What Drives Private Equity Activity and Success Globally?

Josh Lerner, Morten Sorensen, and Per Strömberg[*]

1. Introduction

Recent years have seen an explosion of private equity investing in emerging markets. From 2004 to 2007, the dollars raised by funds investing in the emerging economies of Asia, Russia and the former Soviet Union, Latin America, and the Middle East and Africa have exploded, increasing from eight- to thirty-fold.[1] While the structure and consequences of private equity investing in the United States and Great Britain are increasingly well understood, we know far less about the private and social returns of investments in emerging economies.

It is unclear whether the less developed infrastructure, financial, and regulatory systems create obstacles or opportunities for private equity investors in emerging markets. The finance and growth literature suggests that financial development is beneficial for attracting capital. However, private equity investors bring a different set of skills from traditional institutional investors and may thrive in developed nations in opaque markets where they can exploit market inefficiencies.

More specifically, it is generally believed that the main three areas where private equity investors add value are financial engineering, governance engineering, and operational engineering (see Kaplan and Strömberg (2008)):

- Financial engineering refers to steps to add value by making capital structure more efficient: that is, decreasing the cost of capital. Typically, this goal is achieved in buyouts by taking on leverage and bringing in outside capital.

- Governance engineering refers to processes that create value by improving incentives and monitoring in the companies that private equity investors finance. These steps can

---

[1] Emerging Markets Private Equity Association, http://www.empea.net/pdf/2007FundraisingReview_FINAL.pdf (accessed October 20, 2008).

include the imposition of formal monitoring techniques and compensation that links pay to performance.

- Operational engineering refers to initiatives by private equity funds to improve the firms they finance through the provision of formal and informal consulting services to boost production processes, working capital management, marketing and product mix, and related areas.

It is plausible to assume that the costs and benefits of these activities depend on the institutional environment. On the one hand, a sufficiently developed institutional environment may be a necessary condition for private equity investing to work. For instance, Black and Gilson (1998) argue that well-developed equity markets are a necessary condition for venture capital investing to work, because venture investors rely on the ability to exit their investments through initial public offerings (IPOs). On the other hand, private equity may thrive in markets that work less efficiently and create value by making illiquid investments. This claim can be supported by the observation that the most successful years for buyout investing in the United States were the years 1991 through 1993 and 2001 through 2003, periods when alternative sources of debt and equity capital were largely unavailable.

To address this issue, we create what we believe is the most comprehensive sample of private equity investments across nations. We look at the nature and outcomes of these private equity deals across nations that differ in the developments of their financial sectors, governance, regulatory systems, and operational infrastructures.

We use a variety of measures to characterize the financial, governance, and operational environments of the countries in our sample. We then relate these measures to

deal volumes and characteristics. In the final section, we also examine transaction structures and outcomes (for instance, the type of exit).

We find seven patterns:

- Emerging markets account for a very modest share of private equity activity over the years 1990 through 2008. The share is growing in recent years, particularly in the growth equity category.

- Private equity represents a greater share of the gross domestic product (GDP) in nations that are wealthier and whose wealth is growing more quickly.

- Financial markets matter for private equity activity. Interestingly, only equity market development matters, not the provision of debt, and the effects are particularly strong for venture capitalists. One interpretation is that exiting through public offerings is particularly important for these firms. Otherwise, we find little support for the suggestions of the importance of the institutional environment for financial engineering.

- The measures of governance engineering are somewhat inconsistent. Protections of minority shareholder rights have explanatory power, but only for venture firms, suggesting again the importance of healthy exit markets. Few consistent results appear for buyouts.

- The measures of operational engineering appear to be particularly important for buyout activity. In particular, the presence of barriers to free trade, greater complexity in establishing new entities, and greater corruption are associated with fewer LBOs.

- Transaction structures respond to the economic environment. Minority transactions are associated with faster-growing countries. The presence of syndicated investments are

associated with larger deals and with less favorable fundraising environments, which may be attributable to liquidity constraints.

- Deals in wealthier countries are less likely to be successful, which presumably reflects their greater risk. Deals undertaken in "hotter" private equity markets--e.g., following relatively large private equity fundraising markets--are more likely to fail and less likely to experience a successful exit.

This paper is related to a number of earlier papers that examine the cross-country determinants of private equity. A number of studies (e.g., Gompers and Lerner (1998)) have examined the determinants of private equity activity in a single nation. We are aware of three efforts to undertake cross-country comparisons. The most influential of these, Jeng and Wells (2000), examines the determinants of private equity activity in 21 countries. Mayer, Schoors, and Yafeh (2005) looks at venture activity in four nations. Aizenman and Kendall (2008) focus on venture capital volume across a broad sample of countries.

The plan of this paper is as follows. In Section 2, we develop a set of hypotheses which we will test in the analysis. Section 3 describes the construction of the sample. We present the analysis in Section 4. The final section concludes the paper.

2. Hypotheses

Many accounts of the private equity industry in the United States and Great Britain have suggested that there has been an evolution of the strategies employed by the groups over the years. In particular, many of the pioneering groups that emerged during the 1980s were characterized by an emphasis on financial engineering. As the private equity market has matured in the developed world, financial engineering—and, to some extent, governance

engineering—has become a commodity. Private equity firms have started to differentiate themselves by an emphasis on operational value-added.

This process of evolution in these two nations poses a central question for this paper: what is the potential of private equity funds to add value across countries through these routes? In this section, we will consider each of the three routes to creating value in turn.

Developing economies are typically characterized by underdeveloped financial systems. Using most frequently employed metrics, both the extent and liquidity of equity and debt financing are typically underdeveloped. These considerations suggest two contrasting hypotheses:

H_0: *Lower financial development results in financial engineering being more difficult, making private equity investments less profitable or likely to succeed. This view suggests that private equity transactions should be less frequent in emerging markets, and less likely to succeed in countries with limited financial development.*

H_1: *Lower financial development creates more opportunities for private equity funds to add value through financial engineering and bringing in outside capital when local capital markets are imperfect. Private equity activity may benefit from limited financial development if these firms can address market failures that emerge in these settings. These investors may be more likely to undertake deals where the benefits are purely financial—e.g., simply raising capital for companies—in countries where financial development is more limited.*

One possibility is that the impact of debt and equity markets may be different. For instance, the absence of equity markets may create opportunities for private equity funds. Firms that would otherwise go public may instead need to rely on private equity investors. On the other hand, the presence of active debt markets may be a vital complement to these investments.

Regarding the provision and effectiveness of governance engineering, a crucial consideration is the state of development of legal institutions. Emerging markets are often characterized by a lower ability the enforce contracts and property rights. These observations again suggest two contrasting hypotheses:

H_0: *In emerging markets, contracts cannot be written in an optimal way due to the limited ability to enforce these agreements. These limitations make private equity investing less profitable in other settings. In support of this claim, Lerner and Schoar (2005) show that in emerging economies where civil disputes take less time to resolve, private equity groups are more likely to employ convertible preferred stock, which theory suggests lead to more efficient contracts. In these nations, returns to private equity investments are high than in those where investors are apparently unable to employ such agreements.*

H_1: *Alternatively, poor institutional environment may lead to badly governed firms. If private equity groups can successfully overcome these difficulties, they may have more investment opportunities in these markets.*

The final pair of hypotheses relate to operational engineering. In many emerging economies, the underlying infrastructure, the extent of good business practices, and the

availability of human capital, among other features, are at a lower level. We can formulate two contrasting views as to how it may affect the value of operational engineering:

H_0: *The lack of operational infrastructure makes it harder for private equity investors to add value. Even if the fund managers have insights which can improve the firms' operations considerably, they are unlikely to be able to identify the skilled managers and consultants to implement them. Similarly, the limited skills of other businesses and poor infrastructure are likely to make it difficult to implement policies that have worked well in developed markets, such as just-in-time inventory management and targeted marketing campaigns.*

H_1: *A contrasting view is that inexperienced managers and unsophisticated business practices give rise to lots of "low-hanging fruit," that is, opportunities to introduce modest changes that have a significant economic impact.*

3. Data Sources

We employed two broad sources of data in the analysis. The first characterized the countries in which the investments were made; the second characterized the private equity transactions themselves. Regarding the first task, we discuss the sources of the key country-level independent variables in Section 4 as we employ them. The construction of the sample of investments, however, requires a more extended discussion.

We use the CapitalIQ database to construct a base sample of private equity transactions. We select all private placements and M&A transactions in CapitalIQ where the acquirer(s) include (at least) one investment firm that has a reported investment interest in at least one of the following stages: "Seed/Startup," "Early Venture," "Emerging Growth,"

"Growth Capital," "Bridge," "Turnaround," "Middle Market," "Mature," "Buyout," "Mid Venture," "Late Venture," "Industry Consolidation," "Mezzanine/SubDebt," "Incubation," "Recapitalization," or "PIPES."

In order to track the ultimate fate of these transactions, we first match this sample with the CapitalIQ acquisition database to obtain any subsequent M&A transaction that our LBO firms have been involved in. This gives us information which is used to infer trade-sale exits, divestments, and add-on acquisitions. We then match our sample firms with the SDC and CapitalIQ IPO databases to track down prior and subsequent initial public offerings. Finally, we conduct extensive web searches on a firm-by-firm basis to infer the ultimate outcomes of these transactions.[2]

Although we believe we have constructed the most comprehensive data base of private equity transactions to date, we will still only have a partial coverage of these transactions for three reasons. First, our sampling methodology does not pick up all the private equity transactions in the CapitalIQ database, due to the nature of the CapitalIQ classification methodology, as discussed in Strömberg (2008). Second, even when the CapitalIQ classification is correct, there are quite a few judgment calls that have to be made. For instance, the distinction between venture capital, growth equity, and buyouts are not always sharp. Moreover, we do not include add-on acquisitions by LBO firms as separate LBO transactions, although again the distinction is not necessarily always sharp. Third, CapitalIQ started its data service in 1999 and their coverage has increased over time. Although CapitalIQ has been back-filling their data using various sources, their coverage is likely to be incomplete for the earlier part of the sample.

---

[2] PIPE transactions, which remain public traded after the investment, posed a challenge to the outcome classification scheme. We exclude cases where private equity groups sell their stakes in PIPEs from many of the analyses below.

Strömberg (2008) was able to assess the coverage of the U.S. and Western European buyouts by comparing the CapitalIQ data with that in published studies using other sources. Given the paucity of systematic research in emerging market private equity, we are limited in our ability to calibrate the completeness of the database. Nonetheless, we can assess the completeness of the database by comparing our sample with the databases of the Emerging Markets Private Equity Association (EMPEA). EMPEA is an "umbrella" trade association which represents the private equity industry in all emerging market nations. As part of their mandate, they have compiled the records of development finance institutes and other major limited partners from intensive interviews and other sources, creating what they believe to be a virtually complete listing of funds active in emerging market private equity.

A comparison of investor names indicates that our sample includes transactions by at least 1066, or 63%, of the 1694 private equity groups in their compilation. They do not have a count of the number of deals by each organization, so it is impossible to characterize the weighted coverage. From a qualitative review of the unmatched firms in the EMPEA list, however, it is clear that many of the firms missing from our sample are (a) small, locally based funds not captured by CapitalIQ, (b) susbisidaries of joint ventures of larger groups, whose deals CapitalIQ appears to consolidate under the parent entity's name, or (c) government-owned or –sponsored funds apparently not covered by CapitalIQ.

4. **The Analysis**

This section presents the key analyses we undertake with these data. We begin with summary statistics, and then analyze the three sets of hypotheses delineated above.

A.   Summary Statistics

Tables 1 and 2 display the total number of transactions by geographical region and the type of private equity investment. Based on the criteria delineated above, we have a sample of 76,398 transactions closed by private equity investors worldwide from 1984 through September 2008. (For the rest of the analysis, we will ignore observations prior to 1990, since these are likely to be incomplete.)

The classification of "Venture Capital," "Growth Capital," "Leveraged Buyouts," and "PIPEs" follows the classification in CapitalIQ. "Other Acquisitions" refers to M&A transactions undertaken by private equity funds that are not classified as leveraged buyouts or similar classifications, such as a going private transaction, management buyout, JV/LBO, in CapitalIQ. "Other Private Placement" refers to private placements undertaken by private equity funds that are not classified as a venture capital or growth capital transaction in CapitalIQ. For the bulk of the analyses, we will ignore the roughly 10% of the transactions in the final two categories, since they appear to be an amalgam of different types of transactions.

In making the geographical breakdowns, "Rich Asia Pacific" includes Japan, Singapore, Hong Kong, Macao, South Korea, Australia, and New Zealand. All other Asia-Pacific countries are classified as "Developing Asia". "Rich Middle East" includes United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, and Israel. All other Middle East countries are included in the "Developing Africa and Middle East" group. "Western Europe" includes the EU countries as well as Norway, Switzerland, the Mediterranean islands, the English Channel islands, and the Caribbean islands of Anguilla, British Virgin Islands, Aruba, Bahamas, Bermuda, and Cayman Islands. Other Caribbean Islands are included in the "Latin America and Caribbean" region.

Several interesting patterns emerge from this analysis. Venture capital accounts for more than 43%, and growth capital for 16% of all transactions undertaken, while buyouts only account for 22% and PIPEs for 7%. When weighting by volume, however, the picture changes dramatically. Buyouts and other similar acquisitions account for the vast majority of private equity transactions in terms of volume (more than 80%). All tabulations are in millions of 2008 dollars.[3]

The developed world accounts for 97% of all private equity activity in terms of dollar volume and 94% in terms of number of transactions. Within the group of rich countries, North America accounts for 58% of volume, Western Europe for 34%, and other developed countries in Asia and the Middle East for about 5% of worldwide volume.[4] The North American dominance is particularly large in venture capital. Growth capital deals, however, are disproportionately large in the developing world and in the Middle East.

---

[3] One very important caveat is that the transaction value for an M&A transaction is typically measured as the value of the company acquired, while the transaction value for a private placement (which includes VC and growth capital transactions) is measured as the amount of capital provided. To make this comparable with tabulation of private equity fundraising, one should (1) adjust the LBO volumes for the fraction of equity put into the deal (i.e., maybe only 30% of the transaction value), and (2) adjust for the fraction of the equity acquired by the private equity fund to the extent this is less than 100% (which it will be e.g. if the private equity fund teams up with a strategic buyer, or if the seller retains a fraction in the firm). We will explore this issue in a future draft.

[4] The relative LBO volumes differ somewhat from the figures in Strömberg (2008), where Europe had around 40% of the activity and North America 52%. The main reasons for this are (1) the slightly different imputation procedure (which now includes non-LBOs in the estimation procedure),and (2) the inclusion of non-sponsored MBO deals and buyouts sponsored by investment firms without a reported investment stage interest in the earlier paper.

Tables 3 through 6 present the aggregate volume data by year, for all transactions and then broken up into buyout, venture, and other deals. The explosion of activity of the mid-2000s, particularly among leveraged buyouts, is readily apparent. The growing share of transactions in "Developing Asia," "Rich Middle East," and other emerging markets in recent years is also clear. Again, all figures are in millions of 2008 dollars.

B.   Testing the Hypotheses

In each of the regressions below, we undertake a similar approach. In particular, we undertake the analyses at the country level: that is, we use as the dependent variable the average ratio of the volume of private equity transactions (or private equity transactions of a given type) to gross domestic product over the 1990 to 2008 period. We obtain the gross domestic product, both in aggregate and on a per capita basis, from the World Bank (2007 and earlier years). We use this approach, rather than separate observations for each country and each year, because we worry about the non-independence of the observations. Given that the features of the countries and those of the nations change slowly, we may be getting inflated significance levels if we use annual data in a pooled panel regression.

In each table, we will use independent variables associated with one of the hypotheses delineated above. Due to the uncertainty of the data prior to 1990, as noted above, we use this later cut-off point. We undertake the regressions in case in levels (using the average volume of private equity transactions as a percentage of GDP as the dependent variable) and in logarithms (using the log of per capita private equity transactions and other measures). Our measures of GDP per capita, whether in logs or levels, are expressed in tens of thousands of 2008 dollars. In the log specification, observations will be dropped if there are no transactions in a given country.

In Table 7, we take an initial look at the relationship between GDP and private equity activity. The dependent variables are as before. The key independent variable is the average GDP per capita and is taken from the World Bank (2007 and earlier years). We find that wealthier nations have more private equity activity, even though the transactions are scaled by GDP. This relationship holds true for all transaction types, from venture capital to buyouts (GC denotes Growth Capital).

In Table 8, we turn to examining the financial engineering hypotheses. In particular, we add two measures of financial market development: the average ratio of stock market development to GDP, and the average ratio of private credit to GDP. These two measures are computed between 1990 and 2006 and are again taken from the World Bank (2007 and earlier years). In these regressions, we control not just for the level of GDP, but also its average annual growth.

In these regressions, the result that rich countries have more private equity activity remains. We also find that activity is higher in countries with higher GDP growth, with the exception of growth capital deals. Turning to our hypotheses, local stock market development seems important and positive for deal activity, while local credit market development does not have significant explanatory power.

Interestingly, the effect of public market development seems to be strongest for venture capital deals. One possible interpretation of this result is that local financial markets are important because they provide an IPO exit route, which may be particularly important for venture activity (consistent with the arguments of Black and Gilson (1998) and the findings of

Jeng and Wells (2000)). The effects of public market activity may be weaker in other transactions for two reasons. First, there may be other exit routes, such as trade sales, more readily available for these transactions. Alternatively, the presence of public exits may simultaneous stimulate (by providing an exit route) and depress (by providing an alternative source of financing that firms can tap into in lieu of private equity) these deals. Because of the greater information problems surrounding venture deals, this second effect may be less important for these transactions. The weak effects for buyouts and the unimportance of private debt capital undercut the suggestions of the importance of the local environment for financial engineering in these settings.

We then examine in Tables 9 through 11 the relationship between private equity transactions and the contractual environment, in which we seek to test the hypotheses under the heading of "governance engineering." The additional independent variables used are:

(1) the logarithm of the number of calendar days to enforce a contract of unpaid debt worth 50% of the country's GDP per capita, taken from Djankov, McLiesh, and Shleifer (2007).

(2) An index aggregating creditor rights, following La Porta, et al. (1998). The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights). It was computed for 2003 and is taken from Djankov, et al. (2008).

(3) The Index of Economic Freedom Property Rights Index, compiled by the Heritage Foundation. The property rights measure is an assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state. Again, a higher number is associated with more freedom. This measure is again obtained from Djankov, et al. (2008).

Overall, the results are quite unimpressive. There is weak evidence that creditor rights matter for LBO transaction volume, although only for the log specification. Similarly, weak evidence appears that the property rights index matters for venture and LBO volume, although again only for the log specification. One problem is that there is a high correlation between stock market development and the various creditor and property rights variables. This introduces a potential multicollinearity problem, which may make reduce the statistical power of the results.

We take another attempt to examine the governance hypotheses in Table 12. The independent variable is an index of minority shareholder rights is formed by adding one when:

(1) the country allows shareholders to mail their proxy vote;

(2) shareholders are not required to deposit their shares prior to the General Shareholders Meeting;

(3) cumulative voting or proportional representation of minorities on the board of directors is allowed;

(4) an oppressed minorities mechanism is in place;

(5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders Meeting is less than or equal to ten percent (the sample median); and

(6) when shareholders have preemptive rights that can only be waived by a shareholders meeting.

(The source is La Porta, et al. (1998).) The range for the index is from zero to six, with a higher score associated with more minority rights. Our rationale for including this measure is that these rights are likely to affect the ability of private equity investors to exit investments

via IPOs. Shareholders may be reluctant to purchase stakes in firms where private equity groups have major holdings unless they have such minority protections.

In the regressions, we find that minority shareholder rights are important for venture and growth capital deals, but not for LBOs. This is consistent with the exit story delineated above: i.e., the ability to exit via an IPO and convince new minority shareholders to buy the stock is much more important for venture investors.

Our final look at the governance hypothesis in Table 13 employs a broader measure of investor protection. This measure, which is on a score of 0 to 10, is the result of a principal component analysis of disclosure requirements, liability standards, and minority shareholder rights. This is taken from La Porta, Lopez-de-Silanes, and Shleifer (2006). Once again, a high score indicates a country with more protection of investors.

The results here are very similar to the analysis of minority shareholder protection in Table 12. (Indeed, this measure may be preferable due to its more comprehensive nature.) Consistent with the earlier results, investor protection does not impact LBO activity, but it does impact venture activity and, to some extent, growth equity and PIPEs. This is consistent with the idea that this measure captures the ability to undertake successful stock market exits, which is most relevant for these investments. Interestingly, the inclusion of this variable also decreases the effect of stock market capitalization.

Next, we turn to the relationship between private equity volume and the business environment, which allows us to explore the hypotheses delineated as "operational engineering" above. The key independent variable in Table 14 is the Economic Freedom of

the World Freedom to Trade Internationally Index from the Fraser Institute. This index measures taxes on international trade, regulatory trade barriers, the size of the trade sector relative to expected level for the nation, black-market exchange rates, and international capital market controls. A higher index score means more freedom to trade. It is obtained from Djankov, et al. (2008).

The regression analysis suggests that the absence of trade barriers seems to significantly increase private equity activity in aggregate. The effect seems driven by LBO activity, though the buyout analysis is only significant when we use logarithms. This result might partially be due to the industry mixture: the industries that buyout investors traditionally focus on may be more prone to these kinds of trade distortions. There seems to be some multicollinearity between the trade measure and that of stock market capitalization, though, which suggests a need for a degree of caution in the interpretation of the results.

A second barrier to private equity transactions may be restrictions on employment changes. In the analysis in Table 15, we use as the key independent variable an employment rigidity index. This index is itself an average of three sub-indices: a difficulty of hiring index, a rigidity of hours index, and a difficulty of firing index. The measure is taken from Djankov, et al. (2008), and is originally derived from the World Bank's *Doing Business* series and Botero, et al. (2004). Again, a higher index means a more favorable environment for operational engineering, that is, less rigidity.

Unlike Jeng and Wells (2000), we are unable to find any relationship between employment rigidities and private equity activity when GDP and stock market capitalization

are controlled for. These barriers do not seem to play any major (or consistent) role for private equity activity.

Our next measure, analyzed in Table 16, looks at barriers to entrepreneurship. We look at the number of procedures to start a business, which is computed by the World Bank in its *Doing Business* database. This variable includes all procedures that are officially required for an entrepreneur to start up and formally operate an industrial or commercial business. Here, a higher measure means more rigidity. Across the nations, there are a mean of nine steps and a maximum of 17.

Here we get a strong result. The complexity of business regulation is indeed significant negative for private equity activity in general. The effect is particularly strong for LBO activity. Maybe somewhat surprisingly, these rigidities do not appear to affect VC activity in any significant way.

An alternative way to look at the effectiveness of operational engineering is to look at corruption. In environments rife with corruption, the ability of private equity investors to affect significant changes may be stymied. The independent variable in Table 17 is an index measuring "the exercise of public power for private gain" in the year 2000. It captures aspects ranging from the frequency of additional payments to get things done to the effects of corruption on the business environment. A higher index indicates a lower level of corruption. The source is Kaufmann, Kraay, and Mastruzzi (2003).

The results here are somewhat stronger. There are no consistent patterns on the aggregate level. Buyouts, however, appear to be sensitive to the volume of corruption: less corrupt nations are associated with a high volume of these deals. The same pattern appears

when it comes to venture transactions when using logs. (The negative coefficient on the corruption index in one of the PIPE regressions is more difficult to explain.) One problem is that we only have this variable for a limited number of observations, which may account for the limited explanatory power.

The penultimate analysis in this section in Table 18 and 19 looks at the impact of taxes. The ability to optimize firms' taxes may be an important source of value in these transactions (see Kaplan (1989)). In these tables, we employ two measures, which (rather imperfectly) capture the ability of private equity investors to add value through changing the tax structure. The first of these is the time to comply with taxes (in hours per year). The measure captures the time to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, value added or sales tax, and labor taxes, including payroll taxes and social security contributions. The source is the World Bank's *Doing Business* database. The second measure is the tax rate for the highest bracket of all taxes on corporate income. If there are different corporate taxes (for instance federal, state, and local), the measure takes into account the deductibility of one or more of those taxes when computing the tax rate for corporate income. This measure is obtained from Djankov, et al. (2008).

The tax measures do not seem to have a significant effect on private equity activity. While the coefficient is generally negative, it is almost always generally insignificant. (The positive effect of taxes on PIPEs is counterintuitive and probably indicative of something else.) Given the relatively imprecise relationship between these two proxies and the ability of private equity investors to reduce the tax rates of the firms in their portfolio, our interpretation of this result must be cautious.

In Table 20, we examine the impact of all the explanatory variables simultaneously. We report a multinomial regression, in which we employed all the key independent variables used in the tables above. While our interpretation must be cautious, as a number of these explanatory variables are correlated with each other, the results may indicate the robustness of the associations seen above. Among the most striking results were the strong association between GDP per capita and the volume of private equity transactions, the lack of significance of the measures of the nations' financial market conditions and their suitability for governance engineering, and the explanatory power for LBO activity of a number of proxies of the conduciveness for operational engineering in the various countries (particularly in the levels specification).

Table 21 presents another way to analyze private equity activity, which is to examine the determinants of volume of investments in a given country on an annual basis. Per capita GDP, GDP growth, and the property rights and freedom to trade indexes now have time series as well as cross-section variation. Moreover, we control for the time-series effect of conditions in the private equity market, measured as the aggregate sum of fundraising in the U.S. market (as computed by VentureXpert) normalized by U.S. stock market capitalization in the year preceding the transaction. (In unreported regressions, we use as an alternative proxy the difference between the London Interbank Offered Rate (LIBOR) and the average rating for BB bond offerings for that country and year, taken from Datastream. The results are qualitatively similar to the private equity fundraising variable.) Note that all other variables only vary cross-sectionally.

As opposed to the previous analysis, the panel results show that volume of investment is positively related to private equity fundraising (and in unreported specifications, negatively

related to high-yield spreads), as could be expected. The other country effects are similar. Two exceptions are the corruption index and the time to comply with taxes, which both go the opposite way compared to what was expected (for instance, a high corruption index, which denotes low corruption, is associated with less investment). Since these variables do not change year-by-year, and their sign and significance is different from the cross-sectional analysis, these results should be taken with a grain of salt.

C.   Determinants of Transaction Structure and Success

While there may be less clear predictions *ex ante,* we can also look at the ways in which transaction structures and outcomes vary with the conditions of the country and the market.

The first set of supplemental analyses looks at the characteristics associated with transactions of various types. We begin with some summary statistics, reported in Table 22. "Syndicated deals" are deals where there is more than one investor participating in the transaction. "Non-PE investor in syndicate" denote deals where in addition to at least one private equity fund investor, there is also at least one investor that is not a private equity fund in the syndicate. "Minority deal" denotes transactions where the investor syndicate acquires less than 50% of the equity in the target company. We also look at whether the investor group just includes domestic and/or foreign investors, where the classification of "domestic" and "foreign" investors is done at the country of the target firm.

Not surprisingly, some of the most dramatic differences appear when comparing transactions of different types. LBO deals are less likely to be syndicated, less likely to involve non-PE fund investors, and very unlikely to be minority deals. The opposite is true for

venture deals. Cross-border deals also vary significantly across region, being the least likely in North America, Western Europe, and the rich Middle-East countries. Hence, this decision seems to be significantly driven by the availability of a domestic private equity industry. Finally, minority deals seem overall to be less likely in the developing world, consistent with Lerner and Schoar (2005).

In next two tables, we examine econometrically the drivers of investment structure. In Table 23, we examine the determinants of cross-border deal activity. The dependent variable in regressions (1) through (3) is a dummy variable taking the value of one if at least one of the participating investors is based in the same country as the target company. The dependent variable in regressions (4) through (6) is a dummy variable taking the value of one if at least one of the participating investors is based in a different country than the target company.

In Table 24, we examine the determinants of minority transactions, syndication, and the participation of investors that are not private equity firms. The dependent variable in regressions (1) through (3) is a dummy variable taking the value of one if investors acquire a minority stake in the target company. The dependent variable in regressions (4) through (6) is a dummy variable taking the value of one if there are at least two investors participating in the deal. The dependent variable in regressions (7) through (9) is a dummy variable taking the value of one if the investment syndicate includes at least one investor that is not a private equity firm.

We observe the following patterns in the two tables:
- The results indicate that cross-border deals are less common in developed country deals and less common for U.S. and Western European targets. Similarly, in countries

22

with better investor protection (and more developed stock markets), cross-border deals are less common. This is inconsistent with the view that local investors are more crucial when local knowledge is more important, which is presumably the case in developing countries, and more consistent with developing countries being unable to develop a local private equity industry, thus having to rely on foreign investors. The one exception is "procedures to start a business", our "operating engineering" measure, which is positively related to the presence of local investors and negatively related to cross-border deal activity.

- There is also some indication that cross-border deals are also more likely for larger deals, but less likely for buyouts, although this result is sensitive to the multi-collinearity between these variables. Finally there is a strong trend towards more cross-border deal activity over time, while there are no clear-cut relations with market conditions.

- Minority transactions and deals involving non-PE investors are associated with those in faster-growing nations, although the interpretation is not clear. Syndicated deals are less likely in environments with extensive fundraising. Similarly, syndication and non-PE investors are more likely for larger transactions. These results collectively suggest that private equity fund liquidity constraints is an important driver of syndication.

- There is no consistent relationship between country governance and infrastructure variables and deal structures.

The second analysis in this section looks at what happened to these investments. Table 25 shows the exit status of the transaction by July 1, 2008, sorted by the geographical region and the type of private equity investment. (In Panel A, we use all investments through 2008, even though the prospects that the recent deals will be exited are considerably lower; in Panel

23

B, we only use transactions through 2005, which have had at least two-and-a-half years to be exited.)

The analysis focuses on the type of exit: i.e., whether the firm was liquidated or went bankrupt, was acquired, or went public. (The remaining firms' outcomes remain still to be determined.) We cannot observe the returns that the investments garner, but a substantial body of research suggests that, at least in developed nations, the most successful investments in general are those that go public. We report results for different classes of private equity transactions

The higher fraction of exited transactions in Europe and the US could be an indication of three factors. First, it may reflect the greater success of investments in these markets. Second, it may reflect underreporting of exits outside of these regions: in emerging economies in particular, so failed deals are likely to be hidden in "unknown exits" and "not exited" deals. Third, the higher failure rates in US and Canada, and in "Rich Middle East" (largely driven by Israeli companies), may reflect the greater representation of venture-backed companies in these markets. The reported failure is higher in venture capital and lower in LBO deals, as could be expected.

The final two tables examine these patterns econometrically. Table 26 examines the determinants of deal failure, with the dependent variable being a dummy variable taking the value of one if the company is out of business, liquidated, or financially reorganized by July 2008. In Table 27, the focus is conversely on deal success. The independent variable in regressions (1) through (5) is a dummy variable taking the value of one if the target company is exited by the investors, and if in addition the company is either publicly traded or a

subsidiary of another company in July 2008. The dependent variable in regressions (6) through (10) is a dummy variable taking the value of one if the target company is exited by the investors, and publicly traded in July 2008. PIPE transactions are excluded from the analysis.

Several patterns emerge from the analysis:

- Failures, particularly in VC investments, are more frequent for companies based in nations with larger per capita GDPs. Once again, this result may partial reflect the greater reporting of these transactions. Alternatively, more risky deals are undertaken in richer countries, and in the U.S. in particular.

- Investments which are raised in the wake of a robust private equity fundraising market are less likely to lead to an acquisition or an IPO and more likely to fail. This pattern is particularly true for venture deals. The pattern is consistent with a variety of work examining the impact of market cycles, which suggests that periods with substantial fund inflows lead to overinvestment and lower returns (e.g., Kaplan and Schoar (2005), Lerner, Schoar and Wongsunwai (2007)). Similarly, in unreported regressions, failure rates are significantly lower (and when success is measured as the company being either public or acquired, success is more likely) when interest rate spreads are higher, consistent with Axelson, et al. (2008).

- Larger transactions are more likely to lead to an outcome of some type, whether success or failure. Presumably, there is greater room or pressure for a resolution. The result regarding failures seems counterintuitive but may be a result of underreporting and multicollinearity with deal type (since it does not hold for the buyout subsample).

- Given the modest expected returns and the large stakes, buyouts are less likely to be failures than other transactions, while venture and growth equity investments are most likely to fail. But buyouts are also less likely to unambiguously succeed as well.

- High creditor rights are positively related to failures, indicating that the ability of investors to force companies into bankruptcy may be important. Similarly, deals in countries with better investor protection are in a number of specifications more likely to experience a successful exit.

- Deals in less favorable "operating engineering" environments, measured as the number of procedures to start a business, are less likely to experience a successful exit for most specifications, and the results are particularly consistent for buyouts.

- Minority investments are more likely to be successful. Those with a non-private equity investor are more likely to be failures, and less likely to have a successful outcome.

Combining the exit results with the earlier results on the determinants of volume we see that many of the variables that positively affect volume, such as better investor protection and fewer procedures to start a business, also increase the likelihood of a successful deal outcome. The notable exception is private equity fundraising activity, which not surprisingly increases deal volumes, but is negatively correlated with subsequent deal success, consistent with "to much money chasing too few deals" in these markets.

5. **Conclusions**

This paper seeks to understand the extent to which private equity investors add value to portfolio firms across nations. To do this, we estimate cross-national regressions, which seek to explain the average volume of private equity investments in each country by examining various features which are likely to be associated with different types of value creation.

We find several stark patterns in the data. On an aggregate level, emerging markets account for a relatively modest, though growing, share of private equity activity over the years 1990 through 2008. This pattern reflects the tendency of private equity to focus on nations that are wealthier and whose wealth is growing more quickly.

When we seek to relate the cross-national patterns of private equity to our proxies for the different types of value added, we find three results. Financial markets matter for private equity activity. Interestingly, only equity market development matters, not the provision of debt, and the effects are particularly strong for venture capitalists. Second, the measures of governance engineering are somewhat inconsistent. Protections of minority shareholder rights have explanatory power, but only for venture firms. Finally, the measures of operational engineering appear to be particularly important for buyout activity. In particular, the presence of barriers to free trade, greater complexity in beginning new businesses, and more corruption are associated with fewer LBOs.

We also examine the relationship between national and market conditions and transaction structures and outcomes. We find that transaction structures respond to the economic environment: for instance, the presence of syndicated investments is associated with less favorable fundraising environments and larger deals, suggesting the importance of capital constraints. Transactions in wealthier nations are more likely to fail, which presumably reflect the greater risks that investors in these markets are willing to take on in these settings. Deals undertaken in "hotter" private equity markets are less likely to experience a successful exit.

While we must be cautious in drawing conclusions from these associations, these results suggest a nuanced picture of private equity development. For venture investors, the ability to exit investments via the public market appears to be a critical factor. The results also suggest that barriers to the types of operational engineering that are frequently associated with buyouts can also deter these types of investments and make the ones that are undertaken less successful, suggesting the importance of this form of value-added.   Still, a large caveat to this analysis is that a huge fraction of worldwide historical private equity volume occurred in the last three years and most of these deals are not exited.   As a result, a final verdict of the success drivers of private equity investment is yet to come.

References

Aizenman, J., and J. Kendall, 2008, The internationalization of venture capital and private equity, Working Paper No. 14344, National Bureau of Economic Research.

Axelson, U., P. Stromberg, and M. Weisbach, 2008, The financial structure of private equity funds, *Journal of Finance*, forthcoming.

Black, B. and R. Gilson, 1998, Venture capital and the structure of capital markets: banks versus stock markets, *Journal of Financial Economics* 47, 243–77.

Botero, J., S. Djankov, R. La Porta, F. Lopez-De-Silanes, and A. Shleifer, 2004, The regulation of labor, *Quarterly Journal of Economics* 119, 1339-1382.

Djankov, S., T. Ganser, C. McLiesh, R. Ramalho, and A. Shleifer, 2008, The effect of corporate taxes on investment and entrepreneurship, Unpublished working paper, Harvard University.

Djankov, S., C. McLiesh, and A. Shleifer, 2007, Private credit in 129 countries, *Journal of Financial Economics* 84, 299-329.

Gompers, P., and J. Lerner, 1998, What drives venture fundraising?, *Brookings Papers on Economic Activity—Microeconomics* 149–92.

Jeng, L., and P. Wells, 2000, The determinants of venture funding: Evidence across countries, *Journal of Corporate Finance* 6, 241–89.

Kaplan, S.N., 1989, Management buyouts: Evidence on taxes as a source of value, *Journal of Finance* 44, 611-632.

Kaplan, S.N., and A. Schoar, 2005, Private equity performance: Returns, persistence, and capital flows, *Journal of Finance* 60, 1791-1823.

Kaplan, S.N., and P. Strömberg, 2008, Leveraged buyouts and private equity, Working Paper No. 14207, National Bureau of Economic Research.

Kaufmann, D., A. Kraay, and M. Mastruzzi, 2003, Governance matters III: Updated governance indicators for 1996-02, Unpublished working paper.

La Porta, R., F. Lopez-de-Silanes, and A. Shleifer, 2006, What works in securities laws?, *Journal of Finance* 61, 1-32

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1998, Law and finance, *Journal of Political Economy* 106, 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1999, The quality of government, *Journal of Law, Economics and Organization* 15, 222–279.

Lerner, J., and A. Schoar, 2005, Does legal enforcement affect financial transactions?: The contractual channel in private equity, *Quarterly Journal of Economics* 120, 223-246.

Lerner, J., A. Schoar, and W. Wongsunwai, 2007, Smart institutions, foolish choices: The limited partner performance puzzle, *Journal of Finance* 62, 731-764.

Mayer, C., K. Schoors, and Y. Yafeh, 2005, Sources of funds and investment activities of venture capital funds: Evidence from Germany, Israel, Japan and the United Kingdom, *Journal of Corporate Finance* 11, 586-608.

Strömberg, P., 2008, The new demography of private equity, Unpublished working paper, Swedish Institute for Financial Research.

World Bank, 2007, *World Development Indicators*, Washington, World Bank (and earlier years).

Table 1: Number of Private Equity Transactions, 1990-2007, by Region and Transaction Type: The table displays the total number of transactions by geographical region and type of private equity investment using a sample of 76,398 transactions closed by private equity investors worldwide from 1984 through 2007. The classification of "Venture Capital," "Growth Capital," "Leveraged Buyouts," and "PIPE" follows the classification in CapitalIQ. "Other Acquisitions" refers to M&A transactions undertaken by private equity funds that are not classified as leveraged buyouts or similar transactions (e.g., going private transaction, management buyout, JV/LBO) in CapitalIQ. "Other Private Placement" refers to private placements undertaken by private equity funds that are not classified as a venture capital or growth capital transaction in CapitalIQ. "Rich Asia Pacific" includes Japan, Singapore, Hong Kong, Macao, South Korea, Australia, and New Zealand. All other Asia-Pacific countries are classified as "Developing Asia". "Rich Middle East" includes United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, and Israel. All other Middle East countries are included in the "Developing Africa and Middle East" group. "W. Europe" includes the European Union countries as well as Norway, Switzerland, the Mediterranean islands, the English Channel islands, and the Caribbean islands of Anguilla, British Virgin Islands, Aruba, Bahamas, Bermuda, and Cayman Islands. Other Caribbean Islands are included in the "Latin America and Caribbean" region.

	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Developing Africa Middle East	Developing Asia	Europe Central Asia	Latin America Caribbean	Total developed world	Total developing world	Total
VC No.	21,725	412	772	8,868	17	574	280	110	31,777	981	32,758
Row %	66.32%	1.26%	2.36%	27.07%	0.05%	1.75%	0.85%	0.34%	97.01%	2.99%	100.00%
Col %	48.49%	26.08%	55.30%	36.48%	2.18%	45.92%	19.13%	13.56%	44.08%	22.79%	42.89%
Growth Capital No.	6,218	311	317	4,949	67	154	319	114	11,795	654	12,449
Row %	49.95%	2.50%	2.55%	39.75%	0.54%	1.24%	2.56%	0.92%	94.75%	5.25%	100.00%
Col %	13.88%	19.68%	22.71%	20.36%	8.59%	12.32%	21.79%	14.06%	16.36%	15.19%	16.30%
LBO No.	8,412	410	50	7,664	97	81	314	103	16,536	595	17,131
Row %	49.10%	2.39%	0.29%	44.74%	0.57%	0.47%	1.83%	0.60%	96.53%	3.47%	100.00%
Col %	18.77%	25.95%	3.58%	31.52%	12.44%	6.48%	21.45%	12.70%	22.94%	13.82%	22.43%
PIPE No.	4,682	158	74	344	12	133	13	11	5,258	169	5,427
Row %	86.27%	2.91%	1.36%	6.34%	0.22%	2.45%	0.24%	0.20%	96.89%	3.11%	100.00%
Col %	10.45%	10.00%	5.30%	1.41%	1.54%	10.64%	0.89%	1.36%	7.29%	3.93%	7.10%
Other Acquisition	1,117	172	60	1,807	51	80	154	39	3,156	324	3,480
Row %	32.10%	4.94%	1.72%	51.93%	1.47%	2.30%	4.43%	1.12%	90.69%	9.31%	100.00%
Col %	2.49%	10.89%	4.30%	7.43%	6.54%	6.40%	10.52%	4.81%	4.38%	7.53%	4.56%
Other Private Placement	2,652	117	123	679	536	228	384	434	3,571	1582	5,140
Row %	51.60%	2.28%	2.39%	13.21%	10.43%	4.44%	7.47%	8.44%	69.47%	30.78%	100.00%
Col %	5.92%	7.41%	8.81%	2.79%	68.72%	18.24%	26.23%	53.51%	4.95%	36.75%	6.73%
Total No.	44,806	1,580	1,396	24,311	780	1,250	1,464	811	72,093	4305	76,385
Row %	58.66%	2.07%	1.83%	31.83%	1.02%	1.64%	1.92%	1.06%	94.38%	5.64%	100.00%
Col %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 2: Private Equity Dollar Transaction Volume 1990-2007 by Region and Transaction Type: The table displays total transaction volume in millions of U.S. dollars, deflated to 2008, by geographical region and type of private equity investment using a sample of 76,398 transactions closed by private equity investors worldwide from 1984 through December 2007. For the 22892 transactions where transaction values are missing, these have been imputed by a fitted value from a regression of the log transaction value on year dummies, dummies for the 10 main industry groups, dummies for the six main transaction types (VC, LBO, Growth Capital, PIPEs, Other Acquisitions, Other Private Placements), and 123 country dummies. The classification of "Venture Capital," "Growth Capital," "Leveraged Buyouts," and "PIPE" follows the classification in CapitalIQ. "Other Acquisitions" refers to M&A transactions undertaken by private equity funds that are not classified as leveraged buyouts or similar transactions (e.g., going private transaction, management buyout, JV/LBO) in CapitalIQ. "Other Private Placement" refers to private placements undertaken by private equity funds that are not classified as a venture capital or growth capital transaction in CapitalIQ. "Rich Asia Pacific" includes Japan, Singapore, Hong Kong, Macao, South Korea, Australia, and New Zealand. All other Asia-Pacific countries are classified as "Developing Asia". "Rich Middle East" includes United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, and Israel. All other Middle East countries are included in the "Developing Africa and Middle East" group. "W. Europe" includes the European Union countries as well as Norway, Switzerland, the Mediterranean islands, the English Channel islands, and the Caribbean islands of Anguilla, British Virgin Islands, Aruba, Bahamas, Bermuda, and Cayman Islands. Other Caribbean Islands are included in the "Latin America and Caribbean" region.

	Dev. Africa Middle East	Dev. Asia	Europe Central Asia	Latin America Caribbean	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Total Developing World	Total Developed World	Total
Venture Capital	139.4	11513.2	1890.1	4406.4	323316.8	6643.8	5846.4	84423.3	17949.1	420230.3	438,179.4
% of VC vol	0.0%	2.6%	0.4%	1.0%	73.8%	1.5%	1.3%	19.3%	4.1%	95.9%	100.0%
% of region PE vol	0.5%	16.0%	3.8%	14.0%	10.3%	2.4%	29.6%	4.6%	9.8%	8.0%	8.0%
Growth Capital	706.8	16142.8	1840.4	3332.1	132416.0	5981.0	1911.3	60616.6	22022.1	200924.9	222,947.0
% of GC vol	0.3%	7.2%	0.8%	1.5%	59.4%	2.7%	0.9%	27.2%	9.9%	90.1%	100.0%
% of region PE vol	2.3%	22.4%	3.7%	10.6%	4.2%	2.2%	9.7%	3.3%	12.0%	3.8%	4.1%
LBO	26,041.9	23,743.2	38,808.1	17,152.6	2,269,944.5	119,014.6	5,600.5	1,419,545.7	105,745.8	3,814,105.3	3,919,851.1
% of LBO vol	0.7%	0.6%	1.0%	0.4%	57.9%	3.0%	0.1%	36.2%	2.7%	97.3%	100.0%
% of region PE vol	85.0%	32.9%	78.5%	54.6%	72.3%	43.1%	28.3%	77.4%	57.6%	72.4%	71.9%
PIPE	943.8	10460.0	74.0	785.3	152728.4	12925.0	1059.1	19404.8	12263.1	186117.3	198,380.4
% of PIPE vol	0.5%	5.3%	0.0%	0.4%	77.0%	6.5%	0.5%	9.8%	6.2%	93.8%	100.0%
% of region PE vol	3.1%	14.5%	0.1%	2.5%	4.9%	4.7%	5.4%	1.1%	6.7%	3.5%	3.6%
Other Acquisitions	2,621.20	8,148.80	6,789.90	5,662.20	187,726.80	128,465.40	5,008.60	245,976.90	23,222.10	567,177.70	590,399.8
% of Other Acquisitions	0.4%	1.4%	1.2%	1.0%	31.8%	21.8%	0.8%	41.7%	3.9%	96.1%	100.0%
% of region PE vol	8.6%	11.3%	13.7%	18.0%	6.0%	46.5%	25.4%	13.4%	12.6%	10.8%	10.8%
Other Private Placements	181.0	2141.3	36.8	93.6	73686.2	3372.9	330.5	4084.2	2452.7	81473.8	83,926.5
% of Other PP volume	0.2%	2.6%	0.0%	0.1%	87.8%	4.0%	0.4%	4.9%	2.9%	97.1%	100.0%
% of region PE volume	0.6%	3.0%	0.1%	0.3%	2.3%	1.2%	1.7%	0.2%	1.3%	1.5%	1.5%
Total	30,634.0	72,149.4	49,439.3	31,432.3	3,139,818.7	276,402.6	19,756.3	1,834,051.4	183,655.0	5,270,029.0	5,453,684.0
% of total PE volume	0.6%	1.3%	0.9%	0.6%	57.6%	5.1%	0.4%	33.6%	3.4%	96.6%	100.0%
% of region PE volume	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 3: Total Transaction Volume by Year and Region: Definitions of the various regions are given in Table 1. All figures are in millions U.S. dollars, deflated to 2008.

Year	Dev. Africa Middle East	Dev. Asia	Europe Central Asia	Latin America Caribbean	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Total
1990	27.3	0.0	23.4	0.0	23,024.8	62.2	6.7	9,101.8	32,246.2
1991	171.7	0.0	1.8	0.0	18,081.3	85.1	0.0	7,005.7	25,345.6
1992	7.3	0.0	39.5	0.0	30,062.4	5.9	3.8	7,277.7	37,396.5
1993	86.9	107.7	77.8	0.0	29,412.0	643.7	91.7	12,457.0	42,876.7
1994	20.1	251.7	74.4	74.0	38,029.8	998.7	44.0	12,188.8	51,681.4
1995	73.9	466.8	169.9	388.5	46,526.1	206.8	41.9	17,700.5	65,574.4
1996	78.5	140.5	169.3	1,210.9	62,105.4	573.7	140.4	23,240.6	87,659.4
1997	98.2	441.3	688.8	2,998.1	110,215.7	445.6	193.5	34,908.7	149,989.8
1998	616.6	1,207.4	573.9	3,865.4	149,705.5	1,767.1	495.8	60,152.7	218,384.5
1999	235.2	1,481.0	811.3	2,029.7	202,099.6	7,103.0	972.0	76,337.2	291,069.0
2000	1,965.3	2,726.7	1,131.6	3,475.7	242,311.3	55,911.8	2,221.4	106,092.1	416,000.8
2001	473.3	3,491.6	2,367.4	2,486.7	128,829.6	9,785.5	2,442.1	92,956.8	242,833.1
2002	449.9	566.4	4,626.0	466.8	138,408.4	6,204.5	656.0	99,706.0	251,084.0
2003	1,455.3	1,815.7	2,008.8	916.0	148,909.4	14,082.6	829.8	96,453.0	266,470.6
2004	1,102.5	1,956.0	2,766.8	2,197.0	235,632.6	17,452.9	1,998.5	182,694.8	445,801.0
2005	1,524.5	9,313.2	10,561.8	1,462.6	274,786.8	41,899.1	3,041.0	299,112.2	641,701.2
2006	7,615.7	29,658.1	12,490.5	4,948.5	523,987.5	58,902.4	3,281.3	387,256.6	1,028,140.7
2007	14,631.9	18,525.4	10,856.2	4,912.4	737,690.4	60,272.1	3,296.6	309,244.2	1,159,429.2
Total	30,634.1	72,149.5	49,439.2	31,432.3	3,139,818.6	276,402.7	19,756.5	1,834,051.4	5,453,684.1

Table 4: Venture Capital Dollar Volume: Definitions of the various regions are given in Table 1. All figures are in millions U.S. dollars, deflated to 2008.

Year	Dev. Africa Middle East	Dev. Asia	Europe Central Asia	Latin America Caribbean	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Total
1990	0	0	0	0	534	0	6.7	410	950.7
1991	0	0	1.8	0	707.1	0	0	130.6	839.5
1992	0	0	1	0	886.4	3.1	0	199.8	1,090.20
1993	0	0	8.4	0	1,303.60	10.5	0	299.5	1,622.10
1994	0	146.7	1.5	0	2,643.90	17.7	16.3	246.2	3,072.40
1995	0	171.1	7.7	0	3,060.50	13.8	10.3	268.6	3,532.00
1996	0	10.4	18	243.8	3,821.40	70.3	46.1	1,089.00	5,298.90
1997	0	115.8	7	1,016.10	5,320.70	205.8	55.5	1,524.90	8,245.80
1998	0	14	98.5	262.7	9,681.10	23.4	159.6	1,807.40	12,046.80
1999	9	326.5	163.8	618.6	32,602.40	505.1	342.8	5,553.70	40,122.00
2000	2.5	424.4	176.6	1,450.10	81,415.90	2,222.40	1,313.30	16,798.00	103,803.30
2001	25.6	2,101.50	85.1	237.3	38,003.20	417.7	753.7	14,075.40	55,699.70
2002	0	146.9	65	16.3	20,976.10	185.8	378.9	5,650.10	27,419.00
2003	0	339.6	63.5	4.9	17,461.00	171	314.4	3,421.10	21,775.50
2004	3.4	277.4	52.4	12.4	21,823.30	339.6	364.3	5,049.20	27,922.10
2005	17.2	2,070.70	156.1	88.7	24,785.10	627.3	519.7	7,791.80	36,056.70
2006	16.1	1,993.00	460.4	83.2	29,975.60	1,493.60	919.1	10,710.50	45,651.50
2007	65.5	3,375.10	523	372.4	28,315.50	336.6	645.7	9,397.30	43,031.20
Total	139.30	11,513.1	1,889.80	4,406.50	323,316.80	6,643.70	5,846.40	84,423.10	438,179.40

Table 5: LBO Dollar Volume: Definitions of the various regions are given in Table 1. All figures are in millions U.S. dollars, deflated to 2008.

Year	Dev. Africa Middle East	Dev. Asia	Europe Central Asia	Latin America Caribbean	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Total
1990	27.3	0	23.4	0	21,576.20	52.7	0	7,128.10	28,807.70
1991	0	0	0	0	16,157.00	41.9	0	6,440.70	22,639.60
1992	0	0	27.9	0	23,907.20	0	0	6,655.60	30,590.70
1993	86.9	0	63.5	0	22,800.60	99	60.4	11,049.20	34,159.60
1994	19.1	0	64.6	58.7	29,268.20	229.2	0	10,514.30	40,154.10
1995	73.9	283.3	126.1	378.5	36,575.20	62.7	1.3	15,424.60	52,925.50
1996	62.2	36.5	96.2	722.4	41,129.10	413.8	48.2	19,809.10	62,317.60
1997	88	188.9	477.4	1,504.40	85,535.70	157	3.1	27,772.10	115,726.60
1998	565	778.2	301.8	1,497.80	108,561.80	1,228.80	23.9	48,354.10	161,311.30
1999	115.1	871.7	398.2	926.9	112,526.40	3,540.50	228.8	56,900.50	175,508.10
2000	1,705.40	574.6	705.8	1,216.70	92,696.20	2,733.20	91	62,172.40	161,895.30
2001	106.8	621	1,418.70	750.7	52,353.80	6,356.20	938.2	56,108.60	118,654.10
2002	392.6	17.2	4,298.60	113.1	84,071.00	4,555.40	100.8	68,789.80	162,338.50
2003	1,118.00	521.3	1,493.30	759.1	99,978.40	9,258.70	113.8	77,048.70	190,291.20
2004	462.6	264.3	2,100.80	851.7	171,322.00	8,566.40	122.4	148,371.20	332,061.30
2005	1,285.20	1,626.80	9,503.70	963.6	206,115.80	13,322.00	814.4	236,998.30	470,629.90
2006	6,643.20	13,650.8	10,218.4	4,435.80	442,544.30	38,018.80	1,511.60	325,933.00	842,955.90
2007	13,290.70	4,308.50	7,489.80	2,973.10	622,825.50	30,378.30	1,542.50	234,075.50	916,884.00
Total	26,042.00	24,212.6	41,108.1	17,152.50	2,305,381.8	122,837.7	5,623.40	1,480,338.80	4,022,696.9

Table 6: Other Transaction Dollar Volume: Definitions of the various regions are given in Table 1. All figures are in millions U.S. dollars, deflated to 2008.

Year	Dev. Africa Middle East	Dev. Asia	Europe Central Asia	Latin America Caribbean	North America	Rich Asia Pacific	Rich Middle East	Western Europe	Total
1990	0	0	0	0	914.6	9.5	0	1,563.70	2,487.80
1991	171.7	0	0	0	1,217.30	43.2	0	434.4	1,866.50
1992	7.3	0	10.5	0	5,268.80	2.8	3.8	422.3	5,715.50
1993	0	107.7	5.9	0	5,307.80	534.1	31.3	1,108.20	7,095.00
1994	1	105	8.2	15.3	6,117.70	751.8	27.7	1,428.20	8,454.90
1995	0	12.3	36	10	6,890.50	130.4	30.3	2,007.30	9,116.80
1996	16.3	93.6	55.1	244.7	17,154.90	89.6	46.1	2,342.50	20,042.90
1997	10.2	136.6	204.4	477.6	19,359.40	82.8	134.8	5,611.70	26,017.40
1998	51.7	415.2	173.7	2,104.90	31,462.60	514.9	312.3	9,991.10	45,026.40
1999	111.1	282.8	249.2	484.2	56,970.80	3,057.30	400.5	13,883.00	75,438.90
2000	257.3	1,727.70	249.2	808.8	68,199.10	50,956.20	817.1	27,286.80	150,302.20
2001	340.9	769.1	863.6	1,498.70	38,472.60	3,011.50	750.1	22,772.70	68,479.30
2002	57.3	402.3	262.4	337.5	33,361.30	1,463.30	176.3	25,266.10	61,326.50
2003	337.3	954.8	452	152	31,470.00	4,652.90	401.5	15,983.20	54,403.90
2004	636.4	1,414.20	613.6	1,332.90	42,487.30	8,546.90	1,511.80	29,274.40	85,817.50
2005	222.2	5,615.70	901.9	410.3	43,885.80	27,949.80	1,706.90	54,322.10	135,014.60
2006	956.4	14,014.3	1,811.70	429.5	51,467.70	19,390.10	850.5	50,613.10	139,533.40
2007	1,275.70	10,841.7	2,843.50	1,566.90	86,549.40	29,557.10	1,108.30	65,771.40	199,514.10
Total	4,524.40	37,770.2	9,255.10	10,025.90	594,441.00	151,955.0	8,828.30	344,106.50	1,160,906.8

Table 7: Private Equity Transaction Volume and National Wealth: The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent value is the average GDP per capita (in real, PPP-adjusted, tens of thousands U.S. dollars) between 1990 and 2006, which is from the World Bank (2007 and earlier years). The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All Deals	(2) All Deals	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
GDP per Capita	4.643***		0.370***		3.057***		0.090***		0.061*	
	(6.997)		(3.750)		(6.279)		(3.377)		(1.946)	
Log GDP per Capita		1.369***		1.027***		1.203***		0.658***		0.237
		(9.120)		(5.392)		(7.368)		(3.886)		(0.533)
Constant	-0.699	-18.972***	-0.138	-18.584***	-0.417	-17.621***	0.094**	-15.180***	0.023	-12.033***
	(-0.912)	(-13.618)	(-1.493)	(-10.354)	(-0.621)	(-11.213)	(2.028)	(-9.344)	(0.760)	(-2.767)
Observations	107	104	107	82	107	75	107	82	107	49
R-squared	0.362	0.411	0.319	0.280	0.297	0.421	0.082	0.171	0.072	0.009

Table 8: The Effect of Financial Development ("Financial Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key indpendent variables used are the averages of the ratio of stock market capitalization to GDP and private credit to GDP, which are from the World Bank (2007 and earlier years). The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Log Vol/GDP	Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Average Private Credit / GDP 1990-2006	-2.670	-0.508	-0.455	-0.486	0.163	-0.005	0.083	-0.220	0.101	1.155
	(-0.957)	(-0.764)	(-1.457)	(-0.797)	(0.070)	(-0.007)	(0.812)	(-0.388)	(0.828)	(1.359)
Average Stock Market Cap / GDP 1990-2006	7.637**	1.159***	0.387**	0.548	0.405	0.424	-0.041	0.148	0.281	0.581
	(2.020)	(2.695)	(2.151)	(1.320)	(0.219)	(0.801)	(-0.574)	(0.328)	(1.432)	(0.774)
GDP per Capita	4.041***		0.452***		3.189***		0.088**		-0.025	
	(5.130)		(3.026)		(4.269)		(2.556)		(-0.623)	
GDP Growth	0.466*		0.060*		0.344*		0.043		0.028*	
	(1.860)		(1.744)		(1.699)		(1.099)		(1.739)	
Log GDP per Capita		1.432***		1.355***		1.244***		0.879***		-0.023
		(5.676)		(4.563)		(4.298)		(3.875)		(-0.040)
Log GDP Growth		0.677*		0.151		0.227		0.129		1.194*
		(1.875)		(0.320)		(0.718)		(0.275)		(1.983)
Constant	-3.801***	-20.756***	-0.411**	-21.879***	-2.477***	-18.535***	-0.105	-17.427***	-0.139**	-12.298**
	(-3.321)	(-9.346)	(-2.209)	(-8.272)	(-2.673)	(-6.914)	(-0.711)	(-8.885)	(-2.252)	(-2.254)
Observations	87	83	87	70	87	63	87	73	87	46
R-squared	0.566	0.508	0.383	0.426	0.400	0.500	0.142	0.287	0.317	0.148

Table 9: Deal Volume and the Contractual Environment ("Governance Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the log of number of calendar days to enforce a contract of unpaid debt worth 50% of the country's GDP per capita, from Djankov, McLiesh, and Shleifer (2007). The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Ln of days to enforce a contract	-0.066	0.082	0.128	-0.027	-0.778	-0.002	0.033	0.350	0.051*	-0.140
	(-0.080)	(0.273)	(0.993)	(-0.105)	(-1.064)	(-0.007)	(0.625)	(1.287)	(1.797)	(-0.348)
Average Stock Market Cap / GDP 1990-2006	6.887*	0.918***	0.248*	0.304	0.477	0.500	0.003	0.132	0.337**	1.000
	(1.978)	(3.045)	(1.938)	(0.781)	(0.322)	(1.284)	(0.058)	(0.319)	(2.071)	(1.611)
GDP per Capita	3.209***		0.298***		2.712***		0.126***		0.028	
	(4.804)		(3.015)		(5.092)		(2.815)		(0.817)	
GDP Growth	0.261		0.032		0.085		0.039		0.031***	
	(1.199)		(1.386)		(0.547)		(1.303)		(2.756)	
Log GDP per Capita		1.360***		1.128***		1.163***		0.881***		0.195
		(5.806)		(4.157)		(4.309)		(3.998)		(0.403)
Log GDP Growth		0.486		-0.123		-0.051		0.052		1.278**
		(1.413)		(-0.246)		(-0.144)		(0.106)		(2.544)
Constant	-2.578	-20.475***	-1.027	-19.462***	3.683	-17.523***	-0.286	-19.411***	-0.466**	-13.053**
	(-0.462)	(-5.929)	(-1.274)	(-5.215)	(0.799)	(-4.259)	(-0.830)	(-6.184)	(-2.218)	(-2.288)
Observations	85	82	85	68	85	64	85	72	85	48
R-squared	0.526	0.514	0.288	0.369	0.343	0.456	0.146	0.267	0.374	0.145

Table 10: Deal Volume and the Contractual Environment ("Governance Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is an index aggregating creditor rights, following La Porta, et al. (1998). The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights), based on 2003. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Creditor rights score	0.806*	0.038	-0.003	-0.148	0.245	0.276*	0.016	0.129	0.022	0.160
	(1.881)	(0.225)	(-0.057)	(-1.044)	(0.668)	(1.851)	(0.677)	(0.893)	(0.866)	(0.656)
Average Stock Market Cap / GDP 1990-2006	6.567**	0.879***	0.228*	0.355	0.510	0.381	-0.009	-0.011	0.319**	0.927
	(2.011)	(3.127)	(1.686)	(0.939)	(0.338)	(0.983)	(-0.144)	(-0.028)	(2.022)	(1.455)
GDP per Capita	3.169***		0.267***		2.882***		0.117***		0.014	
	(4.385)		(3.644)		(5.028)		(3.113)		(0.403)	
GDP Growth	0.213		0.029		0.093		0.037		0.029**	
	(1.064)		(1.292)		(0.600)		(1.233)		(2.557)	
Log GDP per Capita		1.343***		1.183***		1.105***		0.804***		0.246
		(6.234)		(4.584)		(4.682)		(3.931)		(0.508)
Log GDP Growth		0.473		-0.075		-0.137		-0.004		1.249**
		(1.341)		(-0.148)		(-0.387)		(-0.008)		(2.505)
Constant	-4.139***	-19.892***	-0.235*	-19.930***	-1.461	-17.347***	-0.106	-16.861***	-0.184***	-14.536***
	(-2.804)	(-9.371)	(-1.736)	(-7.861)	(-1.561)	(-7.356)	(-0.910)	(-8.399)	(-2.873)	(-3.039)
Observations	85	82	85	68	85	64	85	72	85	48
R-squared	0.537	0.513	0.272	0.375	0.337	0.481	0.144	0.250	0.366	0.149

Table 11: Deal Volume and the Contractual Environment ("Governance Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the Index of Economic Freedom Property Rights Index from the Heritage Foundation (reported in Djankov, et al. (2008)). The property rights index is an assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Property rights index	-0.004	0.008	0.001	0.026*	0.015	0.025*	0.001	0.007	-0.002	0.012
	(-0.067)	(0.617)	(0.386)	(1.946)	(0.259)	(1.804)	(0.329)	(0.530)	(-1.070)	(0.435)
Average Stock Market	6.612*	0.433	0.179	-0.088	0.043	0.092	-0.050	-0.160	0.330*	0.823
Cap / GDP 1990-2006	(1.824)	(1.564)	(1.357)	(-0.220)	(0.028)	(0.244)	(-0.689)	(-0.350)	(1.889)	(1.285)
GDP per Capita	3.855***		0.291**		3.054***		0.141**		0.071	
	(3.216)		(2.573)		(2.886)		(2.069)		(1.628)	
GDP Growth	0.532**		0.060**		0.286*		0.075**		0.042***	
	(2.372)		(2.171)		(1.714)		(2.144)		(2.916)	
Log GDP per Capita		1.323***		0.708**		0.927**		0.815***		0.299
		(3.580)		(2.532)		(2.264)		(2.833)		(0.323)
Log GDP Growth		0.513*		0.099		0.279		0.222		1.611***
		(1.683)		(0.181)		(0.840)		(0.438)		(2.733)
Constant	-4.198	-19.636***	-0.429**	-17.143***	-2.256	-17.010***	-0.277	-17.248***	-0.162*	-15.970*
	(-1.566)	(-6.688)	(-2.013)	(-7.895)	(-0.933)	(-5.086)	(-1.476)	(-7.283)	(-1.703)	(-1.952)
Observations	67	67	67	58	67	58	67	63	67	43
R-squared	0.554	0.650	0.285	0.455	0.357	0.571	0.228	0.286	0.390	0.176

Table 12: Deal Volume and the Contractual Environment ("Governance Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is an index of minority shareholder rights, which is is formed by adding one when: (1) the country allows shareholders to mail their proxy vote; (2) shareholders are not required to deposit their shares prior to the General Shareholders Meeting; (3) cumulative voting or proportional representation of minorities on the board of directors is allowed; (4) an oppressed minorities mechanism is in place; (5) the minimum percentage of share capital that entitles a shareholder to call for an Extraordinary Shareholders Meeting is less than or equal to ten percent (the sample median); and (6) when shareholders have preemptive rights that can only be waved by a shareholders meeting. The range for the index is from zero to six. It is based on La Porta, et al. (1998). The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	All	All	VC	VC	LBO	LBO	GC	GC	PIPE	PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Shareholder Rights	0.632	0.102	0.100*	0.276*	0.392	-0.010	0.065**	0.283*	0.047*	0.307
	(1.118)	(0.906)	(1.906)	(1.692)	(0.845)	(-0.085)	(2.038)	(1.821)	(1.687)	(1.377)
Average Stock Market Cap / GDP 1990-2006	6.776*	0.381	-0.024	-0.308	0.091	0.269	-0.128	-0.445	0.226	0.289
	(1.739)	(1.418)	(-0.143)	(-0.676)	(0.051)	(0.675)	(-1.439)	(-0.938)	(1.107)	(0.456)
GDP per Capita	3.873***		0.365***		3.322***		0.168***		0.054	
	(4.798)		(3.764)		(4.891)		(3.662)		(1.212)	
GDP Growth	0.511		0.123**		0.394		0.063		0.071**	
	(1.061)		(2.141)		(1.119)		(1.637)		(2.230)	
Log GDP per Capita		1.459***		1.612***		1.507***		0.902***		0.715
		(6.403)		(5.773)		(5.518)		(3.552)		(1.239)
Log GDP Growth		0.651		0.313		0.502		0.062		1.879***
		(1.611)		(0.463)		(1.300)		(0.116)		(3.236)
Constant	-6.831***	-20.847***	-0.840***	-25.068***	-3.551***	-21.257***	-0.352**	-18.064***	-0.431***	-19.943***
	(-3.565)	(-9.001)	(-3.433)	(-8.956)	(-2.715)	(-7.827)	(-2.211)	(-7.396)	(-2.928)	(-3.256)
Observations	47	47	47	44	47	45	47	43	47	39
R-squared	0.647	0.710	0.285	0.537	0.478	0.632	0.294	0.353	0.415	0.213

Table 13: Deal Volume and the Contractual Environment ("Governance Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is a measure of investor protection, which is the principal component of an analysis of disclosure requirements, liability standards, and minority shareholder rights. The scale is from 0 to 10 and is based on La Porta, Lopez-de-Silanes, and Shleifer (2006), with a higher index meaning more protections. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) ALL	(2) ALL	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Investor Protection Score	5.395*	0.172	1.033**	1.693*	3.315	-0.423	0.392*	0.958	0.427**	0.983
	(1.811)	(0.262)	(2.161)	(1.795)	(1.437)	(-0.578)	(1.866)	(1.085)	(2.312)	(0.795)
Average Stock Market Cap / GDP 1990-2006	6.353	0.448	-0.124	-0.359	-0.166	0.337	-0.142	-0.354	0.190	0.371
	(1.605)	(1.573)	(-0.612)	(-0.755)	(-0.094)	(0.795)	(-1.505)	(-0.727)	(0.910)	(0.530)
GDP per Capita	3.878***		0.364***		3.325***		0.170***		0.054	
	(4.949)		(4.116)		(4.951)		(3.773)		(1.362)	
GDP Growth	0.411		0.099**		0.333		0.060		0.062**	
	(0.894)		(2.107)		(0.890)		(1.550)		(2.095)	
Log GDP per Capita		1.455***		1.593***		1.509***		0.912***		0.697
		(6.328)		(5.574)		(5.533)		(3.379)		(1.196)
Log GDP Growth		0.678		0.209		0.559		0.075		1.889***
		(1.588)		(0.314)		(1.380)		(0.138)		(2.930)
Constant	-6.866***	-20.657***	-0.881***	-24.690***	-3.567***	-21.213***	-0.324**	-17.836***	-0.438***	-19.372***
	(-3.556)	(-8.668)	(-3.446)	(-8.428)	(-2.793)	(-7.674)	(-2.116)	(-6.769)	(-3.356)	(-3.267)
Observations	47	47	47	44	47	45	47	43	47	39
R-squared	0.654	0.706	0.325	0.537	0.485	0.635	0.294	0.318	0.448	0.195

Table 14: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the Economic Freedom of the World Freedom to Trade Internationally Index from the Fraser Institute (from Djankov, et al. (2008)). This index measures taxes on international trade, regulatory trade barriers, size of the trade sector relative to expected, black-market exchange rates, and international capital market controls, with a higher index implying more freedoms. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) ALL	(2) ALL	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Freedom to trade index	2.027	0.611**	0.045	0.537	0.972	0.710**	-0.012	0.173	-0.023	-0.828
	(1.591)	(2.229)	(0.370)	(1.639)	(1.033)	(2.157)	(-0.199)	(0.540)	(-0.405)	(-1.095)
Average Stock Market Cap / GDP 1990-2006	5.729*	0.236	0.167	-0.066	-0.304	0.041	-0.040	-0.157	0.327*	1.128
	(1.718)	(0.833)	(1.112)	(-0.157)	(-0.165)	(0.093)	(-0.538)	(-0.352)	(1.921)	(1.488)
GDP per Capita	2.923***		0.296***		2.878***		0.163***		0.046	
	(3.012)		(3.283)		(3.828)		(3.700)		(0.951)	
GDP Growth	0.343		0.056*		0.198		0.076**		0.044***	
	(1.618)		(1.922)		(1.191)		(2.054)		(2.725)	
Log GDP per Capita		1.155***		0.874***		0.994***		0.832***		1.102
		(4.249)		(3.494)		(2.950)		(3.325)		(1.095)
Log GDP Growth		0.278		-0.200		-0.086		0.138		2.166**
		(0.785)		(-0.388)		(-0.220)		(0.254)		(2.437)
Constant	-16.758**	-21.732***	-0.659	-20.696***	-7.722	-20.887***	-0.169	-18.178***	-0.085	-17.517***
	(-2.076)	(-10.576)	(-0.864)	(-8.462)	(-1.403)	(-8.534)	(-0.468)	(-8.364)	(-0.244)	(-2.777)
Observations	66	66	66	57	66	58	66	62	66	43
R-squared	0.569	0.677	0.282	0.428	0.360	0.581	0.225	0.287	0.383	0.202

Table 15: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is an employment rigidity index, based on World Bank (*Doing Business*) data and updated from Botero, et al. (2004). The index is an average of three sub-indices: a difficulty of hiring index, a rigidity of hours index, and a difficulty of firing index. A higher index means lower rigidities. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) ALL	(2) ALL	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Employment rigidity index	-0.021	-0.001	-0.008*	-0.011	-0.012	-0.009	-0.001	-0.002	-0.003	-0.014
	(-0.758)	(-0.101)	(-1.947)	(-0.996)	(-0.432)	(-0.899)	(-0.496)	(-0.192)	(-1.408)	(-0.661)
Average Stock Market Cap / GDP 1990-2006	6.226*	0.498*	0.057	-0.029	-0.082	0.155	-0.067	-0.124	0.275	0.685
	(1.704)	(1.693)	(0.380)	(-0.064)	(-0.047)	(0.364)	(-0.754)	(-0.274)	(1.545)	(1.073)
GDP per Capita	3.795***		0.320***		3.309***		0.159***		0.038	
	(5.207)		(4.009)		(5.310)		(4.011)		(1.078)	
GDP Growth	0.513**		0.054*		0.278		0.074**		0.040***	
	(2.200)		(1.877)		(1.563)		(2.135)		(2.708)	
Log GDP per Capita		1.437***		1.191***		1.383***		0.915***		0.555
		(6.716)		(4.815)		(4.869)		(4.555)		(0.919)
Log GDP Growth		0.492		0.005		0.196		0.201		1.554***
		(1.610)		(0.010)		(0.510)		(0.406)		(2.787)
Constant	-3.365*	-20.206***	-0.039	-19.604***	-1.254	-19.363***	-0.185	-17.707***	-0.111	-17.068***
	(-1.851)	(-8.678)	(-0.202)	(-7.799)	(-0.882)	(-6.112)	(-1.207)	(-8.580)	(-1.141)	(-2.795)
Observations	67	67	67	58	67	58	67	63	67	43
R-squared	0.556	0.647	0.311	0.416	0.357	0.540	0.230	0.283	0.400	0.179

Table 16: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the number of procedures to start a business from World Bank (Doing Business) data, from Djankov, et al. (2008). This variable includes all procedures that are officially required for an entrepreneur to start up and formally operate an industrial or commercial business. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Procedures to start a business	-0.295**	-0.105**	-0.016	-0.040	-0.277**	-0.140***	0.010	-0.006	-0.003	-0.041
	(-2.146)	(-2.293)	(-0.693)	(-0.698)	(-2.452)	(-3.108)	(0.759)	(-0.108)	(-0.497)	(-0.431)
Average Stock Market Cap / GDP 1990-2006	6.393*	0.387	0.176	0.121	-0.058	0.186	-0.038	-0.084	0.316*	0.829
	(1.770)	(1.510)	(1.257)	(0.297)	(-0.036)	(0.521)	(-0.554)	(-0.207)	(1.836)	(1.328)
GDP per Capita	3.188***		0.283***		2.739***		0.178***		0.030	
	(4.358)		(4.261)		(4.381)		(4.083)		(0.814)	
GDP Growth	0.464**		0.057**		0.223		0.077**		0.041***	
	(2.329)		(2.036)		(1.607)		(2.184)		(2.841)	
Log GDP per Capita		1.237***		1.091***		1.103***		0.900***		0.422
		(5.220)		(4.091)		(3.951)		(3.503)		(0.604)
Log GDP Growth		0.386		-0.049		-0.001		0.206		1.540**
		(1.178)		(-0.095)		(-0.004)		(0.396)		(2.583)
Constant	-0.488	-17.273***	-0.175	-18.714***	1.816	-15.632***	-0.369*	-17.611***	-0.183	-15.947**
	(-0.234)	(-6.465)	(-0.568)	(-6.306)	(1.235)	(-4.959)	(-1.851)	(-5.953)	(-1.428)	(-2.075)
Observations	66	66	66	57	66	57	66	66	66	42
R-squared	0.561	0.673	0.286	0.406	0.370	0.587	0.230	0.284	0.383	0.166

Table 17: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is a corruption index measuring "the exercise of public power for private gain" in the year 2000. It captures aspects ranging from the frequency of additional payments to get things done to the effects of corruption on the business environment. A higher index indicates a low level of corruption. The source is Kauffman, Kraay, and Mastruzzi (2003). The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Corruption index	0.042	0.416	0.010	0.677*	2.896**	0.661**	-0.012	0.584	-0.186**	0.022
	(0.024)	(1.443)	(0.069)	(1.871)	(2.616)	(2.313)	(-0.197)	(1.584)	(-2.120)	(0.030)
Average Stock Market	7.319*	0.428	0.061	-0.091	-0.051	0.202	-0.070	-0.258	0.298	0.542
Cap / GDP 1990-2006	(1.824)	(1.533)	(0.396)	(-0.213)	(-0.034)	(0.571)	(-0.882)	(-0.566)	(1.592)	(0.839)
GDP per Capita	3.874**		0.362*		0.735		0.183**		0.224**	
	(2.697)		(1.970)		(0.631)		(2.422)		(2.447)	
GDP Growth	0.644		0.144**		0.342		0.077*		0.089**	
	(1.423)		(2.428)		(0.914)		(1.716)		(2.225)	
Log GDP per Capita		1.008**		0.776		0.762		0.272		0.674
		(2.279)		(1.517)		(1.634)		(0.555)		(0.815)
Log GDP Growth		0.595		0.215		0.301		0.061		2.023***
		(1.369)		(0.300)		(0.742)		(0.100)		(2.946)
Constant	-5.772**	-16.605***	-0.670**	-16.921***	0.009	-14.540***	-0.260	-11.887**	-0.543**	-18.970**
	(-2.104)	(-4.003)	(-2.288)	(-3.563)	(0.004)	(-3.274)	(-1.564)	(-2.597)	(-2.607)	(-2.373)
Observations	47	47	47	44	47	45	47	43	47	39
R-squared	0.640	0.720	0.265	0.536	0.535	0.669	0.247	0.346	0.457	0.189

Table 18: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the time to comply with taxes, recorded in hours per year from World Bank (*Doing Business*) data and Djankov, et al. (2008). The indicator measures the time to prepare, file and pay (or withhold) three major types of taxes: the corporate income tax, value added or sales tax and labor taxes, including payroll taxes and social security contributions. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Time to comply with taxes	0.001	0.000	0.000	0.001	0.000	0.000	0.000*	0.001**	0.000	0.001*
	(1.011)	(0.904)	(0.758)	(1.621)	(0.126)	(-0.468)	(1.908)	(2.411)	(1.374)	(1.913)
Average Stock Market Cap / GDP 1990-2006	6.670*	0.557**	0.194	0.237	0.135	0.306	-0.023	0.051	0.323*	0.971
	(1.865)	(2.104)	(1.425)	(0.582)	(0.082)	(0.805)	(-0.357)	(0.128)	(1.894)	(1.625)
GDP per Capita	3.874***		0.324***		3.309***		0.183***		0.042	
	(5.338)		(3.991)		(5.410)		(4.344)		(1.151)	
GDP Growth	0.547**		0.062**		0.290*		0.079**		0.043***	
	(2.355)		(2.173)		(1.676)		(2.227)		(2.971)	
Log GDP per Capita		1.466***		1.249***		1.349***		1.028***		0.764
		(5.854)		(4.212)		(4.138)		(5.592)		(1.154)
Log GDP Growth		0.522		0.108		0.186		0.331		1.795***
		(1.656)		(0.209)		(0.471)		(0.676)		(3.235)
Constant	-4.841***	-20.686***	-0.429***	-20.990***	-1.857*	-19.375***	-0.380**	-19.424***	-0.259***	-20.277***
	(-3.110)	(-7.919)	(-2.731)	(-6.723)	(-1.817)	(-5.545)	(-2.318)	(-10.279)	(-3.198)	(-2.917)
Observations	67	67	67	58	67	58	67	63	67	43
R-squared	0.555	0.650	0.285	0.422	0.356	0.536	0.268	0.337	0.387	0.190

Table 19: Deal Volume and the Business Environment ("Operational Engineering"): The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The key independent variable used is the statutory corporate tax rate (in percent) from Djankov, et al. (2008). The tax rate for the highest bracket of all taxes on corporate income, taking into account the deductibility of one or more of those taxes when computing the tax base for corporate income. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All	(2) All	(3) VC	(4) VC	(5) LBO	(6) LBO	(7) GC	(8) GC	(9) PIPE	(10) PIPE
	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP	Vol/GDP	Log Vol/GDP
Statutory tax rate	-0.149	-0.020	0.014	-0.002	-0.114	-0.036	0.009	-0.010	0.009*	0.114***
	(-1.132)	(-0.966)	(1.154)	(-0.080)	(-1.020)	(-1.480)	(1.440)	(-0.332)	(1.779)	(3.249)
Average Stock Market	6.241*	0.490*	0.218*	0.163	-0.136	0.284	-0.024	-0.100	0.339*	1.172*
Cap / GDP 1990-2006	(1.826)	(1.833)	(1.701)	(0.396)	(-0.075)	(0.701)	(-0.345)	(-0.245)	(1.929)	(1.775)
GDP per Capita	3.813***		0.313***		3.325***		0.157***		0.034	
	(5.146)		(3.971)		(5.290)		(4.267)		(0.991)	
GDP Growth	0.346		0.077**		0.147		0.086**		0.054***	
	(1.512)		(2.198)		(0.909)		(2.373)		(3.198)	
Log GDP per Capita		1.415***		1.181***		1.326***		0.901***		0.734
		(6.167)		(4.554)		(4.458)		(4.404)		(1.128)
Log GDP Growth		0.367		0.012		-0.030		0.139		2.383***
		(1.049)		(0.021)		(-0.078)		(0.232)		(3.874)
Constant	0.918	-19.284***	-0.862*	-19.934***	2.192	-17.871***	-0.559**	-17.270***	-0.548***	-24.027***
	(0.184)	(-8.068)	(-1.862)	(-6.639)	(0.490)	(-5.460)	(-2.188)	(-6.773)	(-2.721)	(-3.233)
Observations	67	67	67	58	67	58	67	63	67	43
R-squared	0.567	0.651	0.299	0.407	0.371	0.552	0.251	0.284	0.422	0.267

Table 20: Multinomial Regression Analysis: The dependent variable is private equity transaction volume relative to GDP, averaged over the period 1990-2008. The independent variables used are those in the earlier tables. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent.

	(1) All Vol/GDP	(2) All Log V/G	(3) VC Vol/GDP	(4) VC Log V/G	(5) LBO Vol/GDP	(6) LBO Log V/G	(7) GC Vol/GDP	(8) GC Log V/G	(9) PIPE Vol/GDP	(10) PIPE Log V/G
Average Private Credit / GDP 1990-2006	-4.061	0.055	-0.319	-1.535	2.671	0.271	0.157	0.050	-0.182	-0.746
	(-0.888)	(0.077)	(-1.004)	(-1.611)	(0.772)	(0.316)	(0.852)	(0.047)	(-1.032)	(-0.415)
Ln of days to enforce a contract	-0.151	0.221	0.373	0.213	-0.559	0.043	0.228*	0.697**	0.068	0.100
	(-0.105)	(1.141)	(1.063)	(0.564)	(-0.419)	(0.165)	(1.970)	(2.651)	(1.238)	(0.178)
Creditor rights score	1.519**	0.286**	-0.011	-0.317	0.424	0.263	0.068	0.100	0.002	-0.087
	(2.160)	(2.254)	(-0.083)	(-1.592)	(0.612)	(1.576)	(1.458)	(0.501)	(0.063)	(-0.218)
Property rights index	0.046	-0.013	-0.012	0.061	-0.061	-0.009	-0.003	0.003	0.009	0.083
	(0.324)	(-0.360)	(-0.475)	(1.087)	(-0.646)	(-0.286)	(-0.354)	(0.062)	(1.224)	(1.006)
Investor Protection Score	10.384**	0.416	0.554	1.812	2.941	-0.005	0.190	0.486	0.557**	0.456
	(2.310)	(0.467)	(1.129)	(1.257)	(0.823)	(-0.005)	(0.892)	(0.394)	(2.515)	(0.144)
Corruption index	-2.977	0.176	0.221	0.086	2.398	0.343	0.115	0.991	-0.299*	-0.780
	(-0.954)	(0.369)	(0.661)	(0.146)	(1.144)	(0.573)	(0.943)	(1.569)	(-2.014)	(-0.531)
Freedom to trade index	2.954	0.179	0.280	0.332	-0.411	-0.041	0.083	0.034	0.092	-0.888
	(1.409)	(0.527)	(1.027)	(0.580)	(-0.266)	(-0.098)	(0.776)	(0.061)	(1.036)	(-0.813)
Employment rigidity index	0.060	0.010	-0.016**	-0.008	0.025	0.008	0.003	0.017	-0.003	-0.012
	(0.732)	(0.742)	(-2.167)	(-0.438)	(0.359)	(0.561)	(0.743)	(0.991)	(-1.252)	(-0.336)
Procedures to start a business	-0.537	-0.089	0.018	0.095	-0.552**	-0.099	0.018	-0.019	0.015	0.076
	(-1.601)	(-1.137)	(0.332)	(0.816)	(-2.057)	(-1.304)	(0.681)	(-0.152)	(1.145)	(0.404)
Time to comply with taxes	0.002**	0.001	0.000	0.000	0.002*	0.000	0.000	0.001	0.000	0.000
	(2.090)	(1.082)	(0.308)	(0.241)	(1.755)	(0.976)	(0.675)	(0.955)	(0.139)	(0.010)
Statutory tax rate	-0.011	-0.005	0.021	0.023	-0.057	-0.020	0.017*	0.026	0.013	0.089
	(-0.062)	(-0.184)	(1.384)	(0.618)	(-0.373)	(-0.658)	(1.864)	(0.504)	(1.591)	(1.266)
Average Stock Market Cap / GDP 1990-2006	6.410*	0.274	-0.120	0.204	-1.402	0.050	-0.105	0.053	0.261	1.308
	(1.837)	(0.732)	(-0.396)	(0.374)	(-0.630)	(0.076)	(-0.900)	(0.084)	(1.387)	(0.935)
GDP per Capita	4.626**		0.496**		0.809		0.200*		0.228**	
	(2.228)		(2.354)		(0.442)		(2.034)		(2.747)	
GDP Growth	-0.412		0.140*		0.100		0.125**		0.062	
	(-0.580)		(1.903)		(0.207)		(2.374)		(1.294)	
Log GDP per Capita		1.414***		0.725		1.172**		0.089		0.740
		(2.921)		(0.956)		(2.171)		(0.115)		(0.449)
Log GDP Growth		0.380		-0.110		0.185		0.174		2.418
		(0.533)		(-0.115)		(0.296)		(0.158)		(1.355)
Constant	-27.484	-21.968***	-4.651	-23.746***	12.753	-16.971***	-3.347**	-17.048***	-2.545***	-21.704
	(-1.280)	(-5.388)	(-1.515)	(-4.066)	(0.652)	(-3.095)	(-2.741)	(-3.013)	(-3.065)	(-1.618)
Observations	43	43	43	40	43	42	43	40	43	36
R-squared	0.769	0.807	0.453	0.660	0.613	0.757	0.525	0.492	0.695	0.302

Table 21: Multinomial Regression Analysis Using Annual Data: The dependent variable is dollar volume of private equity transactions over GDP at the country-year level. "Lagged GDP/Capita" is GDP per capita, expressed in PPP adjusted tens of thousands of U.S. dollars, for the country in the preceding year. "Lagged GDP growth" is real growth in GDP per capita for the country in the preceding year. "U.S. PE Fundraising (lag)" is fundraising by U.S.-based private equity funds as a percentage of U.S. stock market capitalization in the preceding year. The Heritage Foundation Property Rights Protection Index and the Freedom International Trade Index are now measured by country and year. The other variables are defined as in previous tables and do not vary across years. Regression (3) includes year fixed effects. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent. Standard errors are clustered at the country level.

	(1) All Deals Vol/GDP	(2) All Deals Vol/GDP	(3) All Deals Vol/GDP
GDP/cap (lag)	4.823***	4.645***	4.468***
	3.036	5.162	5.148
GDP growth (lag)	-0.047	0.025	-0.028
	-0.203	0.356	-0.399
Year	0.582**	0.360***	0.440***
	2.527	4.178	3.825
Average Stock Market Cap / GDP 1990-2006	5.384**	1.7	1.745*
	2.209	1.636	1.687
Creditor rights score	1.432**	0.645*	0.638*
	2.407	1.857	1.834
Investor Protection Score	6.639**	5.237***	5.246***
	2.156	3.227	3.219
Corruption index	-2.610**	-1.731***	-1.642***
	-2.043	-3.364	-3.236
Procedures to start a business	-0.417	-0.21	-0.216
	-1.615	-1.304	-1.348
Time to comply with taxes	0.002*	0.001*	0.001*
	1.958	1.969	1.916
PE Fundraising (lag)	0.760**	0.317**	
	2.103	2.152	
Average Private Credit / GDP 1990-2006	-2.184		
	-0.677		
Ln of days to enforce a contract	0.024		
	0.019		
Yearly Property rights index	0.068		
	1.406		
Yearly Freedom to trade index	0.564		
	0.596		
Employment rigidity index	0.084		
	1.29		
Statutory tax rate	-0.094		
	-0.825		
Constant	-1182.016**	-726.691***	-880.954***
	-2.559	-4.219	-3.838
Observations	337	772	772
R-squared	0.188	0.223	0.254

Table 22: Private Equity Deal Characteristics by Region and Transaction Type: The table reports various deal characteristics by geographical region and type of private equity investment using a sample of 76,398 transactions closed by private equity investors worldwide from 1984 through September 2008. The classification of "Venture Capital," "Growth Capital," "Leveraged Buyouts," and "PIPE" follows the classification in CapitalIQ. "Other Acquisitions" refers to M&A transactions undertaken by private equity funds that are not classified as leveraged buyouts or similar transactions (e.g., going private transaction, management buyout, JV/LBO) in CapitalIQ. "Other Private Placement" refers to private placements undertaken by private equity funds that are not classified as a VC of growth capital transaction in CapitalIQ. "Rich Asia Pacific" includes Japan, Singapore, Hong Kong, Macao, South Korea, Australia, and New Zealand. All other Asia-Pacific countries are classified as "Developing Asia". "Rich Middle East" includes United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, and Israel. All other Middle East countries are included in the "Developing Africa and Middle East" group. "W. Europe" includes the EU countries as well as Norway, Switzerland, the Mediterranean islands, the English Channel islands, and the Caribbean islands of Anguilla, British Virgin Islands, Aruba, Bahamas, Bermuda, and Cayman Islands. Other Caribbean Islands are included in the "Latin America and Caribbean" region. "Syndicated deals" are deals where there is more than one investor participating in the transaction. "Non-PE investor in syndicate" denote deals where in addition to at least one private equity fund investor there is also at least one investor that is not a private equity fund in the syndicate. "Minority deal" are deals where the investor syndicate acquires less than 50% of the equity in the target company. Classification of "domestic" and "foreign" investors are done at the target country level.

	VC	Growth Capital	LBO	PIPE	Other Acquisition	Other Private Placement	Total	Number of observ.
% Syndicated deals	65.6	42.4	24	47	35.3	80	50.8	76,398
% with non-PE fund investor in syndicate	14.5	10.7	5.1	13.6	24.2	11.1	11.9	76,398
% Minority deal	99.5	99.3	0.9	98.9	56.8	59.9	72.7	76,398
% with only domestic investors	71	76	78.2	70.1	65.5	74.5	73.3	76,398
% with only foreign investors	9.1	12.9	16.9	14.2	25.1	5.2	12.5	76,398
% with both dom. & for. investors	19.9	11.1	5	15.7	9.4	20.4	14.2	72,825

	Developing Africa Middle East	Developing Asia	Eastern Europe, Central Asia	Latin America Caribbean	USA & Canada	Rich Asia Pacific	Rich Middle East	W.Eur.
% Syndicated deals	77.3	47.5	40	67.7	56.4	39.4	59.3	40
% with non-PE fund investor in syndicate	2.4	7.8	4	3.1	14.3	12.4	10.7	8.9
% Minority deal	19.2	76.2	50.9	33.2	79.3	64.6	88.6	64.3
% with only domestic investors	60.9	17.6	43.2	17.5	80.5	43.9	47	68
% with only foreign investors	31.5	64.6	50	70.4	5.3	41.1	19.9	18.6
% with both dom. & for. investors	7.7	17.8	6.8	12	14.2	15.1	33.1	13.4

Table 23: Determinants of Cross-Border Deal Activity: The dependent variable in regressions (1) through (3) is a dummy variable taking the value of one if at least one of the participating investors is based in the same country as the target company. The dependent variable in regressions (4) through (6) is a dummy variable taking the value of one if at least one of the participating investors is based in a different country than the target company. "GDP/Capita (lag)" is GDP per capita, expressed in real, PPP-adjusted tens of thousands of U.S. dollars, for the country in the preceding year. "PE Fundraising (lag)" is fundraising by U.S.-based private equity funds as a percentage of U.S. stock market capitalization in the preceding year. "Number of investors" is the number of distinct investors participating in the deal. The other variables are defined as in previous tables and do not vary across years. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent. Standard errors are clustered at the country level.

	(1) Same Country	(2) Same Country	(3) Same Country	(4) Diff Country	(5) Diff Country	(6) Diff Country
GDP/cap (lag)	0.080***	0.093***	0.067***	-0.100***	-0.173***	-0.147***
	(7.490)	(7.155)	(3.610)	(-6.090)	(-8.527)	(-4.034)
GDP growth (lag)	-0.001	-0.001	0.000	0.000	-0.001	0.000
	(-0.296)	(-0.358)	(-0.033)	(0.063)	(-0.207)	(-0.074)
Creditor rights score		-0.003	0.000		0.001	0.005
		(-0.448)	(0.038)		(0.139)	(0.757)
Investor Protection Score		0.135***	0.131***		-0.240***	-0.282***
		(5.810)	(6.408)		(-5.661)	(-6.605)
Procedures to start a business		0.011***	0.010**		-0.026***	-0.025***
		(3.011)	(2.446)		(-4.707)	(-3.133)
PE Fundraising (lag)		-0.003***	-0.002*		0.000	0.002
		(-2.689)	(-1.662)		(0.060)	(1.191)
Year		-0.010***	-0.007***		0.022***	0.018***
		(-5.524)	(-3.298)		(7.419)	(4.166)
Log Transaction Value		-0.014	-0.021*		0.080***	0.047*
		(-1.077)	(-1.830)		(4.222)	(1.869)
Number of investors in deal			0.027***			0.054***
			(8.672)			(23.826)
Target in US or W. Europe			0.061			-0.141**
			(1.609)			(-2.295)
VC	0.056*	0.008	-0.039**	0.100	0.320***	0.153***
	(1.951)	(0.340)	(-2.042)	(1.621)	(10.464)	(3.607)
Growth Equity	0.047*	-0.004	-0.038**	0.002	0.273***	0.115***
	(1.686)	(-0.205)	(-2.181)	(0.032)	(7.272)	(3.235)
PIPE	-0.010	-0.059	-0.118*	0.140***	0.398***	0.165**
	(-0.316)	(-0.949)	(-1.923)	(3.038)	(10.186)	(2.043)
Observations	63994	62462	62462	63994	62462	62462

Table 24: Determinants of Minority Transactions, Syndication, and the Participation of Investors that are not Private Equity Firms. The dependent variable in regressions (1) through (3) is a dummy variable taking the value of one if investors acquire a minority stake in the target company. The dependent variable in regressions (4) through (6) is a dummy variable taking the value of one if there are at least two investors participating in the deal. The dependent variable in regressions (7) through (9) is a dummy variable taking the value of one if the investment syndicate includes at least one investor that is not a private equity firm. The independent variables are defined as in previous tables. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent. Standard errors are clustered at the country level.

	(1) Minority	(2) Minority	(3) Minority	(4) Syndicated	(5) Syndicated	(6) Syndicated	(7) Non-Fin	(8) Non-Fin	(9) Non-Fin
GDP/cap (lag)	-0.001	-0.016	-0.004	0.075***	0.015	0.014	0.014	0.01	0.014
	(-0.104)	(-1.561)	(-0.303)	(7.391)	(0.512)	(0.387)	(1.449)	(0.813)	(1.061)
GDP growth (lag)	0.003	0.007***	0.007***	0.004	-0.004	-0.004	0.006**	0.003	0.003
	(1.014)	(2.902)	(2.775)	(0.887)	(-0.900)	(-0.926)	(2.373)	(0.772)	(0.762)
Creditor rights score		-0.011***	-0.011***		-0.035*	-0.035*		-0.004	-0.005*
		(-3.684)	(-3.427)		(-1.690)	(-1.702)		(-1.475)	(-1.666)
Investor Protection Score		0.002	-0.006		0.009	0.010		-0.007	-0.010
		(0.100)	(-0.381)		(0.152)	(0.168)		(-0.268)	(-0.390)
Procedures to start a business		0.000	0.000		-0.010	-0.010		-0.005*	-0.004*
		(-0.063)	(0.125)		(-1.591)	(-1.640)		(-1.731)	(-1.719)
PE Fundraising (lag)		0.000	-0.001		-0.012***	-0.012***		-0.002	-0.002
		(-0.262)	(-0.435)		(-6.543)	(-6.208)		(-0.888)	(-0.928)
Year		0.003*	0.001		0.004	0.004		-0.003**	-0.003**
		(1.844)	(0.784)		(0.775)	(0.747)		(-1.961)	(-2.263)
Log Transaction Value		-0.029***	-0.029***		0.095***	0.095***		0.034***	0.034***
		(-3.288)	(-3.426)		(7.451)	(7.490)		(15.001)	(14.278)
VC	0.858***	0.811***	0.810***	0.411***	0.618***	0.618***	0.106***	0.204***	0.203***
	(32.290)	(55.615)	(53.670)	(6.594)	(6.915)	(6.904)	(23.859)	(31.236)	(29.330)
Growth Equity	0.346***	0.306***	0.306***	0.215***	0.420***	0.420***	0.084***	0.221***	0.220***
	(40.220)	(70.581)	(69.532)	(3.259)	(4.750)	(4.741)	(10.894)	(17.237)	(16.404)
PIPE	0.176***	0.160***	0.159***	0.211***	0.381***	0.381***	0.116***	0.263***	0.261***
	(36.861)	(58.471)	(55.057)	(3.777)	(4.382)	(4.363)	(8.383)	(14.190)	(13.324)
Target in US or W. Europe			-0.032			0.006			-0.016
			(-1.254)			(0.084)			(-1.036)
Observations	65468	63933	63933	65468	63933	63933	65468	63933	63933

Table 25: Private Equity Deal Outcomes by Region and Transaction Type: The table shows exit status of the transaction by July 1, 2008, sorted by geographical region and type of private equity investment using a sample of 76,398 transactions closed by private equity investors worldwide from 1984 through September 2008. The classification of "Venture Capital," "Growth Capital," "Leveraged Buyouts," and "PIPE" follows the classification in CapitalIQ. "Other Acquisitions" refers to M&A transactions undertaken by private equity funds that are not classified as leveraged buyouts or similar transactions (e.g., going private transaction, management buyout, JV/LBO) in CapitalIQ. "Other Private Placement" refers to private placements undertaken by private equity funds that are not classified as a VC of growth capital transaction in CapitalIQ. "Rich Asia Pacific" includes Japan, Singapore, Hong Kong, Macao, South Korea, Australia, and New Zealand. All other Asia-Pacific countries are classified as "Developing Asia". "Rich Middle East" includes United Arab Emirates, Saudi Arabia, Kuwait, Bahrain, and Israel. All other Middle East countries are included in the "Developing Africa and Middle East" group. "W. Europe" includes the EU countries as well as Norway, Switzerland, the Mediterranean islands, the English Channel islands, and the Caribbean islands of Anguilla, British Virgin Islands, Aruba, Bahamas, Bermuda, and Cayman Islands. Other Caribbean Islands are included in the "Latin America and Caribbean" region. "Acquired" means that all of the target company investors have exited and that, in addition, the target company is a subsidiary of another company according to CapitalIQ. "Public" means that all of the target company investors have exited and that, in addition, the target company is publicly traded according to CapitalIQ. "Failed" means that the target company is out of business, liquidated, or financially reorganized according to CapitalIQ. "Unknown exit" means that all investors in the transaction have exited the deal, but that the company is still recorded as an independent private company in CapitalIQ. Finally, "Not exited" means that not all investors who participated in the transaction have exited the target company.

Panel A: All transactions.

% of the number of transactions where the target company is	VC	Growth Capital	LBO	PIPE	Other Acquisition	Other Private Placement	Total
Acquired	24.5	30.1	26.2	15	15.6	29.1	24.9
Public	1.4	4.6	2.5	17.6	3.1	11.8	3.9
Failed	5.5	5.5	2.9	5.6	2.5	5.6	4.8
Unknown exit	4.8	12	14.7	2.1	6.9	3.9	8.1
Not exited	63.8	47.8	53.7	59.8	71.8	49.7	58.3
Number of observations	31,799	11,908	16,670	5,307	3,364	3,059	72,107

% of the number of transactions where the target company is	Developing Africa and Middle East	Developing Asia	Eastern Europe, Central Asia	Latin America Caribbean	USA & Canada	Rich Asia Pacific	Rich Middle East	W.Europe	Total
Acquired	9.8	5.7	16	15.3	29.2	17.7	15.7	19.5	24.9
Public	1.6	2	2.9	2.4	5	2.3	2.9	2.1	3.9
Failed	0	0.1	1.3	0.3	6.1	1.5	5.2	2.9	4.8
Unknown exit	6.6	1.5	15.1	11.6	5.9	7.4	4.9	12.5	8.1
Not exited	82	90.6	64.8	70.5	53.8	71.1	71.4	63	58.3
Number of observations	244	1033	1076	380	43316	1445	1295	23318	72107

Panel B: Transactions between 1995 and 2005 only.

	VC	Growth Capital	LBO	PIPE	Other Acquisition	Other Private Placement	Total
% of the number of transactions where the target company is							
Acquired	30.9	30.4	31.6	19.7	22.6	33.9	30
Public	1.4	4.2	2.7	22.6	4.7	14.3	4.4
Failed	7.2	5.9	3.3	6.3	3.9	7	6
Unknown exit	6.3	12.2	19.1	2.7	10.1	4.7	9.9
Not exited	54.3	47.2	43.2	48.6	58.8	40.1	49.8
Number of observations	22,616	10,267	10,358	3,515	1,891	2,279	50,926

	Developing Africa and Middle East	Developing Asia	Eastern Europe, Central Asia	Latin America Caribbean	USA & Canada	Rich Asia Pacific	Rich Middle East	W.Europe	Total
% of the number of transactions where the target company is									
Acquired	12.8	13.1	22.8	18.4	34.2	22.8	19.7	24.1	30
Public	2.7	4.1	3.7	3	5.5	2.6	3.7	2.5	4.4
Failed	0	0.2	1.6	0.3	7.4	1.9	7.2	3.7	6
Unknown exit	10.7	3	22.1	13.2	6.9	9.9	6.4	15.6	9.9
Not exited	73.8	79.6	49.7	65.1	46	62.8	63.1	54.1	49.8
Number of observations	149	436	696	304	31326	989	929	16097	50926

Table 26: Determinants of Failures: The dependent variable is a dummy variable taking the value of one if the company is out of business, liquidated, or financially reorganized by July 2008. The dependent variables are defined as in previous tables. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent. Standard errors are clustered at the country level.

	(1)	(2)	(3)	(4)	(5)
	All	All	All	Buyout Only	VC Only
GDP/cap (lag)	0.024***	0.030***	0.021***	0.002	0.025**
	(3.290)	(4.009)	(2.680)	(0.297)	(2.448)
GDP growth (lag)	0.006**	-0.001	0.006**	0.003***	0.006**
	(2.264)	(-1.260)	(2.223)	(6.118)	(1.993)
Creditor rights score	0.006***	0.006***	0.006***	0.002	0.007***
	(4.265)	(3.903)	(3.876)	(1.564)	(3.636)
Investor Protection Score	0.005	0.007	0.006	0.034***	-0.011
	(0.338)	(0.557)	(0.359)	(2.662)	(-0.740)
Procedures to start a business	0.001	0.000	0.001	0.000	0.001
	(0.570)	(0.034)	(0.413)	(0.127)	(0.784)
Log Transaction Value	0.005***	0.003***	0.004***	-0.001	0.008***
	(6.867)	(5.210)	(4.962)	(-1.080)	(6.942)
VC	0.045***	0.028***	0.028***		
	(8.754)	(7.416)	(3.162)		
Growth Equity	0.045***	0.024***	0.022**		
	(12.861)	(9.732)	(2.563)		
PIPE	0.086***	0.068***	0.053***		
	(15.747)	(17.325)	(5.636)		
PE Fundraising (lag)	0.002***		0.002***	0.000	0.004***
	(3.182)		(3.363)	(-0.478)	(6.614)
Year	-0.010***		-0.010***	-0.003***	-0.014***
	(-10.135)		(-8.530)	(-3.620)	(-10.103)
Home-country investor in deal			0.004	-0.001	0.001
			(0.613)	(-0.236)	(0.129)
Minority deal			0.013	0.021	0.017
			(1.592)	(1.368)	(1.568)
Non-PE fund investor in deal			0.004***	0.003	0.006***
			(2.934)	(1.195)	(3.976)
Number of investors in deal			0.001	-0.002**	0.001**
			(1.435)	(-2.110)	(2.460)
Target in US or W. Europe			0.009	0.017***	-0.003
			(0.650)	(4.286)	(-0.167)
Year FE	No	Yes	No	No	No
Observations	60759	60759	60759	15115	29458

Table 27: **Determinants of Deal Success**. The dependent variable in regressions (1) through (5) is a dummy variable taking the value of one if the target company is exited by the investors, and if in addition the company is either publicly traded or a subsidiary of another company in July 2008. The dependent variable in regressions (6) through (10) is a dummy variable taking the value of one if the target company is exited by the investors, and publicly traded in July 2008. PIPE transactions are excluded from the analysis. The independent variables are defined as in previous tables. The table shows coefficients (above) and t-statistics (below). Three stars denote coefficients significant at the one-percent confidence level; two stars, five percent; and one star, ten percent. Standard errors are clustered at the country level.

VARIABLES	(1) Pub Acq All	(2) Pub Acq All	(3) Pub Acq All	(4) Pub Acq Buyout	(5) Pub Acq VC	(6) Public All	(7) Public All	(8) Public All	(9) Public Buyout	(10) Public VC
GDP/cap (lag)	0.016	0.038***	-0.005	-0.042	-0.011	0.002	0.003	0.003	-0.001	0.000
	(0.814)	(3.009)	(-0.171)	(-1.395)	(-0.437)	(0.775)	(1.335)	(1.298)	(-0.240)	(0.002)
GDP growth (lag)	-0.003	-0.004*	-0.003	-0.002	-0.006	0.000*	0.000	0.000	0.001***	0.000
	(-0.827)	(-1.735)	(-0.596)	(-0.379)	(-1.098)	(1.903)	(0.214)	(1.616)	(2.695)	(-0.397)
Creditor rights score	0.003	0.006	0.004	0.013**	-0.007**	0.000	0.000	0.000	-0.001	0.000
	(0.724)	(1.472)	(1.078)	(2.177)	(-2.227)	(0.044)	(0.307)	(0.158)	(-0.959)	(0.605)
Investor Protection Score	0.082**	0.069***	0.095***	0.064*	0.106***	-0.008*	-0.007**	-0.006	-0.013**	-0.001
	(2.550)	(2.799)	(2.777)	(1.742)	(3.413)	(-1.940)	(-2.544)	(-1.569)	(-2.062)	(-0.388)
Procedures to start a business	-0.013***	-0.012***	-0.014***	-0.013***	-0.009*	-0.001*	0.000	-0.001	-0.002***	0.000
	(-3.070)	(-2.905)	(-2.802)	(-2.788)	(-1.787)	(-1.745)	(-1.644)	(-1.552)	(-3.395)	(0.671)
Log Transaction Value	0.038***	0.036***	0.032***	0.020***	0.033***	0.004***	0.003***	0.004***	0.006***	0.001***
	(16.148)	(12.937)	(10.225)	(3.318)	(8.190)	(7.425)	(8.108)	(7.540)	(6.178)	(4.990)
VC	0.101***	0.080***	0.006			0.005***	0.005***	-0.006		
	(3.912)	(3.241)	(0.297)			(4.378)	(4.597)	(-0.851)		
Growth Equity	0.114***	0.087**	0.021			0.025***	0.020***	0.005		
	(2.780)	(2.248)	(0.761)			(14.229)	(10.925)	(0.695)		
PE Fundraising (lag)	-0.014***		-0.014***	-0.017***	-0.013***	-0.001***		-0.001***	-0.001***	-0.000**
	(-10.813)		(-8.942)	(-8.390)	(-7.913)	(-5.843)		(-6.120)	(-7.196)	(-2.149)
Year	-0.045***		-0.042***	-0.033***	-0.045***	-0.003***		-0.004***	-0.003***	-0.002***
	(-23.943)		(-16.337)	(-10.010)	(-15.286)	(-10.488)		(-11.443)	(-6.388)	(-13.127)
Home-country investor in deal			-0.016	-0.039***	0.023			-0.007***	-0.005*	-0.005***
			(-0.846)	(-2.991)	(1.587)			(-4.583)	(-1.785)	(-3.197)
Minority deal			0.063***	0.047	0.099***			0.010*	0.029***	0.001
			(3.136)	(1.093)	(4.308)			(1.837)	(3.054)	(0.346)
Non-PE fund investor in deal			-0.023***	-0.012	-0.027***			-0.002**	-0.007***	-0.001*
			(-6.427)	(-0.931)	(-6.477)			(-1.990)	(-4.395)	(-1.668)
Number of investors in deal			0.013***	0.005	0.012***			0.000	0.001	0.000
			(16.640)	(0.713)	(16.542)			(-0.499)	(1.107)	(-0.341)

Target in US or W. Europe			0.066**	0.069**	0.040*			-0.002	0.005	-0.001
			(2.542)	(2.176)	(1.852)			(-0.685)	(0.934)	(-0.284)
Year FE	No	Yes	No	No	No	No	Yes	No	No	No
Observations	55727	55727	55727	15115	29458	55727	55727	55727	15115	29458