the local institutional environment in order to maximize the potential for success (e.g., Eriksson et al. 1997).

Our results regarding normative and cultural-cognitive differences indicate that venture capitalists are less willing to invest in portfolio firms within business environments that vary in terms of these institutions. These results are consistent with previous research on firm investment in foreign countries. For example, Xu and Shenkar (2002) found that firms had more difficulty implementing a global strategy when normative differences between the two countries were large. Similarly, researchers have suggested normative differences to be more important than cultural-cognitive or regulatory differences (e.g., Kostova 1999). Our findings, however, suggest that when evaluating the merits of a foreign portfolio firm, venture capitalists may perceive that normative and cultural differences simultaneously present deterrents to cross-border VC investments. Thus, just as larger MNEs may view normative and cultural distance as a challenge to overcome (Eden and Miller 2004), our findings suggest venture capitalists view these differences as significant barriers. Therefore, for venture capitalists investing in portfolio firms from distant institutional environments, the venture capitalist's unique experiences and network connections may be viewed as providing distinct knowledge resources (Kogut 2000) and inputs to the creation of firm capabilities (Kogut and Zander 1992) that are especially difficult to leverage in foreign markets. Proponents of the knowledge-based view argue that knowledge is the most significant strategic resource in determining sustainable competitive advantage (e.g., Conner 1991; Grant 1996; Spender 1996). Consequently, the venture capitalist likely represents a source of knowledge that can be combined with the strengths of young firms (e.g., new technologies, products, or processes) to produce sustainable competitive advantages when institutional differences are overcome. However, our results suggest that these knowledge resources are not easily transferable across national boundaries that represent significantly different institutional environments.

At its foundation, the normative institutional dimension measures the traditions upheld by a nation's government. When compared with the normative environments promoted in more advanced economies, this institutional dimension may reveal the extent to which some governments are lagging behind in adapting to global standards. With the continued progression of globalization, institutional barriers are continuously being lowered through various agreements for standardization across borders (e.g., EU and North American Free Trade Agreement). Institutional theory has been argued to suggest that normative institutions present the most difficult obstacle for foreign firms to understand (Kostova and Zaheer 1999). Our findings support this view but further suggest that differences in cultural-cognitive institutions are also especially important factors when considering VC investments.

Additionally, VC managers may perceive that, in contrast to the normative and cultural-cognitive environments, they can effectively manage differences in the regulative environment of the portfolio firm (Smirich and Stubart 1985). In the past, VC firms have enacted their environments through both financial and managerial appropriations. For example, Wright, Pruthi, and Lockett (2005, p. 145) noted the prevalence among European private equity investors to use “flexible financial contracting practices for negating the effect of informational asymmetries.” These complex financial procedures lay the foundation for VC firms to introduce and implement professional practices and new options for entry. Also, VC firms are likely to view the firm with the future in mind and enact the environment of the target firm. Hommel and Wright (2004) described the recruitment practices of VC firms in a foreign setting. As they noted from their study of German venture capitalists, the VC firm sought to recruit experienced foreign nationals to replace the existing management after removal. From this example, one can see that the VC firm is more assured of a positive outcome via its ability to enact its direct environment through such examples as dictating managerial positions as a form of firm control. However, as our study indicates, the nature of certain businesses may provide the basis to view distant regulative institutional environments as not presenting a significant barrier to outside investors. Specifically, regulative business traditions in foreign markets are generally tangible, transparent, and capable of being assessed; thereby, allowing the venture capitalist to incorporate controls to manage these differences.

Rather than viewing foreign environments from a singular environmental dimension, we
demonstrate that institutional pillars may vary in their ability to signal the attractiveness of foreign business opportunities. Given the institutional differences examined in this study and their impact on cross-border investment, how individual firms overcome these forces to increase the overall funding levels from investors remains to be answered. Though empirical examination of this question is beyond the scope of the current study, several factors could play a significant role in future VC cross-border investment. For instance, the continued progression of cross-border trading alliances could significantly impact these investments (e.g., Harbison and Pekar 1997). Ideally, these alliances would increase the venture capitalist’s understanding of the normative and cultural pressures on both home and host country, which may provide additional explanation of syndication frequency (Jääskeläinen, Maula, and Seppä 2006). Another possible stimulant for cross-border investment would be the continued progression of the global society to an interdependent business economy. Though this is a slow process for integration and acceptance, it seems that national cultures and normative business practices will converge over time. This transition in normative business practices and national culture suggests economic interaction and interdependence would play a long-term increase and growth of cross-border investments. Our research suggests that this process should increase cross-border VC investments and ultimately promote economic growth through entrepreneurial activities. Indeed, modern-day economic conditions have lead government officials to try to identify and encourage entrepreneurially stimulating activities, in which venture capitalism is situated as one of the key factors associated with entrepreneurial activity and economic growth (Bruining and Wright 2002; Kreft and Sobel 2005). Hence, the importance of this study to governmental policymakers is potentially high, particularly as it pertains to normative and cultural-cognitive institutional differences.

A final issue of future interest, as we alluded to previously, relates to taking the current study to a firm-level analysis, rather than country level. What are the specific characteristics of VC firms who actively participate in cross-border investment? Equally as important, are what factors that differentiate and predict those VC firms that are adept at taking advantage of institutionally distant firms and what firm-level characteristics enable VC firms to increase their ability to proactively exploit these opportunities? Each of these questions provides potential for contribution to this stream of research.

Though we find support for our general thesis that institutional differences impact the level of VC investment crossing international borders, as well as support for two of three hypotheses, the limitations of this study should be acknowledged. First, it is worthwhile to note that our study is limited to a select group of countries from the European community, which may reduce generalizability. Second, there is a general assumption made throughout this manuscript that increased flows of VC results in positive changes to the country’s level of entrepreneurial activity and economic development. Though previous research has supported this assumption (e.g., Bruining and Wright 2002; Kreft and Sobel 2005), this study does not explicitly test for the effects of VC flows on economic outcomes. Third, venture capitalists make decisions based on a number of interdependent factors of which the different dimensions of institutional distance represent only a part (cf. Drover, Wood, and Payne, 2013). Hence, this study is limited in that it only uses aggregate country-level institutional data and does not fully account for many other factors that may influence VC investment decisions.

**Conclusion**

Previous research has shown that VC investments help societies (i.e., communities, states, and nations) by creating economic growth, jobs, and opportunities for technological development (e.g., Gompers and Lerner 2001). Research generally demonstrates that venture-backed businesses grow faster, have higher productivity, and are more likely to go public than without venture backing (Wright and Robbie 1998). With these outcomes in mind, this study has explored the impact of regulatory, normative, and cultural-cognitive differences between countries on venture funding decisions and suggests how countries, and even individual organizations, seeking VC funding might improve the likelihood of investment flows across borders. Our results suggest that organizations and countries seeking external VC funding should seek to minimize normative and cognitive-cultural differences; regulative differences, on the other hand, do not appear to be significant impediments to cross-border investments.
References


MOORE ET AL. 497


Shenkar, O., Y. Luo, and O. Yeheskel (2008). “From Distant to Friction: Substituting...


