

Disclosure, Venture Capital and Entrepreneurial Spawning

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Abstract

Venture capital funds have been facing increasing regulatory scrutiny since the 2007 financial crisis, particularly in respect of calls for increased disclosure requirements. In this paper, we examine whether more stringent securities regulation helps or hinders the supply and performance of venture capital as well as new business creation (i.e., entrepreneurial spawning). Based on data from 34 countries over the years 1999-2008, we find more stringent regulation, in particular disclosure, has a positive impact on the supply and performance of venture capital around the world, and a positive impact on entrepreneurial spawning induced by venture capital.

Keywords: Venture capital; Spawning; Disclosure; Securities regulation

INTRODUCTION

“When a fight breaks out in a bar, you don’t hit the man who started it. You clobber the person you don’t like instead....” -- The Economist (19 November 2009)

One notable consequence of the financial crisis that began mid-2007 is the increasing regulatory scrutiny over alternative investment funds, including venture capital (VC) and private equity (PE) funds. The colorful Economist quote above highlights the fact that these investment funds may not have much to do with causing the financial crisis, but rather, that regulators have long since viewed the dearth of regulation of such funds to be deficient, and have used the financial crisis as a time to bring into play greater disclosure to this otherwise opaque asset class. Since the CalPERs lawsuit originated in California after the collapse of the Internet bubble in 2001, it has often been reported in the media that institutional investors in VC such as pension funds, or at least their beneficiaries, are at times less than happy with the scant disclosure in the industry. To date, however, while there has been much research on international differences in entrepreneurship and VC (Bowen & De Clerq, 2008; Coeurduroy & Murray, 2008; Wright et al., 2005; Zacharakis et al., 2007; Madhavan & Iriyama, 2009), there has not been much evidence about whether increasing disclosure would in fact benefit the VC industry, and if so, by exactly how much. The recent wave of regulatory scrutiny highlights the importance of filling this gap in the literature.

In this paper, we examine the impact of securities regulation on the supply of VC, the success of VC investments, and the role of such investments in inspiring the creation of new entrepreneurial ventures (“entrepreneurial spawning”; Gompers et al., 2005). Under the “law matters” view (La Porta et al., 1998, 2006), we would expect that securities regulation for public corporations has an impact on VC supply and success because many VC investors invest with the view towards turning a small private corporation into a public company (Black and Gilson, 1998; Allen et al., 2005), and therefore investors and entrepreneurs alike care about the regulation of newly publicly listed firms, even when they are private. As an example,

better disclosure laws facilitate the development of IPO markets (La Porta et al., 2006), thereby improving VC performance and the likelihood of entrepreneurial spawning. Under the “Coasian view” (e.g., Bergman & Nicolaievsky, 2007), sophisticated entrepreneurs and their investors and sponsors that create public companies can appropriately design their own disclosure in ways that overcome any impediments in regulatory structures, and as such, differences in disclosure regulation should not matter.

To test these competing hypotheses, we examine the complete Thompson Financial VentureXpert Database over the period from 1999 to 2008,¹ covering 34 countries. The data strongly indicate that differences in securities regulation, especially disclosure requirements, around the world have a positive impact on the supply and performance of VC. The intuition for this result is consistent with the notion that securities regulation enhances investor confidence. More generally, it is consistent with the notion that securities regulation facilitates the IPO market and the development of stock markets (La Porta et al., 2006). Securities regulation, even though its jurisdiction is limited to public markets, directly relates to VC since IPOs are central to this financing path (Black & Gilson, 1998; Gompers & Lerner, 1999).

As well, we match the VentureXpert Database with World Bank data on entrepreneurial start-ups around the world. The data strongly indicate that the impact of VC on entrepreneurial spawning around the world depends on the enforcement of securities laws, especially those governing disclosure. The intuition for this result is that successful VC-backed entrepreneurship has a positive externality in terms of facilitating, encouraging, training and supporting new entrepreneurial talent (Gompers et al., 2005). VC is more successful and plentiful in countries with better securities laws, and the transmission mechanism for VC to inspire new entrepreneurship is more visible and viable when investors trust that contracts will be enforced by either a public enforcer (e.g., the Securities Exchange Commission in the United States) or the court system in a nation. That said, policy changes that give rise to stricter securities laws do not by themselves work for entrepreneurial spawning; rather, securities laws facilitate entrepreneurial spawning only when they are coupled with more VC investment. In other words, neither VC or securities laws alone

facilitate entrepreneurial spawning – it is the combination of the two that encourages new business creation.

Though we find that all of the securities laws indices are relevant to the supply, demand, and performance of VC, disclosure stands out as having the most economically meaningful impact. This is important given the proposed change in regulation of VC and PE funds. The relative importance of disclosure in our findings casts doubt on the oft repeated rationale for a lack of disclosure in VC, that it would stifle entrepreneurship and VC returns as secrets are revealed to competitors and the public. This offers policy makers evidence that these securities laws can be enacted while enhancing VC markets as well as entrepreneurial spawning.

Our paper is related to several others in the literature. VC has been theoretically and empirically shown to be a value-added source of finance for high-growth entrepreneurial firms (Gompers & Lerner, 1999; Kanniainen & Keuschnigg, 2004; Fulghieri & Sevilir, 2009; Metrick & Yasuda, 2009; Sorensen, 2007). Lerner and Schoar (2005), Hazaruka et al. (2009), Cumming and Walz (2010) and others have examined the impact of legal indices from La Porta et al. (1998) on VC fundraising, exits and returns, among other things. Cumming and Johan (2009) have considered the impact of regulatory harmonization and increased disclosure on VC fundraising in The Netherlands, and found that improved disclosure would encourage more supply of VC. That evidence, however, was based on survey data from one country. Prior evidence has not systematically analyzed securities regulation around the world and its impact on the supply of VC. Further, while prior work has shown that securities regulation impacts IPO markets (La Porta et al., 2006), prior work has not considered the impact of securities regulation on VC markets. Finally, while prior work has examined the importance of VC to entrepreneurial spawning (Gompers et al., 2005), prior work has not considered international differences in VC-induced entrepreneurial spawning.

This paper is organized as follows. The first section considers the importance of securities regulation to VC markets and entrepreneurial spawning in international business. The second section presents the data and summary statistics. Empirical methods are described in the third section, and regression results are presented in the fourth section. Extensions and future research are discussed in the fifth section. Concluding remarks and policy implications follow in the last section.

SECURITIES LAWS AND VC-BACKED ENTREPRENEURSHIP

The Small Business Administration, based on data from the U.S. Dept. of Commerce, the Bureau of the Census and the International Trade Administration,² reports that small firms³ represent 99.7 percent of all employer firms. They employ just over half of all private sector employees and pay 44 percent of total U.S. private payroll. They have generated 64 percent of net new jobs over the past 15 years and create more than half of the nonfarm private gross domestic product (GDP). They made up 97.3 percent of all identified exporters and produced 30.2 percent of the known export value in fiscal year 2007. Further, they produce 13 times more patents per employee than large patenting firms; and these patents are twice as likely as large firm patents to be among the one percent most cited. Clearly these firms are important drivers of an economy and an important consideration for policy makers in the creation of regulation that might impact these businesses.

Extant literature has made clear the advantages that investment through VC affords its investees, i.e., entrepreneurs or portfolio companies. Beyond the obvious financial assistance, VCs often establish a managerial role that supports entrepreneurial firms through the pivotal early years. Gompers and Lerner (1999), Wright and Lockett (2003), Kannianen and Keuschnigg (2004), Jääskeläinen et al., (2006), and others establish that entrepreneurs actually find value in this comparative advantage and chose VC for this reason. Further, VC firms offer a source of larger amounts of cash in return for equity, which is a coveted form of financing for small firms (Frank & Goyal, 2003).

In view of the importance of the VC industry to entrepreneurship, and the highly volatile nature of the industry that might hurt entrepreneurial activity and investors alike, it is perhaps not surprising that there have been calls for greater regulation of VC and PE funds since the aftermath of the 2007 financial crisis. In 2009, the U.S. Senate and the Securities and Exchange Commission started discussions that may result in a mandate for “private equity and venture capital funds to register as investment advisors and be subject to greater disclosure requirements. The assets under management threshold being considered ranges from as low as \$30 million to as much as \$1 billion per manager.”⁴

Recent years have also seen large fluctuations in the number and amount of VC investments (Figure 1). According to PriceWaterhouse Coopers, in 2000, there were 1,156 different venture firms that made at least one new deal. In 2006, there were only 597 (a drop of 48%).⁵ While some VC firms are simply not actively investing, others are leaving the game altogether. Recent media coverage has suggested that VCs are retiring, going out of business, or merging with other VC firms. Based on data from the National Venture Capital Association, VC returns have been negative since the turn of the century (Kedrosky, 2009). Too much money chasing too few deals, imperfect foresight and long-term investments create boom and bust periods in the VC industry (Gompers & Lerner, 1999).

[Insert Figure 1 here]

Calls for greater disclosure requirements induce concerns by VCs. One concern is that VC fund disclosure would stifle entrepreneurship because secrets important to the success of VC-backed companies would be released into the public domain too early. Similarly, VCs fear that if disclosure is mandated, proprietary strategies and methods would be revealed to the public to the detriment of the VC fund. Another concern is that smaller VCs, which would disproportionately bear the costs of enhanced disclosure requirements, might cease to exist or be merged into larger VC firms with deeper pockets. Yet another concern is that the VCs that remain after a consolidation, creating a more concentrated version of

the industry, could suffer from moral hazard problems analogous to those in the “too big to fail” banks involved in the current economic crisis. Finally, there is concern based on the current state of regulation in the financial industry. Specifically, many believe that the United States has the most stringent regulations in the world. In fact, there is research that suggests that it is exactly this that makes the US competitively disadvantaged in the global market for listing venues. Regulation such as the Sarbanes-Oxley Act of 2002 (P.L. 107-204) (SOX), which was enacted to combat incentives of managers to misrepresent accounting information, increases the “costs” of doing business in the U.S., especially for small firms. In a time when VCs are increasingly considering international VC investment as a viable alternative, it is an important policy concern to consider the potential ramifications of enacting regulation mandating increased disclosure of VC. Given the importance of this form of financing coupled with the importance of small firms as the engine of growth to an economy, policy makers would be remiss if they overlooked the impact of securities regulation on the supply, demand (i.e., entrepreneurial spawning) and performance of VC.

Lerner and Schoar (2005), Hazaruka et al. (2009), Cumming and Walz (2010) and others present data that is consistent with the view that the level of legality in a country, even legality reflective of public markets, is influential on VC markets. This work has utilized legal indices from La Porta et al. (1998), including legal origin, rule of law, efficiency of the judiciary, and related indices. Prior work, however, has not directly considered how individual facets of securities laws, such as the widely regarded La Porta et al. (2006) securities laws indices, might impact VC markets.

There are two possible mechanisms through which securities regulation influences VC induced entrepreneurial spawning. First, better-developed public stock markets offer a primary channel linking disclosure standards to VC supply, performance, and entrepreneurial spawning. Better disclosure standards facilitate better developed public markets (La Porta et al., 2006), and better developed public markets in turn facilitate IPOs, thereby improving VC performance. Better developed stock markets give

rise to a higher likelihood of IPO exits because well developed stock markets provides incentives for increased entrepreneurial spawning. As Black and Gilson (1998) argue, entrepreneurs value control over their firms when firms go public rather than when their firms are sold to acquirers. The IPO exit provides entrepreneurs with incentives to work harder and commercialize their ideas by floating independent entrepreneurial startups. In turn, an increased likelihood of improved VC performance and entrepreneurial spawning both increase the supply of VC capital.

Second, the quality of public market disclosure can have a direct impact on VC funds and their limited partners' access to information from VC-backed entrepreneurial firms. Empirical evidence from Europe (Beuselinck et al., 2008) and the U.S. (Armstrong *et al.*, 2005; Hand, 2005) shows that the financial reporting of VC-backed firms is value-informative, and large sophisticated investors in VC funds may demand these financial reports. When a VC-backed company goes public, the company is required to report historical financial information (for five years prior to the IPO in countries with stringent disclosure requirements). Since going public is the main objective of VC-backed firms (Black & Gilson, 1998) and many entrepreneurs start with the intention of going public (Ueda & Frantzeskakis, 2007), it is natural to expect that VC funds and entrepreneurs follow IPO disclosure rules when they prepare their financial statements prior to going public. Prior work (Beiselinck et al., 2008; Cumming & Walz, 2010) shows disclosure in the VC setting closely follows disclosure for newly public firms, and the quality of this disclosure improves with stricter disclosure standards, thereby improving disclosure and strengthening the relationship between entrepreneurial firms, VC funds and their limited partners. Prior evidence has also shown in a more general setting that stronger regulations and accounting standards significantly and positively impact the quality of voluntary reporting across countries (Chen & Countenay, 2006). For example, stringent reporting standards discourage private and public firms from engaging in earnings management (Sloan, 1996; Xie, 2001). Therefore, we expect externalities from VC to new entrepreneurship to be influenced by the quality of securities regulation. Higher quality prospectus disclosure mitigates fraud and enables the impact of VC finance on entrepreneurial activity to be

enhanced. In other words, securities regulation magnifies the impact of VC induced entrepreneurial spawning.

Overall, therefore, cross-country differences in IPO disclosure regulation are expected to be highly correlated with VC disclosure and entrepreneurial firm disclosure. As such, we may expect a direct link between disclosure standards and VC-backed entrepreneurial spawning as disclosure facilitates more informed limited partners, VC fund managers and better trained and less opaque entrepreneurs, as postulated in H1. An important complementary component in the analysis of VC-induced spawning is that we expect securities regulation to explain the performance and supply of VC. Consistent with La Porta et al. (2006), we posit that VC exits are more likely to be IPOs than acquisitions or write-offs in countries with better securities regulation since better securities regulation facilitates the development of IPO markets, as stated in H2. Furthermore, institutional investors will commit more capital in countries with better securities regulation, and VC fund managers will invest that capital in entrepreneurial firms based in countries with better securities regulation with a view to exiting via IPO, as summarized in H3.

H1: *The impact of VC on entrepreneurial spawning is more pronounced in countries with stronger securities laws.*

H2: *Countries with stronger securities laws have a greater likelihood of VC-backed IPOs.*

H3: *Countries with stronger securities laws have a greater supply of VC.*

There are many dimensions on which one can measure the strength of securities laws. In this paper we make use of the widely regarded securities law indices from La Porta et al. (2006), which are defined in both the data section and the Appendix. The main variables of interest include *Supervisor*,

Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, and Private Enforcement. La Porta et al. (2006) explain that securities laws do not change frequently over time. For example, much of the relevant securities legislation relevant today in the US was set out in the Securities Act of 1933, albeit there were relevant changes with the introduction of SOX legislation in 2002 (which we consider in our empirical tests below). But there is little or no evidence from statements of legislative intent that SOX was introduced because of VCs or VC-induced entrepreneurial spawning. Rather, Senator Sarbanes himself stated the introduction of SOX was attributable to "... inadequate oversight of accountants, lack of auditor independence, weak corporate governance procedures, stock analysts' conflict of interests, inadequate disclosure provisions, and grossly inadequate funding of the Securities and Exchange Commission" (Lucas, 2004). As such, we believe it is reasonable to assume that VCs and VC-stimulated entrepreneurship does not cause changes in securities laws.

In our analyses we examine a lag-lead relationship between VC and entrepreneurship. That is, VC is lagged and causes increases in entrepreneurial activity in subsequent years. This view is consistent with many other VC papers, such as the recent example of Samila and Sorrensen (2010) which considers regional growth within the US. Indeed, it is probable that lagged entrepreneurship levels could cause subsequent levels of VC activity in a region, or that other factors such as market regulation affect both VC and entrepreneurship at the same time. In our empirical analyses below we assess in a simultaneous equation framework robustness associated with entrepreneurship and VC simultaneously determined, as well as include control variables for various factors that might affect both VC and entrepreneurship.

We test these three related propositions linking securities regulation, the development of IPO markets, the supply of venture capital and entrepreneurial spawning by creating and combining datasets that are introduced in the next section.

DATA

The data in the paper are collected from a number of sources. The VC and entrepreneurship characteristics are collected from VentureXpert. The sample term for this data is 1999 through 2008. This dataset spans 34 countries. There are 110,463 portfolio company (PC) / VC investment observations. Data on the number of new businesses in countries is collected from two sources: 1) the Global Entrepreneurship Monitor and 2) the World Bank Group Entrepreneurship Survey. The surveys cover years 2001-2008 and 2000-2007, respectively. For consistency, the data (as used in our analysis) spans the same 34 countries covered by the VentureXpert sample. Several macroeconomic variables are used as control variables and are collected for the relevant terms of the sample.

Entrepreneurs' and VCs' characteristics

Some VCs are just more knowledgeable than others due to experience and their gained skill set, leading to implications on PC current status. To control for this, we include a proxy for VC skill: *Expertise*.⁶ The number of funds a VC has successfully raised derives this proxy. This proxy implicitly assumes the retention of VC management. This assumption should not be problematic as long as VC firms are able to hire similarly talented executives to lead their firms. Where the number of successfully-raised funds is missing, it is assumed that the fund is the first in sequence. Expertise also serves to control for VC grandstanding, which was brought to light by Gompers and Lerner (1996). Lastly, expertise serves to proxy the affiliation that is offered the PC. As the VC becomes larger and attains more clout in the industry, it will be able to offer its PCs more management expertise, financial assistance, and certification in the ultimate exit strategy (Megginson & Weiss, 1991; Hsu, 2004; Kannianen & Keuschnigg, 2004).

Prefer to Originate is included to control for the VC's preferred role in a syndication and its influence on PC exit (Cumming & Johan, 2009). According to Gompers and Lerner (1999), "Syndicating

first-round venture investments may lead to better decisions about whether to invest in firms.” This implies that VCs that lead (or even participate in) a syndication will invest in higher quality PCs and the resulting probability of exit should be higher. Related to this but acknowledging that the size of VC networks has an impact on PC performance (Hsu, 2004; Hochbert et al. 2007), we include a variable for the size of the *VC syndicate*.⁷ *Corporate VC* is a dummy variable that indicates whether a VC is corporate or not. It is included to control for VC fund characteristics and follows Cumming and Johan (2009).

A dummy variable for the riskiest stage of the entrepreneurial life cycle – *Early Stage* - is included. Gompers and Lerner (1999) explain that investment at certain stages entails more risk, and Knill (2009) explains that investment in these stages, accordingly, offers more opportunity (for diversification) than others. Similarly, there are some industries that are riskier than others. As such we include dummy variables for each industry as identified by VentureXpert.

Specifics about the VC/PC investment relationship are also obtained. They are: 1) *Investment Term*, 2) *Years Since Last Inv*, 3) *Portfolio Size per Manager*, and 4) *Industry Market-to-Book*. *Investment Term* and *Years Since Last Inv* are included to control for the average term of investment. It is more likely that a firm would have exited the VC cycle if the term is longer or if the last investment occurred less recently. *Portfolio Size per Manager* accounts for the number of companies that each manager must oversee. *Industry Market-to-Book* is included to control for any cyclical impact regarding the industry. This is included based on several papers in the area including Gompers and Lerner (1999) and Cumming and Johan (2009).

Macroeconomic variables

In order to determine if the supply of VC and certain characteristics of securities laws impact innovation, we use aggregate measures of new firms: *New Businesses* and *New Businesses/GDP per*

capita. The former is the measure provided by the Global Entrepreneurship Monitor and the World Bank Entrepreneurship Survey and the latter is the first variable scaled by a proxy of the size of the public market: GDP per capita. Macroeconomic variables such as *Market Capitalization*, *Market Return*, *GDP per capita*, *Domestic Credit*, and *Hot* are included to control for the general state of the VC industry and the market. *Market capitalization*, *Market Return* and *GDP per capita* are included to control for general market/economic conditions. These variables will likely pick up the countercyclical nature of the VC industry (Cumming & Johan, 2009). *Hot* is to control for the “hotness” of the IPO market, which could impact the likelihood that a firm goes public. *Domestic credit* is included to control for the likelihood that a firm will be able to access bank credit, a significant source of capital for entrepreneurial firms. Following studies such as Cumming and Johan (2009), we include time dummies to account for the increased probability of exit during the IT bubble period (1998-2000).

In order to determine if securities laws impact the supply of VC, we use aggregated data from VentureXpert. Specifically, we use 1) *Number of VC Deals*, 2) *Number of VC Firms*, 3) *Sum of Equity*, and 4) *Sum of Deal Value*. The *Number of VC Deals* proxies the level of VC activity in a nation in a given year. The *Number of VC Firms* offers a proxy for the number of VCs available for investment. The *Sum of Equity* provides a proxy for the amount of investment capital that is at work. The *Sum of Deal Value* measures the VC activity, this time in dollar terms.

Characteristics of securities laws

Securities laws regulating capital issuance in public markets fall into two broad categories: *public enforcement* and *private enforcement*.⁸ *Private Enforcement* is calculated in the La Porta et al. (2006) dataset by combining indexes of *disclosure* and *liability*. The *disclosure index* covers five distinct areas: (1) insiders compensation; (2) ownership by large shareholders; (3) inside ownership; (4) contracts outside the normal course of business; and (5) transactions with related parties. The *liability index* is the

average of four levels of accountability in the issuance of stock. These levels of accountability summarize the burden of proof for the issuer of the stock, the company directory, the distributor, and the accountant.

Public Enforcement regulates the supervisory behavior of the main regulatory government authority in charge of the stock market. Public Enforcement is calculated by combining the following four sub indexes: (1) *supervisory index*; (2) *investigative powers index*; (3) *non-criminal sanctions (orders) index*, and (4) *criminal sanctions index*. The *supervisor index* is assessed on its independence from the central government and whether all hirings and firings are given due process, whether the supervisor only regulates stock markets and not banks too, and if the supervisor has the authority to regulate primary offerings and listings on the stock market. The *investigative index* assesses whether the supervisor can subpoena documents and witnesses. The *orders index* involves non-criminal sanctions for violations of disclosure standards, such as compensating investors for losses, or instituting recommendations of the supervisor. The orders can be given to the issuer, distributor or accountant. Finally, the *criminal index* is a measure of the supervisor's ability to impose criminal sanctions against the director, distributor, issuer and accountant.

As in the literature concerning securities laws, we include proxies for the general efficiency of the judicial process – judicial efficiency and the level of rights for shareholders – Anti-director Rights (i.e., from Djankov et al., 2008; Spamann, 2010).

Data characteristics

Table 1 includes summary statistics for all of the variables used in the analyses. Panel A describes some of the attributes of the investments in our entrepreneur sample. The average investment term of the PCs in the sample is about 4 years, which reflects the long-term nature of VC investments. Approximately 16% of the VCs in the sample prefer to originate in syndications and approximately 6%

are corporate VCs. The average VC is fairly conservative, as evidence by the low proportion (i.e., only 11%) of VCs that invest in early stage PCs. The median number of VC deals and firms per country is 62 and 9, respectively. The median Sum of Equity and Deal Value per country are on average \$232.48MM and \$759.09MM, respectively.

The country-level data gives us an idea of the investment environment of the countries included in our analysis. The mean along with the standard deviation of our variables suggests that there is a wide range of securities laws characteristics in our sample with the average generally around the midpoint of 0.5. Just under half (41%) of the sample comprises common law countries.

[Insert Table 1 here]

Table 2 contains the pairwise correlations of the variables used in each analysis separately. There are really only two concerns with regard to multicollinearity. Not surprisingly, they are among the macroeconomic variables: domestic credit and GDP per capita. We feel that both are important in the analysis based on their inclusion in extent literature however so we orthogonalize these variables so that these correlations do not hinder the analysis. For robustness we retest the analyses excluding either variable to ensure that the results are not spurious based on their inclusion. Results remain and are available upon request. All other high correlations seen in Table 2 are among variables that are not used in the same specifications.

[Insert Table 2 here]

Table 3 provides us a snapshot of the supply of VC in the countries covered by our analysis. There is a wide range of VC deals: from a low of 3 in Mexico to a high of 6,042 in the United States. The number of VC firms likewise has a wide range: from a low of 1 in Argentina, Turkey and Mexico to a high of 461 in the United States. Looking at the averages across the groups of legal origin, it is obvious

that nations with British (Common) Legal Origin see the highest levels of VC supply. Given that papers such as La Porta et al. (1998) suggest that countries with English Legal Origin have stronger protection for investors, we might infer that it is these protections that allow for the superior levels of VC supply. The higher levels of both public and private enforcement (La Porta et al., 2006) suggest the same. This implication foreshadows our main result.

[Insert Table 3 here]

In Table 4, we provide univariate comparison tests that provide us with a feel for how the legal variables impact entrepreneurial firms and the supply of VC before we begin the formal analysis. Looking first to Panel A, we examine the impact of securities laws on the number of new businesses and the ratio of new businesses to a proxy for the size of the nation (i.e., New Businesses / GDP per capita). The left half of the table uses data from the Global Entrepreneurship Monitor. The right half of the table uses data from The World Bank Entrepreneurship Survey. Overall, the data from both sources show support for the hypotheses set forth above – countries with levels of securities laws enforcement greater than the median experience significantly higher number of new businesses, even after scaling that number of businesses by GDP per capita, which is consistent with H1. Clearly, data from the World Bank Entrepreneurship Survey has weaker results, but there exists some evidence that enhanced entrepreneurial spawning coincide with higher levels of securities laws enforcement. It is possible that this relationship is more complex than the univariate setting considers. We include interactive variables in the multivariate analysis to evaluate a more comprehensive impact of securities laws on entrepreneurial spawning. Specifically, we can see whether VC financing plays a role in the impact of securities laws on entrepreneurial spawning.

It is clear in Panel B that the level of securities laws governing public firms has quite an effect on the current status of the entrepreneurial firm. Proof of this effect is seen in the widespread statistical significance of the difference test statistics.⁹ The results suggest that PCs in countries with higher levels

of securities laws regulation have a higher probability of going out of business. This is reflected in the statistically significant positive difference test statistics for the proportion of firms that go defunct. The results also suggest that a higher level of securities laws enforcement increases both the probability that an entrepreneurial firm will exit via IPO and M&A. According to and Cumming and MacIntosh (2003), Fleming (2004), and Schwiendbacher (2008), among others, IPOs are a superior exit to M&As, so to the extent that the probability of the PC exiting via IPO is stronger than M&A, we can say that securities laws enforcement encourages superior exit route, as postulated in H2. In the univariate analysis, it is difficult to tell which impact is stronger so we wait until the multivariate analysis to comment on this further. What we can say is that strong securities laws enforcement seems to facilitate efficiency in the entrepreneurial process. To see this, we can look at securities laws governing disclosure. The stronger the enforcement of disclosure, the quicker the “type” of PC is revealed. That is, the PCs that are of inferior quality fail sooner allowing for other, higher quality PCs to enter the market.

Panel C shows the impact of securities laws characteristics on VC supply to test H3. Results of these difference-in-means tests suggest that more stringent securities laws enforcement actually increases the supply of VC. Difference test statistics for all aspects of securities laws enforcement save one are statistically significant and positive. The aspect that does not fall in line with the other characteristics of securities laws is criminal. Overall, these results strongly support the notion that securities laws enhance the supply of VC.

Comprehensively, these univariate analyses strongly suggest that it is beneficial for policy makers to impose laws that strictly enforce securities contracts. This benefit is seen in a statistically significant increase in entrepreneurial spawning (H1), an increase in the efficiency of the entrepreneurial process (H2), and an increase in the supply of VC (H3), an important source of financing for many nations. Full results may be found in Table 4.

[Insert Table 4 here]

REGRESSION METHODS

Our empirical analysis proceeds in three sequential steps. First, we consider the impact of securities laws on the relation between VC and new business creation, or entrepreneurial spawning. Second, we consider whether securities laws affect the performance of VC investments in terms of exit outcomes. Third, we consider whether securities regulation influences the amount of VC investment.

To examine whether VC has an impact on entrepreneurial spawning (H1), we perform the following regression:

$$Spawning_{k,t} = \varphi + \lambda_0 Y_{k,t-1} + \lambda_1 SupplyVC_{k,t-1} + \lambda_2 SecuritiesLaws_k + \lambda_3 (SupplyVC_{k,t-1} * SecuritiesLaws_k) + \varepsilon_k, \quad (1)$$

where $Spawning_{k,t}$ is a proxy of the number of start-ups (private firms) in country k at time t . We consider and explicitly report alternative definitions of this dependent variable where we scale the number of new businesses by GDP per capita (other scaling measures are available on request). As discussed in the second section above, we expect a positive coefficient on λ_3 if better securities laws encourage higher quality and more reputable VC, thereby giving rise to more effective coaching of new entrepreneurs, and inducing more effective spawning of new entrepreneurial ventures.¹⁰ We cluster our standard error by country. Our analyses of equation (1) are based on country-level data from the World Bank that is matched with the VentureXpert data.

Y is a vector of macroeconomic variables to control for characteristics of the funding market in country k at time $t-1$ such as *Expertise*, which is the average level of VC expertise in a nation, *VC Syndicate Size*, which is the average size of a VC syndicate in a nation, *Market Cap*, which is a proxy for the size of the market in a nation, *Market Return*, which is the return on the most comprehensive stock

market index, *GDP per capita*, which is the natural log of gross domestic product per capita (regressions with GDP in levels yielded nearly identical results and are therefore not reported), *Hot*, which is a proxy for the “hotness” of the IPO market, *Domestic Credit*, which is a proxy for the size of the banking sector, *Number of Deals*, which is a proxy for the VC activity in a nation, *Judiciary Efficiency*, which is an index measuring the efficacy of the court system in a nation, and *Anti-director Rights*, which is an index measuring shareholder rights (see the Appendix for formal definitions).¹¹

SecuritiesLaws_k is a proxy for the level of protection that is afforded shareholders when investing in a firm in country *k*. *SecuritiesLaws* are the variables of interest, which encompass *Supervisor*, *Investigative*, *Orders*, *Criminal*, *Public Enforcement*, *Disclosure*, *Burden of Proof*, and *Private Enforcement* (La Porta et al., 2006). The proxies that are used can be categorized as public or private enforcement. The former comprises four components: the independence of a supervisor such as the Securities Exchange Commission in the United States, the investigative powers of the supervisor, and the power of the regulator to impose both criminal and non-criminal sanctions on violators of the law. The latter describes the ability of shareholders to sue for civil injury in the court system and reflects the mandated disclosure as well as the burden of proof faced by the shareholder. As these variables are highly correlated, they are not included within the same regression, but instead are analyzed separately in different regressions to assess robustness. We expect to see a positive and statistically significant sign on λ_2 (or if it is negative, the magnitude to be such that the comprehensive effect on securities laws is positive).

To consider whether securities laws affect the performance of VC investments (H2), we run the following regression on data at the PC/VC relationship level.

$$\Pr(\text{CurrentStatus}_j) = \Psi(\alpha + \beta_0 \text{Inv}_{ij} + \beta_1 X_i + \beta_2 I_j + \beta_3 Y_k + \beta_4 \text{SecuritiesLaws}_k), \quad (2)$$

where Ψ is the cumulative logistic probability distribution function. Current Status is the current status of the PC: Public, Subsidiary, or Defunct. The base specification is Public Status = Private. $Inv_{i,j}$ is a vector of investment-specific data (between VC_i and PC_j) such as: the term of the investment (*Investment Term*), how long it has been since the last VC firm investment (*Yrs Since Last Inv*), the number of investments each manager at the VC firm manages (*Portfolio Size/Mgr*), and the market-to-book value of the PC's industry (*Industry M/B*). X_i is a vector of VC characteristics including whether the VC is corporate or not (*Corporate VC*), the number of successful funds the VC has raised (*Expertise*) as well as the size of the VC syndicate (*VC Syndicate Size*), and whether or not the VC invests in early stage entrepreneurship (*Early Stage*) and whether or not the VC prefers to originate in a syndication relationship (*Prefer to Originate*). I_j is an indicator variable for the industry of the portfolio firm. Y_k is a vector of macroeconomic variables as defined in equation 1 (with the exception of expertise and syndicate size, which are no longer aggregated and included above). *Securities Laws_k* is also defined as in equation 1. Robust errors are clustered around PC to control for firm effects.

To assess the robustness of our analysis of exited investments to sample selection issues, we ran two-step Heckman regressions whereby in the first step we predicted the probability of an exit and then in the second step examined the exit outcome. The results were not materially different relative to those reported explicitly below. These and other related tests are available on request.

To examine the impact of existing securities laws that govern public markets on VC supply (H3), we perform the following ordinary least squares regression on country-level data:

$$SupplyVCs_{k,t} = \varphi + \lambda_0 Y_{k,t-1} + \lambda_1 SecuritiesLaws_k + \varepsilon_k, \quad (3)$$

SupplyVCs is measured with different proxies that include the *Number of VC deals*, the *Number of VC firms*, the *Sum of the dollar value of Equity* invested by VCs, and the *Sum of the Deal Value* invested by VCs in country k at time t. In our empirical analyses we considered scaling this variable by country size

(GDP per capita) and found the results of interest to be robust; therefore, we do not explicitly report them in the tables below. We include country-level control variables in the regressions and cluster standard errors by country.¹² Alternative specifications are available on request.

In all of our regression results below, we present analyses with U.S. observations included in the sample. We have rerun regressions excluding the U.S. and the results are similar such that our conclusions pertaining to the role of securities laws in VC and entrepreneurial spawning are not materially different. Similarly, excluding other countries or different scaling measures did not affect our results. Alternative specifications are available on request.

REGRESSION RESULTS

Table 5 reports regression results for the impact of securities laws on venture-capital entrepreneurial spawning. The data are strongly supportive of the view that the quality of securities laws facilitates entrepreneurial spawning, consistent with H1. Panels A and B use the data from Global Entrepreneurship Monitor. The results of this analysis reveal the pivotal nature of VC in the impact of securities laws enforcement on entrepreneurial spawning. The negative main effect on securities laws suggests that with zero VC, securities laws enforcement would actually hinder entrepreneurial spawning. This is not particularly meaningful since there does not exist such an instance in the data. Still it highlights the importance of VC in the impact. Indeed, it is only once we consider the level of VC that we see a positive impact. For all securities laws proxies, we see that when VC activity is low (i.e., the *Number of Deals* is equal to the sample mean minus the standard deviation), there is actually a negative comprehensive effect – on average, it is a reduction in new businesses of 8,073. For the average level of venture activity in the sample, the cumulative impact of securities laws is positive; there is an increase in new businesses of 4,277. In countries that have superior levels of VC activity (i.e., the *Number of Deals* is

equal to the sample mean plus the standard deviation), the average cumulative impact is even more striking – improving securities laws enforcement by one point increases entrepreneurial spawning by 16,626 firms.

[Insert Table 5 here]

Many of the control variables in Table 5 are statistically insignificant, albeit with a couple of exceptions. The data show that the availability of *Domestic Credit* inspires the creation of new firms, consistent with many other papers in the literature on international differences in start-ups. The marginal effect of the *Number of Deals* is statistically significantly negative in some specifications and statistically significantly positive in others. This, once again, is not very meaningful since it is interpreted as the impact of the *Number of Deals* on entrepreneurial spawning in an environment where there is absolutely no securities regulation (i.e., Securities Laws = 0). Such an instance does not exist in our sample. The true impact is seen only once we include both the direct and interactive effect, and it is such that the more securities laws a nation has, the more VC activity will inspire entrepreneurial spawning. This once again is consistent with La Porta et al. (1998) and the implications set forth in the motivation of this paper.

Panels C and D of Table 5 test the impacts of securities laws on the data collected in the World Bank Entrepreneurship Survey. Though the results of the analysis using this data is not as impressive, there is statistical significance of at least 10% for all but three of the interactive terms in these specifications in Panel C. We note that the negative impact of the direct effect of securities laws (where *Number of Deals* = 0) is no longer statistically significant in the majority of the specifications. This highlights the relative importance of the interactive term. *Criminal*, which was statistically insignificant in Panels A and B, remains insignificant in Panel C. Also statistically insignificant is *Supervisor* and *Orders*. All other securities laws indices retain statistical significance and confirm the results found using the Global Entrepreneurship Monitor data.

Once we scale the number of businesses by *GDP per capita*, statistical significance is less than impressive. Indeed, Panel D shows only three indices that retain statistical significance – they are those that pertain to private enforcement of securities laws. Since *Disclosure* is the securities laws index most noteworthy in this study (given all of the calls for increased disclosure in the U.S. and abroad), it is definitely comforting to see statistical significance for this specification.

Collectively, this table suggests that strong securities laws – especially *Disclosure* – encourage entrepreneurial spawning. Regardless of the data used, there are statistically significant positive impacts of securities laws.¹³ Importantly, these results cast doubt on the suggestion that strong disclosure requirements would discourage entrepreneurs from starting firms. Further, these results highlight the pivotal nature of VC in bringing these firms to the public market. Clearly, the existence of a thriving VC industry is vital in encouraging new business formation. This cannot be overemphasized in economic recessions, since as pointed out earlier, small firms comprise the vast majority of businesses in an economy and are clearly the drivers for hiring. These results underscore the importance of the impact of securities laws on the supply of VC. This analysis is displayed in Table 7, which is discussed below. We first analyze the impact of securities regulation on the performance of VC.

Table 6 takes the entrepreneurial spawning analysis one step further to look at the relative importance of the supply of VC in entrepreneurial spawning. Given the findings in Table 5 that securities laws encourage the spawning of new businesses in the presence of VC, can we say that VC activity is more than other factors? Table 6 shows the results of this analysis with regard to two factors: *VC Expertise* and the *Efficiency of the Judiciary*. The former is included based on papers like Megginson and Weis (1991) and Hsu (2004), who claim that entrepreneurs pay for VC affiliation. The latter is included to address the fact that investors are more likely to invest when the court system in a nation is efficient (La Porta et al., 1998).

[Insert Table 6 here]

Panel A shows the importance of the level of VC activity relative to *VC Expertise* (and affiliation). These results suggest that the level of VC activity is much more important than the actual expertise of the venture capitalists, themselves. In fact, there are no specifications that show statistical significance for this variable. It should be noted that *Expertise* is aggregated in these specifications, but given the complete lack of statistical significance in these regressions, it is unlikely that its importance is greater than the level of VC activity. Panel B examines the importance of VC activity relative to the *Efficiency of the Judiciary*. Once again, there are no specifications where the interactive term including *Judicial Efficiency* is statistically significant. Relatively speaking, VC activity is clearly the winner in these horse races.

Collectively, these results suggest that the level of VC activity is not only important in the impact of securities laws on entrepreneurial spawning, it is more important than the expertise of VCs, which has been found to be a very important factor to entrepreneurs, or the efficiency of the court system in a nation, which has been found to be an important consideration in whether investors are willing to invest in riskier firms.

Table 7 reports regression results for the impact of securities laws on the performance of VC backed firms. The majority of the securities regulations improve the probability of an IPO exit, the majority of these effects significant at the 1% level. Consistent with the work of La Porta et al. (2006), the economic significance of disclosure is the most influential. Its economic significance is such that a one-point improvement in the *Disclosure index* increases the probability of an IPO by 15.5%, which strongly supports H2. A close second is *Private Enforcement*, which isn't surprising since it is an arithmetic average of disclosure and burden of proof. Note that there is some evidence, albeit weaker, that stronger securities laws increase the probability of write-off exits. The intuition for this latter result is that VCs are less likely to sell their weakest PCs to other investors by way of hiding information or fraud where

disclosure standards are higher; rather, they have stronger incentives to exit those weakest PCs by writing them off when securities regulations are stricter.

[Insert Table 7 here]

The control variables in Table 7 are significant in ways that are consistent with prior work on VC exits. Perhaps most importantly, *Expertise* is significantly positively related to IPOs, consistent with the view that VC is value-added active investment that depends on the quality of the fund manager (Gompers & Lerner, 1999; Kannianen & Keuschnigg, 2004; Nahata, 2008). *Risk* is negatively associated with IPOs (albeit statistically insignificantly), while *Industry Market/Book* is positively associated with IPOs, as would be expected. *Domestic Credit* is positively correlated with acquisitions and write-offs, but negatively associated with IPOs, which possibly reflects the use of leverage in acquisitions, and leverage causing liquidations. Various other control variables are significant in the exit outcomes regressions, but in general, their inclusion or exclusion does not materially impact the securities regulation variables. Overall, the data are consistent with the view that disclosure, as well as other regulatory enforcement variables, improves VC backed IPO exit markets, consistent with H2.

Regression results for the supply of VC in equation (3) are presented in Table 8. The data indicate the supply of VC, regardless of how it is measured, is significantly positively associated with the quality of securities regulation in a country. This new and central result is robust to a number of control variables explicitly reported and otherwise.¹⁴ The effect is statistically significant and robust across each of the four alternative dependent variables for securities laws, measured by the indices for *Supervisor*, *Investigative*, *Orders*, *Public Enforcement*, *Disclosure*, and *Private Enforcement*. *Burden of Proof* is significantly positively related to one of the four dependent variables in Table 8 (*Number of Deals*). The economic significance is such that a one-point improvement in a securities law index such as *Private Enforcement* gives rise to an additional 20.17 VC deals, 7.08 VC firms, \$US77.17 million equity

invested by VCs, and \$US31.44 million in VC deal value per year. Recall that the median country in the data has roughly 62 VC deals per year, 9 VC funds, and the median VC fund holds \$232 million and deal values total on average \$759 million in a country-year in the data (see Table 2), the economic significance of these effects is quite large. Overall, this provides strong support for H3.

[Insert Table 8 Here]

The control variables in Table 8 show that the supply of VC is marginally positively associated with IPO markets (*Hot*), and significantly positively associated with *Market Capitalization* and *GDP per capita*. The strength of a country's *Market Returns* and economy (*GDP* or *GDP per capita*) improve VC markets, consistent with a number of earlier studies on topic. Further, the data indicate common law countries have stronger VC markets, as evidenced in Lerner and Schoar (2005), Cumming and Johan (2009), among others.

Lastly, we analyze the impact of securities laws enforcement on both VC Demand (entrepreneurial spawning) and VC Supply in a simultaneous equation framework. The results are almost identical to that which are reported and discussed above, and as such, add credence to the overall conclusions of the paper. These results may be found in Table 9.

[Insert Table 9 Here]

DISCUSSION

The data in this paper highlight a role for securities regulation in facilitating the supply and success of VC, and particularly highlight the role of securities regulation in facilitating venture-capital entrepreneurial spawning, or the creation of new businesses inspired by the presence of VC in a country.

Our sample was based on data from 1999-2008 across 34 countries, with perhaps coarse time-invariant measures of securities regulation and types of disclosure in VC. The data do not pose reason for concern for VCs with disclosure requirements in terms of securities regulation prospectus disclosure. However, further research could investigate more specifically different items disclosed by VCs, particularly if legislation mandates such disclosure in the future. The type of disclosure suggested by some commentators in the public media since the financial crisis of mid-2007 is suggestive that more onerous disclosure will be required among funds.

It is reasonable to expect that not all types of disclosure are the same. Some disclosures are good whereas some may hurt the disclosing parties. As well, one type of disclosure in one country might be beneficial, while the same type of disclosure in another country may be harmful. Indeed, our regression results show that stricter securities laws do not by themselves work for entrepreneurial spawning. Securities laws only facilitate entrepreneurial spawning when they are coupled with more VC investment. To the extent disclosures reduce the asymmetric information problem without compromising the strategic objectives of the firms, our data are consistent with the view that disclosure is likely to be beneficial when coupled with a sufficient supply of value-added active investors like VCs in the market.

Our indices of securities laws do not enable a way to distinguish the beneficial elements of the disclosure index from the potentially detrimental ones. Future research could consider how different types of disclosure reduce information asymmetry and adverse selection risk and in turn have a positive impact on VC success and supply, without compromising the strategic or other goals of the disclosing party. If the VC industry does become more heavily regulated as predicted by *The Economist* and other media outlets, there will indeed be more natural experiments in the future that would make ideal subjects for future empirical scrutiny.

CONCLUSIONS

Since the start of the mid-2007 financial crisis, VC funds around the world have faced increasing pressure towards more disclosure. Whether or not disclosure - or more generally securities regulation - helps or hurts VC markets is a question that has received scant attention in prior work. We hypothesized that better-developed public stock markets offer a primary channel linking securities regulation to VC supply, performance, and entrepreneurial spawning. More stringent securities regulation, in particular disclosure, facilitates VC-backed entrepreneurial spawning with more informed limited partners and VC fund managers and more highly professionalized entrepreneurs. In essence, securities laws stimulate venture capital activity, which in turn stimulate entrepreneurial spawning. We tested these hypotheses in this paper by comparing current securities laws around the world. Exploiting the differences in individual facets of securities laws across 34 nations, we are able to assess whether these facets have helped or hindered VC markets.

Based on VentureXpert, Global Entrepreneurship Monitor and World Bank data from 1999-2008 and 34 countries, we find evidence that more onerous securities regulation is associated with a greater supply of VC and better performance of VC in terms of IPO exits. Further, and perhaps more importantly, the data are consistent with the view that securities regulation facilitates VC-induced entrepreneurial spawning. That is, VC inspires new entrepreneurial ventures through mentoring and certification as an important value-added source of capital, and the strength of this relationship is enhanced by improved securities regulations.

In particular, disclosure stands out in all of the analyses as being a key facet of securities laws that works to enhance VC markets. This is particularly interesting given the recent calls for increased disclosure for the opaque class of assets that is private equity/venture capital. Policy makers looking to spur growth in entrepreneurship (and the resulting enhanced employment that accompanies this growth)

may find comfort in these results knowing that enhanced disclosure standards in securities laws will not endanger the viability or the spawning of entrepreneurships, nor the supply of VC, an important source of capital for these firms.

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Appendix. Variable definitions and sources

Variable	Definition
<i>PC Analysis</i>	
PC Public Status	The current public status of the invested portfolio company as of status date: defunct, private, subsidiary (exit via M&A), or public (exit via IPO). <i>Source: SDC Platinum</i>
Investment Term	The year VC _i last invested in PC _j minus year VC _i first invested in PC _j . <i>Source: SDC Platinum</i>
Years Since Last Inv	The number of years since VC _i last invested in PC _j . <i>Source: SDC Platinum</i>
Portfolio Size/Mgr	The number of PCs in which VC fund invests divided by the number of managerial staff in the VC. <i>Source: SDC Platinum</i>
Industry M/B	The market-to-book ratio for the industry to which PC _j belongs (Data Item 24*Data Item 25)/Data Item 60). <i>Source: Compustat</i>
Prefer to Originate	A dummy variable describing the preferred role VC _i takes in syndications equal to one if the VC prefers to originate and zero otherwise. <i>Source: VentureXpert</i>
Corporate VC	A dummy variable that takes on a value of one where VC _i is a corporate VC and zero otherwise. <i>Source: SDC Platinum</i>
VC Syndicate Size	The number of firms (VCs) invested in the PC. <i>Source: SDC Platinum</i>
Expertise	The number of successful funds VC _i has closed. <i>Source: SDC Platinum</i>
Early Stage	A dummy variable which takes on a value of one if the VC invests in Early Stage PCs and zero otherwise. <i>Source: SDC Platinum</i>
<i>Entrepreneurial Spawning</i>	
New Businesses	The number of newly registered corporations (in 10,000s) at time t. <i>Source: Global Entrepreneurship Monitor; World Bank Entrepreneurship Survey</i>
New Businesses/ GDP per capita	The number of newly registered corporations divided by GDP per capita (in millions). <i>Sources: Global Entrepreneurship Monitor; World Bank Entrepreneurship Survey; World Development Indicators</i>
<i>Supply of VC</i>	
Number Deals	The natural log of the number of VC deals (investments) at time t. <i>Source: VentureXpert</i>
Number of Firms	The natural log of the number of VC firms (investments) at time t. <i>Source: VentureXpert</i>
Sum of Equity	The natural log of the sum of equity owned by VCs at time t (in constant \$US millions). <i>Source: VentureXpert</i>
Sum of Deal Value	The natural log of the sum of deal value at time t (in constant \$US millions). <i>Source: VentureXpert</i>
<i>Country-level Characteristics</i>	
Ln GDP per capita	The natural log of gross domestic product per capita (purchasing power parity). <i>Source: World Development Indicators (WDI)</i>
Hot	A dummy variable which takes on a value of one (zero) in years when the value of IPO's exceeds (falls below) the country-sample median. <i>Sources: SDC Platinum; World Development Indicators</i>
Domestic Credit	Credit provided by financial institutions, with the exception of credit to the central government, scaled by gross domestic product. <i>Source: WDI</i>
Market Cap	The market capitalization of country k. <i>Source: WDI</i>
Market Return	The annual return on the most comprehensive stock market index in country k. <i>Source: DataStream</i>

Appendix. Variable definitions and sources (cont.)

Securities Laws Characteristics (Source: La Porta, Lopez de Silanes, and Shleifer, 2006)

Anti-director Rights	An index from 0 (less) to 5 (more) describing the rights afforded shareholders of a publicly-listed firm in a country.
Judicial Efficiency	An index from 0 (less) to 10 (more) indicating how efficient the legal system is in a country.
Supervisor	An index from 0 (less) to 1 (more) that measures the extent to which a country has an independent public enforcer of securities laws (analogous to the Securities Exchange Commission in the United States).
Investigative	An index from 0 (less) to 1 (more) that measures the extent to which a country's securities laws enforcer can investigate, e.g., subpoena documents.
Orders	An index from 0 (less) to 1 (more) that measures the extent to which a country's securities laws enforcer can issue noncriminal sanctions.
Criminal	An index from 0 (less) to 1 (more) that measures the extent to which a country's securities laws enforcer can issue criminal sanctions.
Public Enforcement	An index from 0 (less) to 1 (more) that represents a country's level of public enforcement of securities laws. It is calculated as the arithmetic average of supervisor, investigative, orders and criminal.
Disclosure	An index from 0 (less) to 1 (more) that measures the extent of disclosure requirements in a prospectus.
Burden of Proof	An index from 0 (less) to 1 (more) that measures how difficult it is for a shareholder to recover damages from a firm in a particular country.
Private Enforcement	An index from 0 (less) to 1 (more) that represents a country's level of private enforcement of securities laws. It is calculated as the arithmetic average of disclosure and burden of proof.

Table 1.
Data characteristics

The number of new businesses is taken from the Global Entrepreneurship Monitor and the World Bank Group Entrepreneurship Survey (2000-2007). Country-level data is taken from World Development Indicators. VC Industry data is taken from VentureXpert. Variable definitions are in Appendix. Supply of VC figures and GDP per capita are transformed using a natural log in the analyses but are presented in their raw form in this table.

	Obs.	Mean	Median	Std. Dev.	Min	Max
Panel A: PC Analysis						
PC Public Status	110,463	2.49	2.00	0.87	1	4
Investment Term	110,463	3.78	3.00	4.19	0	43
Years Since Last Inv	110,463	4.80	5.00	2.97	0.00	9
Portfolio Size/Mgr	110,463	1.80	1.00	1.72	0.00	8.61
Industry M/B	110,463	5.41	4.67	3.01	1.56	11.85
Prefer to Originate	110,463	0.16	0.00	0.36	0.00	1
Corporate VC	110,463	0.06	0.00	0.24	0.00	1
VC Syndicate Size	110,463	6.13	5.00	4.54	1	17
Expertise	110,463	2.26	1.00	3.52	1	56
Early Stage	110,463	0.11	0.00	0.31	0	1
Panel B: Entrepreneurial Spawning						
New Businesses (GEM; 10,000s)	181	11.80	4.40	27.85	0.50	153.46
New Businesses/GDP per capita (GEM)	181	5.36	2.06	10.21	0.14	58.73
New Businesses (WBES; 10,000s)	181	11.50	5.49	15.63	0.33	67.68
New Businesses/GDP per capita (WBES)	181	7.27	2.73	14.75	0.10	68.48
Panel C: Supply of VC						
# Deals	158	282.14	62	803.61	1	5,117
# VC Firms	158	28.32	9	74.70	1	468
Sum of Equity (\$Mil)	152	1,929.58	232.48	6,109.59	0.16	46,979.45
Sum of Deal Value (\$Mil)	137	112,474.52	759.09	33,556.18	1	208,456.10
Panel D: Country-level Characteristics						
Market Cap	181	98.49	82.28	74.32	14.85	561.44
Market Return	181	0.00	0.10	0.30	-1.02	0.46
GDP per capita (000's)	181	26.39	28.57	9.91	1.52	45.64
Hot	181	0.64	1	0.48	0	1
Domestic Credit	181	1.36	1.23	0.59	0.32	3.13
Judicial Efficiency	34	8.63	9.5	1.72	3.25	10
Anti-director's Rights	34	3.83	4	0.97	2	5
Panel E: Securities Laws Characteristics						
Supervisor	34	0.43	0.5	0.26	0	1
Investigative	34	0.56	0.5	0.37	0	1
Orders	34	0.42	0.21	0.43	0	1
Criminal	34	0.49	0.5	0.25	0	1
Public Enforcement	34	0.48	0.375	0.25	0	0.90
Disclosure	34	0.64	0.67	0.21	0.25	1
Burden of Proof	34	0.55	0.66	0.26	0	1
Private Enforcement	34	0.60	0.61	0.20	0.18	1

Table 2.
Correlations

The number of new businesses is taken from the Global Entrepreneurship Monitor (2001-2008) and the World Bank Group Entrepreneurship Survey (2000-2007). Country-level data is taken from World Development Indicators. VC Industry data is taken from VentureXpert. Variable definitions are in Appendix. Bold font indicates a significance level of 1% or 5%.

Panel A: Spawning Analyses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Expertise (1)	1.00																
VC Syndicate Size (2)	-0.03	1.00															
Market Cap (3)	0.07	-0.05	1.00														
Market Return (4)	-0.11	-0.06	0.30	1.00													
Ln GDP per capita (5)	0.11	0.31	0.08	-0.13	1.00												
Domestic Credit (6)	-0.17	0.17	0.00	0.00	0.06	1.00											
HOT (7)	-0.11	0.06	-0.18	0.05	-0.06	-0.01	1.00										
# Deals (8)	0.08	0.49	-0.09	0.11	0.36	0.22	-0.04	1.00									
Judicial Efficiency (9)	0.02	0.43	0.08	0.03	0.59	0.11	-0.07	0.47	1.00								
Anti-director Rights (10)	-0.01	-0.12	0.10	0.10	-0.34	0.25	0.08	0.00	-0.06	1.00							
Supervisor (11)	0.11	0.26	0.05	0.01	-0.01	-0.08	0.07	0.32	-0.20	-0.30	1.00						
Investigative (12)	0.12	0.18	0.04	0.10	-0.25	-0.01	0.11	0.36	0.01	0.22	0.55	1.00					
Orders (13)	0.04	0.32	0.04	0.16	-0.08	-0.03	0.09	0.50	0.26	0.32	0.44	0.75	1.00				
Criminal (14)	0.05	0.04	0.13	0.06	-0.11	-0.32	0.08	0.05	0.15	0.15	0.14	0.23	0.31	1.00			
Public Enforcement (15)	0.10	0.28	0.08	0.12	-0.15	-0.12	0.12	0.44	0.10	0.17	0.68	0.88	0.89	0.50	1.00		
Disclosure (16)	0.10	0.31	0.07	0.04	-0.03	0.36	0.04	0.45	0.27	0.29	0.26	0.55	0.50	0.33	0.56	1.00	
Burden of Proof (17)	-0.06	0.24	0.05	0.03	0.13	0.49	0.04	0.37	0.38	0.19	0.16	0.36	0.25	0.08	0.30	0.48	1.00
Private Enforcement (18)	0.01	0.31	0.07	0.04	0.07	0.50	0.05	0.47	0.38	0.27	0.24	0.52	0.42	0.22	0.48	0.82	0.89

Table 2. (cont.)
Correlation

Panel B: VC Performance Analysis

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Investment Term (1)	1.00																						
Yrs Since Last Inv. (2)	-0.41	1.00																					
Portfolio Size/Mgr (3)	0.02	0.08	1.00																				
Industry M/B (4)	-0.24	0.46	0.09	1.00																			
Prefer to Originate (5)	0.09	0.03	0.11	0.04	1.00																		
Corporate VC (6)	-0.01	0.04	0.02	0.08	-0.05	1.00																	
VC Syndicate Size (7)	0.46	-0.13	0.11	0.06	0.17	0.10	1.00																
Expertise (8)	0.03	0.00	0.05	0.00	0.14	0.02	0.05	1.00															
Early Stage (9)	0.00	0.02	0.07	0.07	0.19	0.08	0.10	0.09	1.00														
Market Return (10)	-0.25	0.41	0.02	0.06	0.01	-0.01	-0.13	0.01	-0.01	1.00													
Market Cap (11)	-0.11	0.22	0.03	0.24	0.01	0.01	-0.04	0.00	0.01	0.00	1.00												
Ln GDP per capita (12)	0.40	-0.51	0.03	-0.20	0.08	0.00	0.34	-0.02	0.02	-0.29	-0.03	1.00											
Hot (13)	0.18	-0.20	0.04	-0.03	0.05	0.02	0.21	0.01	-0.01	-0.04	-0.01	0.37	1.00										
Domestic Credit (14)	0.11	-0.21	-0.02	-0.16	0.02	-0.02	0.06	-0.05	0.00	0.04	-0.10	0.13	0.10	1.00									
Judicial Efficiency (15)	-0.10	0.29	0.06	0.17	0.04	-0.02	0.00	-0.03	0.02	0.13	0.29	0.02	0.18	0.16	1.00								
Anti-director Rights (16)	-0.05	0.00	-0.01	-0.02	-0.03	0.01	-0.07	0.02	-0.03	0.00	0.05	-0.17	-0.03	-0.06	-0.42	1.00							
Supervisor (17)	0.23	0.00	0.09	0.07	0.11	0.02	0.35	-0.04	0.02	-0.10	-0.01	0.60	0.40	0.00	-0.01	-0.02	1.00						
Investigative (18)	0.17	0.00	0.04	0.04	0.08	0.00	0.24	-0.03	0.01	-0.07	-0.01	0.29	0.21	0.00	0.00	-0.02	0.69	1.00					
Orders (19)	0.20	-0.01	0.05	0.04	0.09	0.00	0.27	-0.04	0.02	-0.07	0.00	0.43	0.21	0.01	0.00	-0.01	0.70	0.91	1.00				
Criminal (20)	0.01	-0.01	-0.06	-0.02	0.00	-0.03	-0.04	-0.09	-0.01	0.01	0.01	-0.11	-0.15	0.01	0.02	0.03	-0.01	0.19	0.20	1.00			
Public Enforcement (21)	0.21	0.00	0.05	0.05	0.10	0.00	0.29	-0.05	0.01	-0.08	0.00	0.45	0.26	0.01	0.00	-0.01	0.84	0.93	0.95	0.30	1.00		
Disclosure (22)	0.21	0.02	0.07	0.10	0.11	0.03	0.31	-0.03	0.01	-0.12	0.00	0.47	0.37	0.00	0.00	-0.01	0.77	0.80	0.80	0.12	0.85	1.00	
Burden of Proof (23)	0.20	0.02	0.06	0.09	0.11	0.03	0.29	-0.04	0.01	-0.12	0.00	0.51	0.35	0.00	0.00	-0.01	0.69	0.65	0.63	0.13	0.71	0.84	1.00
Private Enforcement (24)	0.21	0.02	0.07	0.10	0.11	0.03	0.31	-0.04	0.01	-0.12	0.00	0.51	0.37	0.00	0.00	-0.01	0.75	0.74	0.72	0.13	0.79	0.94	0.98

Panel C: VC Supply Analyses

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Expertise (1)	1.00															
VC Syndicate Size (2)	-0.04	1.00														
Market Cap (3)	0.04	0.10	1.00													
Market Return (4)	0.03	-0.20	0.09	1.00												
Ln GDP per capita (5)	0.12	0.29	0.13	-0.26	1.00											
Hot (6)	-0.07	0.09	0.02	0.01	-0.08	1.00										
Domestic Credit (7)	-0.27	0.13	0.18	-0.07	-0.02	-0.06	1.00									
Judicial Efficiency (8)	0.03	0.40	0.29	-0.24	0.56	-0.05	0.04	1.00								
Anti-director Rights (9)	-0.06	-0.14	0.31	0.08	-0.34	0.02	0.21	-0.04	1.00							
Supervisor (10)	0.05	0.27	0.12	0.02	0.01	0.08	-0.03	-0.15	-0.28	1.00						
Investigative (11)	0.02	0.11	0.25	0.12	-0.25	0.09	0.03	0.04	0.31	0.51	1.00					
Orders (12)	0.02	0.25	0.32	0.03	-0.08	0.09	-0.05	0.29	0.38	0.42	0.78	1.00				
Criminal (13)	0.03	-0.05	0.34	-0.01	-0.11	0.02	-0.29	0.24	0.25	0.09	0.27	0.39	1.00			
Public Enforcement (14)	0.04	0.20	0.34	0.05	-0.15	0.09	-0.09	0.17	0.27	0.63	0.89	0.91	0.54	1.00		
Disclosure (15)	0.07	0.20	0.49	-0.04	-0.08	-0.04	0.31	0.23	0.38	0.25	0.57	0.52	0.41	0.60	1.00	
Burden of Proof (16)	-0.12	0.19	0.30	-0.09	0.09	-0.02	0.45	0.31	0.24	0.20	0.45	0.31	0.10	0.37	0.49	1.00
Private Enforcement (17)	-0.05	0.23	0.44	-0.08	0.02	-0.03	0.45	0.32	0.35	0.26	0.59	0.47	0.27	0.54	0.83	0.90

Table 3.
Country characteristics

VC Industry data is taken from VentureXpert (2000-2008). The number of new businesses is taken from the Global Entrepreneurship Monitor (2001-2008). Enforcement variables are taken from La Porta et al. (2006). Variable definitions are in Appendix.

Country	# VC Deals	# of VC Firms	Sum of Equity (\$Mil)	Sum of Deal Value (\$Mil)	New Businesses (10,000s)	New Businesses/ GDP per capita (\$Mil)	Public Enforcement	Private Enforcement
<i>British Legal Origin</i>								
Australia	210.78	19.22	1,009.30	3,637.93	6.32	2.09	0.90	0.71
Canada	500.44	30.78	2,316.51	5,996.59	8.34	2.56	0.86	0.96
Hong Kong, China	81.89	13.67	1,082.25	2,292.55	0.91	0.26	0.88	0.79
India	87.67	15.11	378.76	472.55	8.85	41.48	0.72	0.79
Ireland	49.25	4.38	80.07	160.63	1.58	0.41	0.27	0.61
Israel	122.44	11.67	329.93	687.21	0.89	0.36	0.75	0.66
Malaysia	12.75	3.50	24.06	33.81	1.74	1.38	0.84	0.79
New Zealand	30.43	2.57	67.65	19,079.63	1.28	0.55	0.40	0.55
Singapore	60.00	7.44	268.04	4,570.09	0.61	0.15	0.88	0.83
South Africa	11.00	3.13	52.31	682.39	1.24	1.49	0.29	0.75
Thailand	9.25	1.50	11.11	0.67	3.59	5.58	0.67	0.63
United Kingdom	788.89	73.22	7,593.65	56,902.82	12.86	4.05	0.67	0.75
United States	6,041.78	461.22	37,612.35	131,405.00	131.40	32.18	0.88	1.00
Average	615.89	49.80	3,909.69	17,378.61	13.82	7.12	0.69	0.75
<i>Scandinavian Legal Origin</i>								
Denmark	95.56	7.22	168.46	2,626.72	1.37	0.41	0.27	0.68
Finland	113.44	8.89	101.17	152.68	1.16	0.37	0.35	0.58
Norway	77.56	8.22	171.22	301.22	2.38	0.51	0.40	0.51
Sweden	129.67	14.67	583.23	4,075.14	1.40	0.44	0.44	0.46
Average	104.06	9.75	256.02	1,788.94	1.58	0.43	0.36	0.56
<i>German Legal Origin</i>								
Austria	42.00	6.88	54.37	119.06	1.26	0.36	0.19	0.18
Germany	297.56	33.56	686.60	1,112.16	12.85	4.25	0.25	0.21
Japan	101.00	21.11	744.57	5,397.25	13.98	4.61	0.00	0.71
South Korea	357.56	23.11	513.59	1,239.44	8.61	4.08	0.29	0.71
Switzerland	134.44	12.89	500.28	1,855.33	2.32	0.65	0.21	0.55
Average	186.51	19.51	499.88	1,944.65	7.80	2.79	0.19	0.47
<i>French Legal Origin</i>								
Argentina	4.00	1.00	3.45	.	2.69	2.46	0.50	0.36
Belgium	52.00	6.11	154.51	394.29	1.19	0.37	0.19	0.43
Brazil	36.44	5.00	272.86	587.66	11.24	12.88	0.52	0.29
France	563.11	47.78	1,991.14	10,265.85	9.60	3.12	0.80	0.49
Greece	10.33	2.50	164.18	510.06	1.98	0.75	0.35	0.39
Italy	66.11	10.33	275.41	1,675.16	8.63	3.03	0.38	0.44
Mexico	3.40	1.40	19.46	4.75	8.77	7.73	0.25	0.35
Netherlands	139.89	12.78	586.63	6,272.33	3.09	0.87	0.38	0.75
Philippines	4.50	2.00	8.75	.	2.40	7.68	0.81	0.92
Portugal	32.78	4.22	40.20	137.52	1.16	0.56	0.50	0.54
Spain	61.78	12.89	307.25	1,363.81	7.05	2.51	0.38	0.58
Turkey	6.67	1.33	16.34	1,633.67	3.89	2.96	0.56	0.36
Average	81.75	8.95	320.02	2,284.51	5.14	3.74	0.47	0.49

Table 4.
Difference in means

VC Industry data is taken from VentureXpert. Securities laws characteristics are taken from La Porta, Lopez de Silanes, and Shleifer (2006). Variable definitions are in Appendix. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively. Sample term is 1999-2008.

Panel A: Entrepreneurial spawning

Characteristic Tested	Global Entrepreneurship Monitor (2001-2008)					Characteristic Tested	World Bank Entrepreneurship Survey (2000-2007)				
	N	New Businesses (10,000s)	Difference Test Statistic	New Businesses/ GDP per capita	Difference Test Statistic		N	New Businesses (10,000s)	Difference Test Statistic	New Businesses/ GDP per capita	Difference Test Statistic
Full Sample	181	10.95		5.00		Full Sample	181	0.86		11.61	
supervisor > median	42	30.70		8.28		supervisor > median	48	1.08		8.76	
supervisor < median	139	4.99	25.71***	4.01	4.27**	supervisor < median	133	0.78	0.30*	12.63	-3.87**
investig > median	70	20.05		8.79		investig > median	85	1.00		14.54	
investig < median	111	5.21	14.84***	2.61	6.18***	investig < median	96	0.74	0.25*	9.00	5.54***
orders > median	89	16.95		8.07		orders > median	77	1.46		13.41	
orders < median	92	5.15	11.81***	2.03	6.04***	orders < median	104	0.42	1.05***	10.27	3.15*
criminal > median	47	3.81		6.31		criminal > median	60	0.46		11.12	
criminal < median	134	13.45	-9.64**	4.54	1.76	criminal < median	121	1.06	-0.60***	11.84	-0.72
public enforcement > median	73	20.37		9.81		public enforcement > median	86	1.34		13.11	
public enforcement < median	108	4.59	15.78***	1.75	8.05***	public enforcement < median	95	0.43	0.91***	10.24	2.87*
disclosure > median	101	16.14		6.91		disclosure > median	70	1.20		11.01	
disclosure < median	80	4.40	11.75***	2.59	4.32***	disclosure < median	111	0.65	0.56***	11.98	-0.97
burden of proof > median	110	14.34		6.11		burden of proof > median	25	1.46		11.89	
burden of proof < median	71	5.70	8.63**	3.29	2.82*	burden of proof < median	156	0.77	0.70**	11.56	0.33
private enforcement > median	118	13.51		5.81		private enforcement > median	85	0.98		11.79	
private enforcement < median	63	6.15	7.36*	3.50	2.31	private enforcement < median	96	0.75	0.23	11.44	0.35

Panel B: Entrepreneurial outcome

Characteristic Tested	N	Proportion of Firms that go Defunct	Difference Test Statistic	Proportion of Private Firms	Difference Test Statistic	Proportion of Acquisition Exits	Difference Test Statistic	Proportion of IPO Exits	Difference Test Statistic
Full Sample	110,463	0.06		0.57		0.18		0.18	
supervisor > median	75,755	0.08		0.50		0.23		0.23	
supervisor < median	34,708	0.01	0.07***	0.71	-0.21***	0.08	0.15***	0.08	0.15***
investig > median	93,946	0.07		0.54		0.20		0.20	
investig < median	16,517	0.01	0.06***	0.74	-0.21***	0.07	0.18***	0.07	0.13***
orders > median	91,144	0.07		0.54		0.21		0.21	
orders < median	19,319	0.01	0.06***	0.73	-0.19***	0.07	0.14***	0.07	0.14***
criminal > median	13,541	0.01		0.66		0.08		0.08	
criminal < median	96,922	0.07	-0.06***	0.56	0.10***	0.19	-0.11***	0.19	-0.11***
public enforcement > median	84,726	0.08		0.52		0.21		0.21	
public enforcement < median	25,737	0.01	0.06***	0.73	-0.21***	0.08	0.14***	0.08	0.14***
disclosure > median	80,833	0.08		0.51		0.22		0.22	
disclosure < median	29,630	0.02	0.06***	0.73	-0.23***	0.08	0.13***	0.08	0.13***
burden of proof > median	78,324	0.08		0.51		0.22		0.22	
burden of proof < median	32,139	0.01	0.06***	0.71	-0.20***	0.08	0.14***	0.08	0.14***
private enforcement > median	77,285	0.08		0.51		0.23		0.23	
private enforcement < median	33,178	0.01	0.07***	0.71	-0.21***	0.08	0.15***	0.08	0.15***

Panel C: Supply of venture capital

Characteristic Tested	N	Ln(Number of VC Deals)	Difference Test Statistic	Ln(Number of VC Firms)	Difference Test Statistic	Ln(Sum of Equity)	Difference Test Statistic	Ln(Sum of Deal Value)	Difference Test Statistic
Full Sample	151	4.19		2.28		5.45		6.59	
supervisor > median	81	4.41		2.49		5.67		6.75	
supervisor < median	70	3.94	0.46*	2.03	0.47**	5.20	0.47	6.40	0.35
investig > median	94	4.45		2.49		5.88		7.09	
investig < median	57	3.77	0.68**	1.92	0.57***	4.77	1.11***	5.73	1.36***
orders > median	80	4.59		2.55		5.98		7.24	
orders < median	71	3.75	0.84***	1.96	0.59***	4.87	1.11***	5.86	1.38***
criminal > median	100	4.16		2.25		5.48		6.29	
criminal < median	51	4.26	-0.10	2.33	-0.08	5.39	0.10	7.21	-0.91*
public enforcement > median	75	4.61		2.60		6.11		7.34	
public enforcement < median	76	3.78	0.82***	1.96	0.65***	4.82	1.29***	5.81	1.53***
disclosure > median	86	4.54		2.64		6.18		7.25	
disclosure < median	65	3.73	0.81***	1.80	0.84***	4.50	1.68***	5.53	1.71***
burden of proof > median	92	4.48		2.53		5.87		6.81	
burden of proof < median	59	3.75	0.72***	1.88	0.65***	4.80	1.06***	6.19	0.62
private enforcement > median	77	4.58		2.65		6.17		7.25	
private enforcement < median	74	3.79	0.80***	1.89	0.75***	4.71	1.46***	5.83	1.42***

Table 5.
Securities laws and VC-induced entrepreneurial spawning

The ordinary least squares model used is:

$Spawning_{k,t} = \varphi + \lambda_0 Y_k + \lambda_1 SupplyVCs_{k,t-1} + \lambda_2 SecuritiesLaws_k + \lambda_3 (SupplyVCs_{k,t-1} * SecuritiesLaws_k) + \varepsilon_k$ where Spawning is proxied by New Business or New Businesses scaled by GDP per capita. Panels A and B use data from the Global Entrepreneurship Monitor (2001-2008). Panels C and D use data from the World Bank Entrepreneurship Survey (2000-2007). Y is a vector of macroeconomic variables including Market Cap Market Return, GDP per capita, Hot, Domestic Credit, Judicial Efficiency and Anti-director Rights. Law is either Supervisor, Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, or Private Enforcement. Public Enforcement is the arithmetic average of Supervisor, Investigative, Orders and Criminal. Private Enforcement is the arithmetic average of Disclosure and Burden of Proof. Market Return is collected from DataStream. Country-level data is taken from World Development Indicators. VC Industry data is taken from VentureXpert. Marginal effects are reported and robust standard errors (clustered around country) are given in brackets. Variable definitions are in Appendix. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively.

	Sec. Laws = Supervisor 1	Sec. Laws = Investigative 2	Sec. Laws = Orders 3	Sec. Laws = Criminal 4	Sec. Laws = Public Enforcement 5	Sec. Laws = Disclosure 6	Sec. Laws = Burden of Proof 7	Sec. Laws = Private Enforcement 8
Panel A: Dependent Variable = New Businesses								
Expertise	-0.629 [0.668]	-0.689 [0.699]	-0.642 [0.721]	-0.333 [0.731]	-0.559 [0.664]	-0.168 [0.544]	-0.656 [0.500]	-0.282 [0.446]
VC Syndicate Size	4.215* [2.105]	7.255* [3.588]	6.912* [3.475]	7.977* [4.065]	6.225** [3.051]	5.360** [2.497]	5.372** [2.381]	5.230** [2.328]
Market Cap	-0.031 [0.032]	13.399** [0.030]	12.407** [0.030]	16.386** [0.037]	-0.018 [5.496]	10.927*** [3.687]	11.415*** [0.031]	10.675*** [0.029]
Market Return	-0.677 [7.631]	2.984 [7.147]	5.865 [7.106]	3.993 [7.241]	3.656 [6.499]	7.943 [6.752]	1.239 [6.684]	3.685 [6.214]
Ln GDP per capita	-2.171 [1.798]	-3.210 [2.619]	-3.242 [2.607]	-2.949 [2.668]	-2.526 [2.495]	-1.722 [2.044]	-1.940 [1.315]	-2.062 [1.583]
Domestic Credit	-0.543 [3.210]	4.310 [2.588]	3.226 [2.553]	5.922** [2.797]	2.456 [2.724]	3.946* [2.084]	1.948 [2.293]	2.534 [2.155]
Hot	10.099** [4.072]	-0.011 [5.510]	-0.020 [5.135]	-0.031 [7.641]	12.375** [0.031]	-0.005 [0.030]	0.002 [3.128]	-0.001 [3.251]
# Deals	-4.828* [2.546]	-0.119 [1.668]	2.347* [1.305]	7.910* [4.464]	-3.349 [2.421]	-11.712*** [4.156]	-4.861** [1.928]	-9.633*** [3.101]
Judiciary Efficiency	-1.771 [1.333]	-2.072 [1.504]	-1.895 [1.628]	-2.774* [1.634]	-1.912 [1.448]	-1.701 [1.289]	-1.678* [0.952]	-1.646 [1.042]
Anti-director Rights	-2.227 [1.851]	-5.197* [2.754]	-4.508* [2.476]	-6.295* [3.639]	-4.033* [2.189]	-4.125* [2.078]	-1.741 [1.759]	-2.256 [1.867]
Sec. Laws	-79.588*** [25.289]	-35.817** [15.354]	-31.366 [20.165]	21.000 [25.447]	-65.121** [29.836]	-79.821*** [22.423]	-98.151*** [21.736]	-104.060*** [23.744]
Sec. Laws * # Deals	20.641*** [6.164]	9.302** [3.939]	7.864* [4.051]	-2.310 [6.610]	16.882** [6.679]	24.184*** [6.961]	21.167*** [5.482]	25.209*** [6.316]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.743	0.642	0.646	0.611	0.673	0.728	0.746	0.752

Table 5. (cont.)
Securities laws and VC-induced entrepreneurial spawning

Panel B: Dependent Variable = New Businesses/GDP per capita								
Expertise	-0.440	-0.457	-0.391	-0.284	-0.329	-0.404	-0.487	-0.415
	[0.320]	[0.330]	[0.327]	[0.269]	[0.274]	[0.383]	[0.305]	[0.346]
VC Syndicate Size	1.099	1.888*	1.834*	2.075*	1.570	1.321*	1.532*	1.450*
	[0.697]	[1.034]	[1.047]	[1.111]	[0.928]	[0.754]	[0.804]	[0.776]
Market Cap	2.074	3.271*	3.738*	4.679*	3.962*	-0.038	-0.038	1.433
	[1.372]	[1.865]	[1.969]	[0.034]	[0.036]	[1.567]	[0.039]	[0.038]
Market Return	4.280	5.279	5.092	5.188	5.119	6.529*	4.620	5.400
	[3.847]	[3.708]	[3.407]	[3.713]	[3.589]	[3.346]	[3.321]	[3.341]
Domestic Credit	-0.418	0.479	0.905	1.529	0.413	0.644	0.298	0.310
	[1.330]	[1.379]	[1.109]	[1.281]	[1.186]	[1.134]	[0.985]	[1.085]
IPO Value	-0.048	-0.043	-0.045	-0.047	-0.045	1.581	2.025	-0.039
	[0.037]	[0.036]	[0.035]	[2.663]	[2.187]	[0.033]	[1.413]	[1.691]
# Deals	-1.723*	0.160	0.741	1.316	-0.329	-3.922***	-1.518*	-2.732*
	[0.912]	[0.900]	[0.533]	[1.484]	[1.094]	[1.406]	[0.818]	[1.367]
Judiciary Efficiency	-1.038*	-1.311**	-1.479***	-1.644***	-1.214**	-1.222**	-1.265**	-1.343**
	[0.590]	[0.557]	[0.527]	[0.581]	[0.516]	[0.474]	[0.497]	[0.554]
Anti-director Rights	1.888	0.621	0.323	0.311	0.546	0.931	1.777	1.453
	[1.740]	[1.347]	[1.330]	[1.370]	[1.134]	[1.244]	[1.329]	[1.092]
Sec. Laws	-17.572*	-0.678	2.867	8.398	0.544	-17.397	-23.019*	-20.422
	[9.016]	[10.098]	[8.411]	[13.886]	[17.346]	[14.105]	[12.237]	[19.920]
Sec. Laws * # Deals	5.207***	1.284	0.366	0.016	2.025	6.793***	5.238**	6.140**
	[1.890]	[1.768]	[1.518]	[2.968]	[2.874]	[2.272]	[2.157]	[2.812]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.399	0.350	0.344	0.355	0.371	0.414	0.389	0.403
Panel C: Dependent Variable = New Businesses								
Expertise	0.004	-0.013	-0.012	-0.002	0.007	0.032	0.032	0.044
	[0.063]	[0.058]	[0.064]	[0.062]	[0.059]	[0.047]	[0.058]	[0.049]
VC Syndicate Size	0.145	0.162	0.154	0.184	0.141	0.125	0.110	0.101
	[0.116]	[0.140]	[0.136]	[0.161]	[0.130]	[0.119]	[0.112]	[0.108]
Market Cap	0.223	0.001	0.319	0.000	0.000	0.386**	0.250	0.393***
	[0.375]	[0.002]	[0.002]	[0.422]	[0.396]	[0.188]	[0.002]	[0.001]
Market Return	-0.069	-0.242	-0.035	-0.103	-0.141	-0.239	-0.344	-0.454
	[0.328]	[0.269]	[0.370]	[0.365]	[0.297]	[0.381]	[0.291]	[0.352]
Ln GDP per capita	-0.006	-0.062	0.082	-0.067	-0.036	-0.125	-0.015	-0.097
	[0.255]	[0.304]	[0.206]	[0.256]	[0.291]	[0.269]	[0.227]	[0.244]
Domestic Credit	0.511**	0.531**	0.492**	0.522**	0.512**	0.470***	0.515***	0.492***
	[0.191]	[0.215]	[0.204]	[0.218]	[0.202]	[0.160]	[0.172]	[0.153]
IPO Value	0.000	0.235	0.000	0.164	0.227	0.000	0.000	0.000
	[0.002]	[0.360]	[0.333]	[0.002]	[0.002]	[0.001]	[0.236]	[0.144]
# Deals	0.207	-0.059	0.241	0.382*	-0.037	-0.511**	-0.128	-0.518**
	[0.345]	[0.164]	[0.150]	[0.218]	[0.196]	[0.196]	[0.190]	[0.248]
Judiciary Efficiency	-0.294	-0.262*	-0.289	-0.242*	-0.249*	-0.184*	-0.260**	-0.197**
	[0.194]	[0.140]	[0.172]	[0.123]	[0.140]	[0.103]	[0.120]	[0.093]
Anti-director Rights	0.310	0.277	0.229	0.367	0.321	0.476*	0.390	0.504*
	[0.209]	[0.256]	[0.209]	[0.292]	[0.276]	[0.262]	[0.259]	[0.266]
Sec. Laws	-1.670	-2.357	-0.133	-0.964	-2.810	-6.755***	-4.637*	-7.941**
	[2.618]	[1.526]	[1.136]	[1.539]	[1.940]	[2.199]	[2.306]	[3.035]
Sec. Laws * # Deals	0.384	0.579**	0.171	0.062	0.687*	1.305***	0.940**	1.467***
	[0.604]	[0.269]	[0.238]	[0.271]	[0.392]	[0.376]	[0.431]	[0.497]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.413	0.447	0.432	0.420	0.430	0.582	0.498	0.585

Table 5. (cont.)
Securities laws and VC-induced entrepreneurial spawning

Panel D: Dependent Variable = New Businesses/GDP per capita								
Expertise	-0.062	-0.149	-0.167	-0.375	-0.110	-0.151	-0.067	-0.201
	[0.440]	[0.478]	[0.453]	[0.463]	[0.464]	[0.367]	[0.468]	[0.404]
VC Syndicate Size	1.208	1.373	1.452	1.492	1.305	1.382	0.991	1.061
	[1.039]	[1.171]	[1.214]	[1.259]	[1.128]	[1.121]	[0.909]	[0.977]
Market Cap	-3.876	-0.011	-0.015	-4.846	-3.896	-0.010	-0.010	-0.208
	[4.494]	[4.136]	[3.409]	[0.012]	[4.691]	[1.762]	[2.810]	[0.012]
Market Return	10.153	10.652	6.714	9.270	11.007	9.229	8.732	8.444
	[9.304]	[9.775]	[7.769]	[9.571]	[10.083]	[8.293]	[9.184]	[8.613]
Domestic Credit	2.266	3.108	2.433	1.730	2.219	2.432	1.529	1.557
	[1.918]	[2.345]	[1.931]	[1.728]	[1.955]	[2.043]	[1.605]	[1.862]
IPO Value	-0.009	-3.635	-1.648	-0.015	-0.013	-1.297	-2.002	-0.007
	[0.016]	[0.014]	[0.012]	[5.118]	[0.014]	[0.014]	[0.012]	[1.250]
# Deals	-0.718	-2.221	1.797	-1.022	-1.608	-6.104**	-3.540	-6.740**
	[1.792]	[2.373]	[1.707]	[1.969]	[2.246]	[2.454]	[2.492]	[2.710]
Efficiency of Judiciary	-3.805	-3.367	-3.532	-2.761	-3.143	-2.372*	-2.715	-2.147*
	[2.664]	[2.199]	[2.276]	[1.642]	[2.106]	[1.288]	[1.626]	[1.188]
Anti-director Rights	4.439	5.145	3.292	6.104	5.234	7.394*	5.879*	7.681**
	[2.690]	[3.648]	[2.308]	[3.908]	[3.776]	[3.768]	[3.387]	[3.731]
Securities Laws	-20.709	-19.729	13.756	-21.854	-19.511	-61.370**	-44.339*	-78.063**
	[21.539]	[16.184]	[14.192]	[18.907]	[19.272]	[23.553]	[25.834]	[34.773]
Securities Laws * # Deals	3.700	4.135	-2.036	3.466	4.170	10.123***	8.144*	12.574***
	[3.762]	[2.860]	[2.783]	[3.013]	[3.503]	[2.975]	[4.228]	[4.436]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.328	0.355	0.346	0.357	0.327	0.543	0.393	0.532

Table 6.
The relative importance of VC activity in the impact of securities laws

The ordinary least squares model used is:

$Spawning_{k,t} = \varphi + \lambda_0 Y_k + \lambda_1 SupplyVCs_{k,t-1} + \lambda_2 SecuritiesLaws_k + \lambda_3 (SupplyVCs_{k,t-1} * SecuritiesLaws_k) + \varepsilon_k$ where Spawning is proxied by New Business from the Global Entrepreneurship Monitor (2001-2008). Y is a vector of macroeconomic variables including Market Cap Market Return, GDP per capita, Hot, Domestic Credit, Judicial Efficiency and Anti-director Rights. Law is either Supervisor, Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, or Private Enforcement. Public Enforcement is the arithmetic average of Supervisor, Investigative, Orders and Criminal. Private Enforcement is the arithmetic average of Disclosure and Burden of Proof. Market Return is collected from DataStream. Country-level data is taken from World Development Indicators. VC Industry data is taken from VentureXpert. Marginal effects are reported and robust standard errors (clustered around country) are given in brackets. Variable definitions are in Appendix. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively.

	Sec. Laws = Supervisor	Sec. Laws = Investig	Sec. Laws = Orders	Sec. Laws = Criminal	Sec. Laws = Public Enforce- ment	Sec. Laws = Disclosure	Sec. Laws = Burden of Proof	Sec. Laws = Private Enforce- ment
	1	2	3	4	5	6	7	8
<i>Panel A: VC Supply vs. VC Expertise</i>								
# Deals	-4.866*	-0.109	2.352*	7.957*	-3.553	-11.604***	-4.961**	-9.404***
	[2.483]	[1.670]	[1.304]	[4.433]	[2.465]	[4.236]	[1.931]	[3.131]
Securities Laws	-76.112**	-35.243**	-30.467	3.830	-75.626**	-81.517***	-117.058***	-119.434***
	[34.222]	[16.417]	[20.980]	[29.843]	[35.474]	[23.428]	[27.312]	[30.107]
Securities Laws * # Deals	20.880***	9.318**	7.879*	-1.985	17.097**	24.035***	21.233***	24.787***
	[5.723]	[3.952]	[4.061]	[6.761]	[6.703]	[7.046]	[5.341]	[6.234]
Expertise	-0.131	-0.593	-0.560	-3.016	-1.711	-0.640	-2.920*	-3.085
	[2.029]	[1.153]	[0.617]	[2.262]	[1.565]	[2.044]	[1.554]	[2.132]
Securities Laws * VC Expertise	-1.412	-0.203	-0.284	5.098	2.772	0.713	5.387*	5.204
	[6.621]	[2.777]	[2.168]	[3.936]	[3.980]	[3.168]	[3.108]	[3.850]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.743	0.642	0.646	0.616	0.675	0.728	0.754	0.756
<i>Panel B: VC Supply vs. Judicial Efficiency</i>								
# Deals	-4.091	1.573	2.794**	8.321*	-1.700	-9.496**	-4.866**	-8.604**
	[2.860]	[1.647]	[1.282]	[4.692]	[2.056]	[3.877]	[2.102]	[3.177]
Securities Laws	-117.926	-87.350*	-60.215	-7.677	-174.366*	-118.056**	-97.920***	-137.056***
	[72.819]	[44.909]	[60.884]	[51.925]	[98.516]	[44.111]	[31.976]	[40.584]
Securities Laws * # Deals	18.380**	6.524*	6.936*	-3.167	13.651**	20.852***	21.174***	23.560***
	[7.537]	[3.691]	[3.724]	[6.784]	[5.913]	[6.559]	[5.716]	[6.429]
Judicial Efficiency	-4.412	-6.275*	-2.880*	-4.138	-7.788*	-5.778	-1.663	-4.363
	[4.111]	[3.280]	[1.551]	[3.209]	[4.346]	[3.752]	[1.818]	[2.970]
Securities Laws * Judicial Efficiency	5.606	7.068	3.667	3.504	13.421	6.495	-0.030	4.730
	[9.820]	[5.240]	[6.004]	[5.993]	[10.363]	[5.373]	[3.546]	[5.010]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	181	181	181	181	181	181	181	181
R-squared	0.747	0.656	0.651	0.612	0.69	0.732	0.746	0.754

Table 7.
Securities laws and the performance of venture capital

The multinomial logit model used for entrepreneurs is $\Pr(\text{CurrentStatus}_j) = \Psi(\alpha + \beta_0 \text{Inv}_{ij} + \beta_1 X_i + \beta_2 I_j + \beta_3 Y_k + \beta_4 \text{SecuritiesLaws}_k)$ where Ψ is the cumulative logistic probability distribution function. Current Status is the current status of the PC: Public, Subsidiary, or Defunct. Inv is a vector of investment-specific data such as: Investment Term, Yrs Since Last Inv, Portfolio Size/Mgr, and Industry M/B. Xi is a vector of VC characteristics including: Corporate VC, Expertise, and Risk. Y is a vector of macroeconomic variables including Market Cap Market Return, GDP per capita, Hot, Domestic Credit, Judicial Efficiency and Anti-director Rights. SecuritiesLaws is either Supervisor, Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, or Private Enforcement. Public Enforcement is the arithmetic average of Supervisor, Investigative, Orders and Criminal. Private Enforcement is the arithmetic average of Disclosure and Burden of Proof. The base specification is Public Status = Defunct. Investment (PC) data specifics are from VentureXpert. Marginal effects are reported and robust standard errors (clustered around PC) are given in brackets. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively. Sample includes VC/PC relationships in SDC Platinum where the last investment in portfolio company was between 1999 and 2008.

	Sec. Laws = Supervisor	Sec. Laws = Investigative	Sec. Laws = Orders	Sec. Laws = Criminal	Sec. Laws = Public Enforcement	Sec. Laws = Disclosure	Sec. Laws = Burden of Proof	Sec. Laws = Private Enforcement
	1	2	3	4	5	6	7	8
Dependent variable = defunct								
Securities Laws	0.039***	0.017***	0.011**	-0.006	0.026***	0.020	0.003	0.010
	[0.009]	[0.006]	[0.006]	[0.011]	[0.010]	[0.013]	[0.008]	[0.012]
Dependent variable = private								
Securities Laws	-0.224***	-0.100***	-0.100***	-0.047	-0.187***	-0.247***	-0.092***	-0.167***
	[0.027]	[0.024]	[0.020]	[0.037]	[0.031]	[0.042]	[0.027]	[0.035]
Dependent variable = exit via M&A								
Securities Laws	0.132***	0.044**	0.044***	-0.062**	0.078***	0.072**	-0.004	0.022
	[0.023]	[0.017]	[0.016]	[0.026]	[0.024]	[0.034]	[0.023]	[0.029]
Dependent variable = exit via IPO								
Securities Laws	0.054**	0.039*	0.045***	0.116***	0.083***	0.155***	0.093***	0.136***
	[0.023]	[0.021]	[0.017]	[0.038]	[0.029]	[0.038]	[0.023]	[0.031]
Industry Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	110,463	110,463	110,463	110,463	110,463	110,463	110,463	110,463
Pseudo R ²	0.174	0.171	0.172	0.171	0.172	0.172	0.171	0.172

Table 8.
Securities laws and the amount of venture capital

The ordinary least squares model used is $SupplyVC_{k,t} = \varphi + \lambda_0 Y_{k,t-1} + \lambda_1 SecuritiesLaws_k + \varepsilon_k$. Supply VCs is either Number of VC Deals, Number of VC Firms, Sum of Equity, or Sum of Deal Value. Y is a vector of macroeconomic variables including Market Cap Market Return, GDP per capita, Hot, Domestic Credit, Judicial Efficiency and Anti-director Rights. SecuritiesLaws is either Supervisor, Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, or Private Enforcement. Public Enforcement is the arithmetic average of Supervisor, Investigative, Orders and Criminal. Private Enforcement is the arithmetic average of Disclosure and Burden of Proof. Investment (PC) data specifics are from VentureXpert. Marginal effects are reported and robust standard errors (clustered around country) are given in brackets. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively. Sample term is 1999-2008.

	Sec. Laws = Supervisor 1	Sec. Laws = Investigative 2	Sec. Laws = Orders 3	Sec. Laws = Criminal 4	Sec. Laws = Public Enforcement 5	Sec. Laws = Disclosure 6	Sec. Laws = Burden of Proof 7	Sec. Laws = Private Enforcement 8
Panel A: Dep. Variable = Ln(Number of Deals)								
Expertise	0.083 [0.069]	0.088 [0.063]	0.096 [0.070]	0.102 [0.081]	0.095 [0.068]	0.053 [0.073]	0.104 [0.080]	0.077 [0.079]
VC Syndicate Size	0.232* [0.124]	0.295** [0.137]	0.272* [0.139]	0.380** [0.185]	0.274** [0.125]	0.314** [0.142]	0.360** [0.160]	0.325** [0.140]
Market Cap	-0.004* [0.002]	-0.003 [0.002]	0.643 [0.002]	0.492 [0.003]	-0.003* [0.370]	0.185 [0.457]	-0.003 [0.443]	-0.003 [0.448]
Market Return	-0.305 [0.675]	-0.618 [0.790]	-0.722 [0.741]	-0.556 [0.841]	-0.424 [0.721]	-0.176 [0.839]	-0.643 [0.750]	-0.391 [0.748]
Ln GDP per capita	0.491 [0.373]	0.660* [0.383]	0.564 [0.413]	0.465 [0.386]	0.634 [0.385]	0.575* [0.339]	0.461 [0.360]	0.534 [0.336]
Hot	0.396 [0.400]	0.518 [0.397]	0.434 [0.418]	0.455 [0.446]	0.418 [0.388]	0.288 [0.318]	0.490 [0.399]	0.387 [0.332]
Domestic Credit	0.470 [0.351]	0.519 [0.358]	-0.003 [0.414]	-0.003 [0.515]	0.681* [0.002]	-0.003 [0.002]	0.117 [0.003]	-0.016 [0.002]
Judicial Efficiency	0.172 [0.200]	0.010 [0.175]	-0.040 [0.189]	0.054 [0.178]	-0.010 [0.176]	-0.008 [0.159]	-0.002 [0.168]	-0.042 [0.155]
Anti-director Rights	0.321 [0.249]	0.019 [0.232]	-0.053 [0.279]	0.144 [0.280]	0.024 [0.261]	-0.008 [0.260]	0.082 [0.265]	-0.008 [0.251]
Securities Laws	2.259*** [0.668]	1.555*** [0.434]	1.245** [0.476]	0.221 [0.877]	2.185*** [0.679]	2.671** [1.027]	1.562* [0.907]	3.004** [1.384]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	158	158	158	158	158	158	158	158
R-squared	0.503	0.516	0.485	0.411	0.505	0.489	0.454	0.497
Panel B: Dep. Variable = Ln(Number of Firms)								
Expertise	0.088 [0.061]	0.093 [0.055]	0.099 [0.059]	0.106 [0.071]	0.097 [0.059]	0.062 [0.063]	0.104 [0.070]	0.087 [0.069]
VC Syndicate Size	0.201* [0.103]	0.258** [0.117]	0.228* [0.113]	0.326** [0.149]	0.234** [0.103]	0.266** [0.116]	0.312** [0.141]	0.286** [0.122]
Market Cap	-0.002 [0.239]	0.709** [0.269]	-0.001 [0.001]	0.752* [0.002]	-0.001 [0.278]	0.431 [0.002]	0.511 [0.305]	-0.001 [0.290]
Market Return	0.034 [0.530]	-0.219 [0.647]	-0.310 [0.580]	-0.086 [0.662]	-0.057 [0.566]	0.159 [0.614]	-0.232 [0.640]	-0.072 [0.623]
Ln GDP per capita	0.295 [0.280]	0.417 [0.287]	0.361 [0.313]	0.299 [0.303]	0.415 [0.292]	0.369 [0.255]	0.264 [0.280]	0.315 [0.261]
Hot	0.461 [0.294]	0.556* [0.323]	0.489 [0.321]	0.491 [0.324]	0.477 [0.301]	0.364 [0.248]	0.529 [0.324]	0.466 [0.282]
Domestic Credit	0.674*** [0.002]	-0.001 [0.001]	0.827*** [0.294]	-0.001 [0.369]	0.851*** [0.001]	-0.001 [0.292]	-0.001 [0.002]	0.354 [0.002]
Judicial Efficiency	0.150 [0.139]	0.022 [0.132]	-0.029 [0.145]	0.036 [0.138]	0.000 [0.132]	0.000 [0.112]	0.035 [0.127]	-0.007 [0.117]
Anti-director Rights	0.197 [0.203]	-0.038 [0.201]	-0.119 [0.226]	0.038 [0.232]	-0.047 [0.211]	-0.077 [0.219]	0.032 [0.229]	-0.043 [0.221]
Securities Laws	1.830*** [0.538]	1.157** [0.438]	1.086** [0.421]	0.456 [0.764]	1.823*** [0.607]	2.290*** [0.793]	0.682 [0.679]	1.957* [1.058]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	158	158	158	158	158	158	158	158
R-squared	0.488	0.484	0.481	0.394	0.496	0.482	0.402	0.448

Table 8. (cont.)
Securities laws and the amount of venture capital

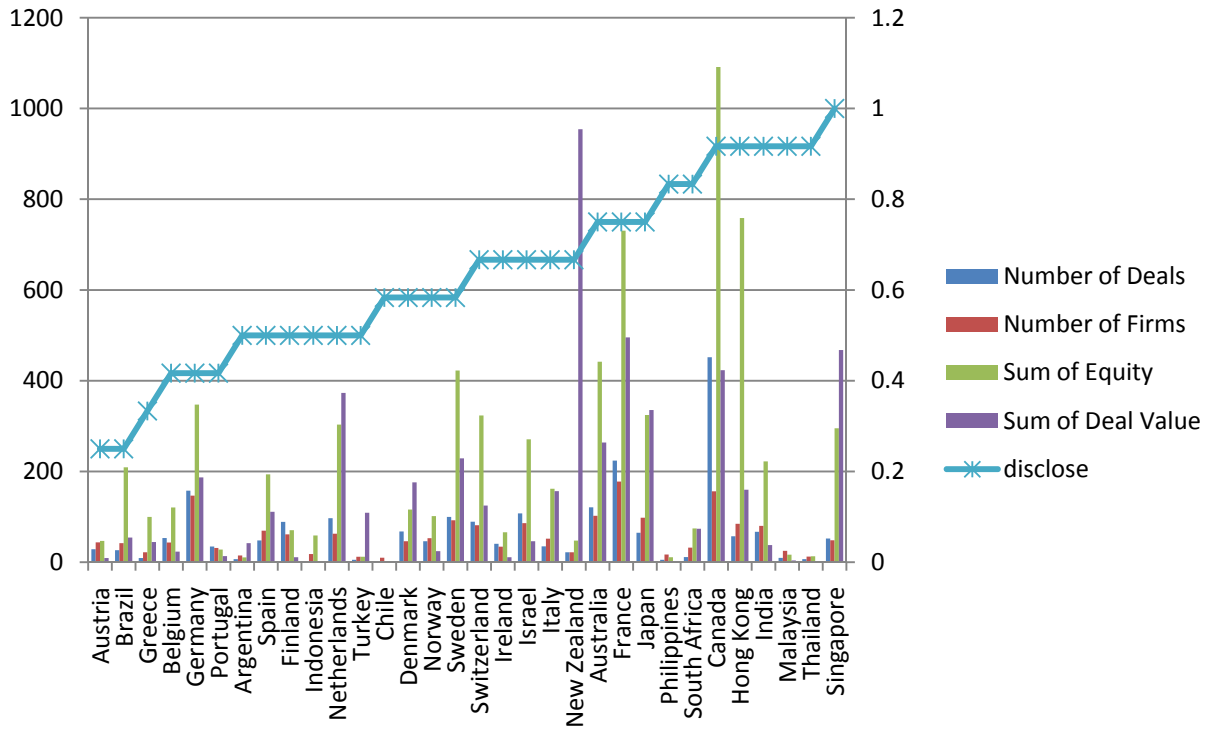
VARIABLES	Sec. Laws =	Sec. Laws =	Sec. Laws =	Sec. Laws =	Sec. Laws =	Sec. Laws =	Sec. Laws =	Sec. Laws =
	Supervisor	Investiga- tive	Orders	Criminal	Public Enforce- ment	Disclosure	Burden of Proof	Private Enforce- ment
	1	2	3	4	5	6	7	8
Panel A: Dep. Variable = Ln(Sum of Equity)								
Expertise	0.096 [0.132]	0.105 [0.099]	0.125 [0.107]	0.156 [0.133]	0.117 [0.110]	0.049 [0.112]	0.138 [0.143]	0.100 [0.137]
VC Syndicate Size	0.242 [0.179]	0.310 [0.201]	0.259 [0.195]	0.426* [0.240]	0.262 [0.180]	0.282 [0.175]	0.392 [0.234]	0.328* [0.193]
Market Cap	-0.002 [0.473]	0.688 [0.469]	0.000 [0.522]	0.931 [0.617]	0.922* [0.002]	-0.001 [0.002]	0.000 [0.004]	-0.062 [0.003]
Market Return	-0.426 [1.240]	-0.625 [1.223]	-0.958 [1.301]	-0.283 [1.336]	-0.475 [1.240]	-0.119 [1.117]	-0.795 [1.241]	-0.462 [1.094]
Ln GDP per capita	0.332 [0.433]	0.552 [0.459]	0.442 [0.498]	0.405 [0.439]	0.542 [0.456]	0.509 [0.359]	0.293 [0.425]	0.402 [0.382]
Hot	-0.154 [0.846]	-0.019 [0.851]	-0.103 [0.874]	-0.139 [0.823]	-0.138 [0.837]	-0.388 [0.646]	-0.025 [0.828]	-0.162 [0.737]
Domestic Credit	0.612 [0.003]	0.000 [0.002]	0.866 [0.002]	-0.001 [0.003]	-0.001 [0.470]	0.122 [0.473]	0.270 [0.587]	-0.001 [0.497]
Judicial Efficiency	0.273 [0.233]	0.075 [0.223]	-0.003 [0.243]	0.054 [0.212]	0.043 [0.221]	0.019 [0.167]	0.072 [0.208]	-0.005 [0.180]
Anti-director Rights	0.450 [0.321]	0.056 [0.316]	-0.037 [0.340]	0.156 [0.393]	0.063 [0.328]	-0.073 [0.325]	0.167 [0.365]	0.006 [0.339]
Securities Laws	2.669*** [0.872]	2.045*** [0.667]	1.756*** [0.589]	1.459 [1.138]	3.123*** [0.874]	5.003*** [1.084]	1.619 [1.037]	4.346*** [1.466]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	152	152	152	152	152	152	152	152
R-squared	0.368	0.402	0.381	0.310	0.410	0.453	0.317	0.400
Panel A: Dep. Variable = Ln(Sum of Deal Value)								
Expertise	0.092 [0.231]	0.130 [0.166]	0.145 [0.164]	0.167 [0.228]	0.150 [0.177]	0.109 [0.198]	0.161 [0.248]	0.156 [0.241]
VC Syndicate Size	0.110 [0.186]	0.240 [0.213]	0.143 [0.221]	0.347 [0.277]	0.175 [0.207]	0.198 [0.225]	0.341 [0.273]	0.285 [0.235]
Market Cap	1.638*** [0.002]	0.004* [0.002]	1.948*** [0.002]	1.645** [0.804]	0.003 [0.003]	1.086 [0.003]	1.391* [0.003]	0.003 [0.002]
Market Return	0.394 [1.534]	-0.267 [1.501]	-0.569 [1.595]	0.186 [1.934]	-0.025 [1.582]	0.195 [1.675]	0.003 [1.821]	-0.053 [1.652]
Ln GDP per capita	0.719* [0.367]	0.936** [0.396]	0.826* [0.434]	0.673* [0.386]	0.937** [0.405]	0.865** [0.366]	0.630* [0.358]	0.726** [0.348]
Hot	1.091 [0.783]	1.169 [0.840]	1.279 [0.825]	1.339 [0.954]	1.135 [0.839]	0.760 [0.868]	1.344 [0.926]	1.098 [0.888]
Domestic Credit	0.001 [0.565]	1.706*** [0.617]	0.004* [0.637]	0.003 [0.003]	1.994*** [0.622]	0.003 [0.656]	0.004 [0.775]	1.033 [0.661]
Judicial Efficiency	0.149 [0.209]	-0.136 [0.244]	-0.263 [0.231]	-0.059 [0.234]	-0.182 [0.218]	-0.165 [0.192]	-0.057 [0.218]	-0.152 [0.220]
Anti-director Rights	0.680 [0.441]	0.101 [0.434]	-0.092 [0.412]	0.277 [0.492]	0.104 [0.422]	0.005 [0.439]	0.285 [0.480]	0.152 [0.464]
Securities Laws	4.127*** [0.879]	2.468** [0.990]	2.416*** [0.771]	0.535 [1.446]	3.793*** [1.192]	5.188** [2.118]	0.678 [1.215]	3.448** [1.626]
Time Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	137	137	137	137	137	137	137	137
R-squared	0.379	0.361	0.373	0.272	0.373	0.359	0.273	0.307

Table 9.
VC Demand (i.e., entrepreneurial spawning) and VC Supply simultaneously estimated

VC Demand and VC Supply are estimated in a simultaneous framework as follows:
 $Spawning_{k,t} = \varphi + \lambda_0 Y_k + \lambda_1 SupplyVCs_{k,t-1} + \lambda_2 SecuritiesLaws_k + \lambda_3 SupplyVCs_{k,t-1} * SecuritiesLaws_k + \varepsilon_k$
 $SupplyVC_{k,t} = \varphi + \lambda_0 Y_{k,t-1} + \lambda_1 SecuritiesLaws_k + \varepsilon_k$, and VC Supply ($SupplyVC_{k,t} = \varphi + \lambda_0 Y_{k,t-1} + \lambda_1 SecuritiesLaws_k + \varepsilon_k$). Spawning is proxied by the number of New businesses from Global Entrepreneurship Monitor and Supply VCs is proxied by the Number of VC Deals. Y is a vector of macroeconomic variables including Market Cap Market Return, GDP per capita, Hot, Domestic Credit, Judicial Efficiency and Anti-director Rights. SecuritiesLaws is either Supervisor, Investigative, Orders, Criminal, Public Enforcement, Disclosure, Burden of Proof, or Private Enforcement. Public Enforcement is the arithmetic average of Supervisor, Investigative, Orders and Criminal. Private Enforcement is the arithmetic average of Disclosure and Burden of Proof. Investment (PC) data specifics are from VentureXpert. Marginal effects are reported and robust standard errors (clustered around country) are given in brackets. *, **, *** indicate significance levels of 10, 5, and 1 percent respectively. Sample term is 1999-2008. All specifications include time dummies and 121 observations.

	Spawning 1	R-squared	VC Supply 2	R-squared
Supervisor	-108.30*** [15.39]	0.81	2.60*** [0.39]	0.63
Supervisor * # Deals	27.97*** [2.97]			
Investigative	-68.75*** [14.30]	0.73	1.83*** [0.27]	0.63
Investigative * # Deals	16.50*** [2.99]			
Orders	-42.11*** [12.69]	0.71	1.41*** [0.26]	0.59
Orders * # Deals	11.03*** [2.55]			
Criminal	13.000 [25.69]	0.66	0.93** [0.46]	0.51
Criminal * # Deals	-0.180 [6.07]			
Public Enforcement	-116.77*** [21.06]	0.76	2.65*** [0.38]	0.64
Public Enforcement * # Deals	28.75*** [4.23]			
Disclosure	-99.10*** [14.63]	0.80	3.07*** [0.54]	0.60
Disclosure * # Deals	29.29*** [3.23]			
Burden of Proof	-129.87*** [13.48]	0.84	1.14** [0.46]	0.52
Burden of Proof * # Deals	29.61*** [2.59]			
Private Enforcement	-128.49*** [15.62]	0.84	2.95*** [0.61]	0.58
Private Enforcement * # Deals	32.11*** [2.92]			

Figure 1.
Disclosure and venture capital investments



This figure presents the average number of deals from 1999 through the end of 2008. Countries are sorted from low to high levels of disclosure requirements. Number of Deals is the number of VC disbursements in each country. Number of Firms is the number of VC firms (x10) in each country. Sum of Equity is the aggregate level of equity received by VCs in each country. Sum of Deal Value is the aggregate level of deal value (/10) in each country. The United States and the United Kingdom are excluded from the graph as they are outliers that limit the depth of the detail shown in the resulting graph when they are included. Source: PricewaterhouseCoopers/National Venture Capital Association MoneyTree(tm) Report.

Notes

¹ Though we can collect SDC data beyond 2007, the data from both the World Bank Entrepreneurship Survey and the Global Entrepreneurship Monitor limit the time frame to 2007.

² <http://www.sba.gov/advo/stats/sbfaq.pdf>

³ Not all of these firms are backed by VCs.

⁴ Rich (2009); similar pushes toward greater regulation of disclosure in VC markets around the world was evidenced from the Financial Service Authority (FSA) (2006) and Financial Accounting Standards Board (FASB) (2008).

⁵ <http://techstartups.globspot.com/2007/09/venture-capital-consolidation-reflects.html>

⁶ This figure is aggregate to the country-year level for the country-level analyses.

⁷ This figure is aggregate to the country-year level for the country-level analyses.

⁸ Because the securities laws indices that we use are specific to one country, we do not attempt to address cross-border VC deals. Please see Iriyama, Li, & Madhavan, 2010; Madhavan and Iriyama, 2009, Ute and Uhlaner (2010), Guler and Guillén (2010), Neilson (2009; 2010) and Bruton, Ahlstrom and Puky (2009) for discussions of this investment scope.

⁹ Several sub indices display parallel test results due to the lack of dispersion in these values across the countries in the sample.

¹⁰ Spawning may likewise be induced by successful VC exits, and our findings are robust to considering exit as the mechanism to induce spawning. These details are not reported below but are available on request.

¹¹ We have also performed the analysis using a contemporaneous vector Y. Results are qualitatively identical and since this specification may suffer from endogeneity issues, we leave it out. Results are available upon request.

¹² In all of our regressions we considered two-way clustering with time as the second dimension (Petersen, 2009), but this two-way clustering did not materially impact the results.

¹³ These results are robust to the inclusion of an indicator variable for Sarbanes Oxley and for the average number of years of secondary education achieved by citizens of a nation. For brevity these results are excluded but are available upon request.

¹⁴ For instance, we also considered variables for bankruptcy laws (Armour & Cumming, 2008), as well as different legal indices reported in La Porta et al. (1998), Spamann (2010) and others.