The Effect of Trade Barriers on Country-Level Investment Decisions of Private Equity Funds

Simon J. Evenett [1]
Stefan Morkoetter [2]
Dominic Rainsborough [3]

Working paper
(31 December 2023)

Abstract

We investigate the impact of trade barriers on the investment behavior of private equity funds with regards to country preferences. We use a sample of 9,142 transactions across 60 countries and 52 industries completed by 1,623 PE funds during 2010-2020. We observe a negative and significant relationship of trade policies restricting imports into the target country and the probability of a PE fund investment. This effect is driven by trade barriers pertaining to subsidies paid to import-competing firms. We find a positive and statistically significant effect of tariffs on the probability of a PE fund investment in a given country. Using subsample analyses, we find distinctive regional differences in funds' investment decision-making with regards to trade barriers.

Keywords: Private Equity, Trade barriers, Protectionism.

[1] University of St. Gallen, Department of Economics, Bodanstrasse 8, 9000 St. Gallen, Switzerland; simon.evenett@unisg.ch
[2] University of St. Gallen, The St.Gallen Institute of Management in Asia, 110 Amoy Street, Singapore 069930; stefan.morkoetter@unisg.ch
[3] University of St. Gallen, The St.Gallen Institute of Management in Asia, 110 Amoy Street, Singapore 069930; dominic.rainsborough@unisg.ch

1. Introduction

Over the past decade, China's ascent as a dominant trading power and the resurgence of protectionism have profoundly influenced the global economic landscape. There has been a discernible shift to industrial policies, more selective policy interventions and favoring of local businesses. Governments have expanded import restrictions and raised the levels of subsidies paid to protect local firms from international competition. Data from the Global Trade Alert database shows that more than 24% of world trade is impacted by some form of protectionism such as import tariffs, import quotas, public procurement rules favoring local firms. The level of trade affected by subsidies paid to local firms is even larger at 28% in the EU and the U.S. alone (Evenett and Fritz, 2021). Yet, we observe a high level of dispersion in terms of trade barriers experienced across countries and industries. For example, tariffs on agricultural products vary widely reaching levels of 32.3% on dairy products in the European Union. These policies influence the investment behavior of acquirers in M&A transactions as trade barriers impact the underlying businesses. We study this in the context of private equity (PE) investors and focus on buyout funds. Buyout funds raise capital from investors and acquire a controlling interest in a company on a stand-alone basis for investment purposes. They have a mandate to invest in a range of different countries and industries. Due to the stand-alone character of their investments, synergies with existing businesses are typically not reflected in their investment decisions.[4] They have fixed investment period, a high incentive to deploy capital and they are primarily focused on maximizing financial returns[5]. Thus, we hypothesize this investor group is sensitive to changes in trade barriers as each investment decision is independent and they possess – in contrast to strategic acquirers – the ability to not only move across countries but also industries when selecting their investment targets. We estimate determinants of the funds' investment decisions by taking explicitly into account their industry and country mandates. The careful choice of our dataset allows us to isolate the impact of trade distortions on M&A decisions.

While literature has centered on various factors influencing PE investments, the impact of trade barriers on these decisions has not been the primary focus. Research has shown that a country's level of trade protection is positively related to the rate of return of private equity transactions (Watson and George, 2010). Aldatmaz, Brown, and Demirguc-Kunt (2023) study the determinants of buyout investments across countries and find GDP growth, active credit and stock markets, rule of law and investor protection are drivers of buyout activity. Research in venture capital (VC) identified similar factors influencing host country attractiveness and return variations across countries (Balcarcel, Hertzel and Lindsey, 2010; Bottazi, Da Rin, and Hellmann, 2009; Guler and Guillén, 2010; Schertler and Tykvová, 2011, 2012; Aizenman and Kendall, 2012). Trade literature shows that trade barriers and alleviating policy interventions such as trade agreements have measurable effects on patterns of FDI across countries. Research finds that trade barriers lead to the phenomenon of tariff-jumping FDI (Blonigen and Feenstra, 1997; Barrel and Pain, 1999; Görg and Labonte, 2012). Further, Hijzen, Görg, and Manchin (2008) find that trade costs negatively impact cross-border merger activity across OECD countries. They show that horizontal mergers are less impacted by trade costs than vertical mergers. This indicates that firms regard tariff-jumping as a reason to buy foreign competitors.

[4] We exclude add-on transactions in our paper which refer to an acquisition of a smaller company by a private equity-backed portfolio company. Objectives typically are to consolidate market share, or acquire proprietary technologies, and often involve acquiring smaller competitors.

[5] We exclude impact funds in our analysis due their primary focus on social and environmental performance measures.

Despite the existing research focusing on macroeconomic factors, we know little on how trade barriers are affecting M&A activities. Against this background, our paper studies the impact of state interventions on the investment behavior of private equity funds across different countries. It extends the research on tariff-jumping beyond FDI and provides a new empirical assessment of the phenomenon in the context of buyout transactions. We analyze how buyout funds respond to (changes in) import restrictions and subsidies in their choice of a target firm's geographic location and industry denomination. We use a sample of 9,142 transactions across 60 countries and 52 industries completed by 1,623 buyout funds during 2010-2020 and analyze the funds' country-level investment decisions based on their geographic and industry investment mandates. We use a probit model to measure the probability of a buyout fund to invest in a given country. Our dependent variable investment is a dichotomous variable that equals 1 if we observe an investment by a buyout fund in a given country and 0 in every other investment destination within its geographic investment mandate. We add data from the Global Trade Alert database on the national shares of imports affected by any form of import restrictions (such as import tariffs or import quotas) and on the shares of imports where local firms receive subsidies. We have created a unique dataset and are the first to use the Global Trade Alert to study the impact of trade barriers on private equity deals. Our analysis focuses on buyout, private investment in public equity (PIPE)[6], public to private[7] and growth capital[8] transactions, excluding venture capital and add-on transactions. Target firms are public and private enterprises from various industry sectors.

Our results indicate that a 1 percentage point increase in trade barriers restricting imports into the target country decreases the probability of a PE fund investment by 0.33486 percentage points. Trade barriers are defined as the share of imports covered by protective measures in the target country (ranging from 0 to 1). This effect is more pronounced when examining subsidies paid to import-competing firms. We find that import tariffs increase the probability of a PE fund investment in a given country. Applying a subsample for different time periods, we find that the negative effect of subsidies increases while the positive impact of tariffs is less pronounced during the U.S.-China trade war (2017-2020). Our results show that trade barriers have differing impacts depending on the policy instruments. Tariffs attract PE investments as they create an environment that allows local companies to achieve above-average profitability by reducing the competitiveness of firms located outside the country. Subsidies are often firm-specific and discourage PE investments as they signal favoring of particular firms by local governments.

Building on existing literature on determinants of PE and VC activity across economies, our paper complements research on international trade and how firms supply foreign markets (Antras and Yeaple, 2014; Zapkau, Schwens and Brouthers, 2021). It also adds to our knowledge about the effects of trade restrictions on FDI (Belderbos, 1997; Belderbos and Sleuwaegen, 1998; Blonigen, 2002; Blonigen, Tomlin and Wilson, 2004; Blonigen, 2005; Blonigen and Piger, 2014; Nunnekamp, 2002). Our paper carves out several distinct contributions. Firstly, we are the first to use Global Trade Alert data to study the impact of trade barriers on cross-border buyout deal activity. Our dataset, encompassing over 9,000 buyout transactions coupled with industry-specific trade barrier data, allows for a detailed and comprehensive analysis of trade impacts on deal activity. Next, we expand the scope of tariff-jumping research,

[6] PIPE represents an investment by a private equity firm in a public company, which remains public post-investment.

[7] A public-to-private deal is defined as an acquisition of a company from the stock exchange and subsequent de-listing by a private equity firm.

[8] An investment by private equity firm typically via a non-controlling or minority stake to provide capital for the growth and expansion of a company.

traditionally focused on FDI, to encompass buyout transactions. This provides insight into the impact of trade distortions on M&A transactions. Our research unveils varying effects of tariffs and subsidies on PE investments, which challenges conventional views on trade barriers. By highlighting the varied responses to these policy instruments, we offer insights into how they influence firm-level investment decisions. We connect research on international trade, FDI, M&A, and private equity, emphasizing the profound influence of trade policies on investment decisions. Our findings underscore the need for deeper exploration of how such policies directly and indirectly shape investor behavior in M&A transactions.

The remainder of this paper is organized as follows. Section 2 introduces private equity and discusses its relevance to this study. Section 3 provides an overview of the research in the area. The data employed in this study is described in Section 4 and the empirical strategy and results are presented in Section 5. Conclusions follow in Section 6.

2. Overview of private equity funds

Private equity represents an important asset class with assets under management (AUM) of over $9.1 trillion by the end of 2022 as per Preqin data. In 2022 alone, 3,327 private equity funds collectively raised $901.9 billion. This shows the significance of private equity in the financial markets and its large role in M&A transactions.

Private equity funds are structured as closed-end investment vehicles, which have a finite lifespan of generally 10 years during which investors will not be able to redeem their capital (Metrick and Yasuda, 2011). These funds are organized as a limited partnership and are managed by a general partner (GP). A GP raises capital from investors, and sources, executes, and manages investments to realize returns for the investors in a fund. Fund investors are called limited partners (LPs) and have no influence over investment decisions. Investors typically include institutions such as endowment plans, pension funds, insurance companies and foundations, as well as high-net-worth individuals.

The terms of the partnership are set out in a so-called limited partnership agreement (LPA). This is described in detail in Gompers and Lerner (1996), Litvak (2009), and Metrick and Yasuda (2010). The LPA outlines the investment criteria such as geographic region or country, the maximum size of the individual fund investments, target industries, the duration of the fund, and the fees to be awarded to the fund manager. Investors cannot exert influence over the fund or its investment decisions beyond the LPA. GPs are free to decide where to invest within the limits of the LPA. Each private equity fund focuses on a specific investment strategy with buyout, venture capital, and growth being the most common types. This determines the type and development stage of the companies a fund seeks to acquire. While buyout funds, for example, buy mature companies with stable cashflows, VC funds invest into early-stage, often unprofitable startups. The average holding period for a fund investment is 5-8 years. Capital flows stemming from divestments cannot be reinvested and are directly distributed to LPs. (Kaplan and Schoar, 2005; Robinson and Sensoy, 2016). Therefore, a GP needs to raise follow-on funds for new investments once its current fund is fully invested (Barber and Yasuda, 2017). Fund managers receive an annual management fee measured as percent of total capital invested of historically 2% and a performance fee, the so-called carried interest, which is typically 20% of capital gains achieved (Korteweg and Sorensen, 2010; Phalippou and Gottschalg, 2009; Metrick and Yasuda, 2011).

We believe that buyout funds present a unique opportunity to study the impact of trade barriers on investment behavior in the context of M&A transactions. Research on M&A transactions

often focuses on non-financial buyers and finds a range of strategic reasons for cross-border acquisitions. Companies complete M&A deals to use existing resources to achieve a competitive advantage in the destination market or to obtain new resources to increase firm competitiveness in the home country (Anand and Delios, 2002; Schweiger et al., 1994). Acquiring a foreign company can be the fastest and cheapest way to gain strategic assets, such as know-how, brand names, permits and licenses, to exploit complementarities among firms' capabilities (Barkema and Vermeulen, 1998; Morck and Yeung, 1991; Madhok, 1997; Vermeulen and Barkema, 2001), to expand production and markets internationally, to achieve synergies and economies of scale (Vasconcellos and Kish, 1998), to access new markets, customers and distribution channels, to obtain new technology and brands, to increase overall size and to remove a competitor or potential competitor (Caiazza and Nueno, 2014). In contrast buyout funds acquire companies on a stand-alone basis for investment purposes and focus on maximizing financial returns. We focus on buyout funds as these invest in mature companies which face high levels of cross-border competition both in importing and exporting goods and services. Financial factors both on a company- and country-level, which impact corporate profitability, determine the investment decisions of PE investors. Thus, we posit buyout funds are sensitive to trade barriers and provide a unique way to study M&A investment behavior.

3. Literature review

Our paper is linked to private equity and trade literature. We first provide an overview of determinants of cross-border investment decisions of PE and VC funds. Afterwards we summarize research into the effect of trade barriers on FDI and M&A.

Aldatmaz, Brown, and Demirguc-Kunt (2021) study the determinants of buyout investments across countries and find that countries with cyclically strong economies, more active credit and stock markets, and better rule of law more receive more buyout capital. Private equity activity is also higher in countries which have better investor protection and enacted contract enforcement reforms. Other literature in this area focuses primarily on venture capital investments (e.g., Balcarcel, Hertzel and Lindsey, 2010; Bottazi, Da Rin, and Hellmann, 2009; Guler and Guillén, 2010; Schertler and Tykvová, 2011, 2012; Aizenman and Kendall, 2012). Researchers identified several factors influencing host country attractiveness and return variations across countries. Aizenman and Kendall (2008, 2012) analyze venture capital activity across a large number of countries. They find that cultural and geographic distance, human capital and technological development, financial market and business conditions are statistically significant determinants of cross-border investments. Gompers and Lerner (1998) analyze the drivers of VC activity across U.S. states and show that GDP growth and VC activity are positively correlated on a state-level. Schertler and Tykvová (2011) study the impact of GDP growth, R&D expenditures, and stock market capitalization on cross-border venture capital activity. The authors find evidence that these factors improve the attractiveness of a country as an investment location and increase the probability of cross-border VC deals.

Legal and regulatory factors also influence cross-border investment activity. Cumming, Schmidt, and Walz (2010) find that legal origin and accounting standards significantly impact VC market success. Guler and Guillen (2010) study the importance of the institutional environment for VC investments and find that countries with high levels of regulatory stability, investor right protection, and simple sale legislations receive more VC investments. Lerner and Schoar (2005) analyze private equity investments in emerging markets and find that legal origin and length of commercial dispute resolutions in the host country influence exit valuations. Cumming and Walz (2009) determine that the IRR across countries is positively influenced by

a legality index (rule of law, efficiency of judicial system, risk of expropriation, corruption, risk of contract repudiation, and shareholder rights). Cao, Cumming, Qian, and Wang (2015) study the impact of the legal and institutional environment on cross-border LBOs and find that an LBO investment is more likely from sponsors in countries with stronger creditor rights toward targets in countries with weaker creditor rights.

There is some research on the impact of business freedom[9], openness and trade protection on private equity activity. Wang and Wang (2012) investigate the determinants of cross-border venture capital performance. They find that the host country's economic freedom significantly impacts the cross-border VC performance. In countries with a higher level of economic freedom foreign VC-backed portfolio company are more likely to successfully exit via an IPO or a M&A transaction, and the investment duration is shorter in the portfolio company. Watson and George (2010) find that a country's level of trade protection is positively related to the rate of return. They find no evidence that the openness of a country influences the rate of return.

Li, Vertinsky and Li (2014) find that institutional and cultural distances negatively affect the likelihood of international venture capital exit success. They show that a fund's international experience significantly reduces the negative effect of institutional distance, but neither a fund's international experience nor its specific experience in the host country can significantly reduce the effects of cultural distance. Research shows that institutional investors exhibit a bias towards investing in domestic assets, such as French and Poterba (1991), Coval and Moskowitz (1999, 2001), Baik, Kang, and Kim (2010) and Brown, Pollet, and Weisbenner (2012). Research finds that investment decisions of PE and VC funds are influenced by local bias. Prior literature shows VC investors prefer to invest in their home provinces in the US (Cumming and Dai, 2010; Lerner, 1995; Stotz et al., 2010). Cornelius, Juttmann and Langelaar (2009) find evidence for home bias in European private equity funds. Similarly, Hochberg and Rauh (2013) find that LPs exhibit substantial home-state bias when selecting PE funds. Studies also find a home bias in private equity investments of sovereign wealth funds (Chhaochharia and Laeven, 2008; Johan, Knill, and Mauck, 2013).

Scholars in both international business and international trade extensively investigate how firms supply foreign markets (Antras and Yeaple, 2014; Zapkau, Schwens and Brouthers, 2021). They show that trade barriers impact FDI in both an inward and outward direction (Belderbos, 1997; Belderbos and Sleuwaegen, 1998; Blonigen, 2002; Blonigen, Tomlin and Wilson, 2004; Blonigen, 2005; Blonigen and Piger, 2014; Nunnekamp, 2002). Research also illustrates that trade barriers impact proximity-concentration trade-offs regarding the location of production facilities (Brainard, 1997; Caves, 1996). Research shows that trade barriers and alleviating policy interventions such as trade agreements have measurable effects on patterns of FDI across countries.

Research studies the phenomenon of tariff-jumping FDI. Blonigen and Feenstra (1997) find that the threat of protectionism had a significant and positive effect on greenfield FDI in the USA in the 1980s. Barrel and Pain (1999) analyze FDI flows into the European Union and the U.S. and find investment was significantly influenced by trade protection measures. Görg and Labonte (2012) study the impact of trade protection measures on FDI inflows among OECD economies and find these are associated with 40-80% lower FDI inflows. In general, while little has been written about subsidy races inducing FDI, subsidy competition within the U.S.

[9] Research often uses the business freedom component of the Heritage Foundation's Index of Economic Freedom (2009). It captures the ease to start, operate, and close a business, as well as the general efficiency of the government in the regulatory process.

has been analyzed extensively (Suarez Serrato and Zidar, 2016; Ossa, 2018; Slattery, 2018; Chava et al., 2019; Fajgelbaum et al., 2019; Slattery, 2020; Slattery and Zidar, 2020).

Besides greenfield FDI, cross-border M&A is the most common FDI mode of entry into a market. There has been some research on how trade barriers impact cross-border M&A activity. Hijzen, Görg, and Manchin (2008) analyze OECD countries and find that trade costs negatively impact cross-border merger activity. They find that horizontal mergers are less impacted by trade costs than vertical mergers. This is an indication that firms see tariff-jumping as a reason to buy foreign competitors. Other research finds a positive relationship between M&A and bilateral trade liberalization (Coeurdacier, Santis, and Aviat, 2009; Erel, Liao, and Weisbach, 2012; Hyun and Kim, 2010; Rossi and Volpin, 2004).

4. Data

4.1. Data on funds and transactions

We obtain data on private equity transactions from Preqin, a database for global private equity and venture capital transactions.[10] It contains detailed information regarding the portfolio company (such as deal value and portfolio company country), the fund (such as fund size and fund investment mandate) and fund manager (such as fund manager type or domicile).

First, we identify all PE funds that have completed at least one buyout, PIPE, public to private, growth capital transaction between 2010 and 2020. We only include funds with an investment mandate for multiple countries. This yields 1,623 funds from 938 unique firms (GPs). Table 1 reports the breakdown of our full sample of funds by fund region, vintage year, fund size, internal rate of return (IRR) and fund sequence. The average fund manages around $1,903 million in capital (median of $894 million) and has average sequence number of 3.3. Around 50% of the funds are based in the U.S. Almost two-thirds of funds provide performance data in terms of IRR and/or a total value to paid-in capital (TVPI).[11] The average fund generates an IRR of 15.8% (median: 15.1%) and a total value of 1.60 times the paid-in capital (median: 1.54). This is in line with prior research (e.g., Kaplan and Schoar, 2005; Robinson and Sensoy, 2016; Korteweg and Sorensen, 2017).

[Insert Table 1 about here]

Second, we compile all completed investments by these funds between 2010 and 2020, for which deal size, deal industry and deal location is available. We only include buyout, PIPE, public to private, growth capital transactions. This leaves us with a final sample of 9,142 investments across 52 industries and 60 countries. Table 2 presents a break-down of the investments by geography, industry sector, and investment year. We find that investments in our sample overall tend to be equally distributed across transaction years with the highest activity in PE transactions in 2017 (accounting for 10.5% of our observations) and the lowest activity in 2012 (representing 7.9% of our observations). Most transactions were completed in the United States (37% of all investments), followed by the UK (8.3%) and France (6.6%). The

[10] Preqin (www.preqin.com) obtains data from public sources (i.e. filings, press releases, and websites) as well as through submissions by funds on their platform. Research teams gather, validate, and consolidate the information, and they reach out to companies, investors, advisers, and lenders to cross-verify the assembled data.

[11] The internal rate of return (IRR) represents the rate at which the net present value of all cash inflows equals zero. Total value-to-paid-in (TVPI), alternatively referred to as investment multiple, is the money returned to investors in addition to the unrealized investments.

industry split exhibits a high concentration on consumer discretionary and information technology, followed by the industrials and healthcare sectors.

[Insert Table 2 about here]

4.2. Trade barriers and control variables

We use annual trade barrier data from the Global Trade Alert database from 2010-2020. This database contains national import shares which are computed based on detailed reports of more than 52,000 policy interventions implemented globally since November 2008. The reports state implementation dates and duration of each policy intervention. See Evenett (2019) for a detailed explanation of the methodology. The Global Trade Alert has been acknowledged by the International Monetary Fund in 2016 as the dataset with the most comprehensive coverage of policies affecting international commerce. The number of policy interventions included in the Global Trade Alert database has more than doubled since 2016. Deputy Director-General of the World Trade Organization Alan Wolff called the coverage of the Global Trade Alert "unmatched."[12] We are the first to use the Global Trade Alert database to analyze buyout transactions.

We use four specifications of the trade barriers variable based on the Global Trade Alert methodology. Trade barriers (all instruments) contain all trade restrictions on import such as quotas, tariffs, and anti-dumping measures as well as subsidies paid to import-competing firms. For a complete list of measures refer to Appendix A6. This represents the most comprehensive measure of trade barriers in our dataset. The trade barriers variable pertaining to subsidies contains the measures bailout (capital injection or equity participation), state loan, financial grant, in-kind grant, production subsidy, interest payment subsidy, loan guarantee, tax or social insurance relief, consumption subsidy, import incentive, financial assistance in foreign market, state aid, and price stabilization. The variable trade barriers (tariffs) refers to all tariff measures on imports. Tariffs are any form of customs duties on merchandise imports. These give a price advantage to locally produced goods over comparable imports. As a robustness test we also include the variable trade barriers excluding subsidies.

We control for cross-country differences in an economy's business friendliness using their ease of doing business score from the World Bank's Doing Business database[13]. These aggregate scores are based on the assessments of 10 policy classes concerning the profitability of business which include time and cost of setting up a business and of registering property, the level of minority investors protections, the ease of obtaining credit, of contract enforcement, and of contracting with government. We obtain each economy's score for every year from 2010 to 2020. Other country-level control variables are sourced from the World Bank's Development Indicators database including annual GDP growth, annual unemployment change, stocks traded (% of GDP), and domestic credit to the private sector (% of GDP). The variable rule of law is obtained from World Bank's Worldwide Governance Indicators and is used as a control variable for institutional quality. We match this data with the buyout transaction data on the country level.

[12] See the statement by Ambassador Alan Wolff at https://www.wto.org/english/news_e/news20_e/ddgaw_01apr20_e.htm.
[13] Given the ease of doing business index was discontinued in 2021 following irregularities, we use both rule of law and the ease of doing business score as control variables.

4.3. Counterfactual approach

Ideally, we would be able to identify all investment opportunities each PE fund has evaluated for each transaction in our dataset. Since such information is unavailable, we resort to a counterfactual approach. Based on data from Preqin on the funds' geographic and industry investment mandate we identify transactions with a suitable profile that each fund *could* have invested in. This is used to assess the impact of trade barriers on the funds' selection of target companies. Utilizing the counterfactual dataset allows us to better understand the underlying factors that guide funds towards their observed investment decisions. Thereby it offers a clearer perspective on how trade barriers shape choices amidst other influencing variables. This approach follows research on the impact of networks on the probability of PE and VC investments in firms (e.g., Bengtson and Hsu, 2015; Gompers, Mukharlyamov, and Xuan, 2016; Fuchs et al., 2021).

We create a counterfactual dataset comprising all PE and M&A transactions completed between 2010-2020. Using the Preqin database we compile all buyout, PIPE, public to private and growth capital transactions in this timeframe with information on deal country, deal industry, deal size and deal year. If information on transaction size is missing, we use the acquiring fund's average deal size. Further, we use Refinitiv to retrieve all M&A transactions in the same timeframe with information on deal size, deal country and deal industry. All transactions already present in the Preqin data were excluded. These steps result in 100,823 additional unique transactions.

We compile the counterfactual investments for each investment decision based on the following three criteria: (i) the deal takes place in the same year as the fund's actual investment, (ii) both country and industry of the transaction are included in the fund's investment mandate, and (iii) the deal value is within the fund's target transaction size range based on its fund size.[14] In total this procedure allows us to create a dataset of 1,497,425 counterfactual investments. While the number of transactions appears high, it is important to reflect carefully what it measures. It represents all the deals that the funds in the dataset in principle could have invested in according to their investment mandate. However, it is not implying that every fund has evaluated an actual investment in each case. The objective is to analyze the effect of trade barriers on the investment decisions of each fund. By comparing actual investments against this counterfactual backdrop, we can isolate and quantify the specific impact of these factors, ensuring our conclusions are both rigorous and grounded in a comprehensive analytical framework.

5. Empirical strategy and econometric results

To analyze the impact of trade barriers on the probability of an investment by a PE fund being made in a given country *i* in year *t*, we estimate the following probit model.

$$\begin{aligned} &Prob\left(investment_{i,t}\right) \\ &= \alpha_1 + \beta_2\left(trade\ barriers_{i,t}\right) + \gamma_3\left(controls_{i,t}\right) \\ &+ \delta_4(FE\ year, industry) + \varepsilon_5 \end{aligned} \tag{1}$$

[14] Similar to Gottschalg, Gleisberg and Derungs (2015) we classify funds into small (fund size smaller than \$100 million), mid-sized (fund size between \$100-800 million) and large (fund size larger than \$800 million). Based on average transaction sizes we specify that small funds can invest in deals up to \$50 million, mid-sized funds in deals between \$50-200 million, and large funds in deals larger than \$200 million.

We employed a probit model with maximum likelihood estimation (MLE) tailored for binary outcomes (Heckman, 1979). While fixed effects in large panels can introduce bias due to the incidental parameters problem, they are crucial for controlling unobserved heterogeneity. The Wald chi-squared statistic confirms the joint significance of our predictors, and the pseudo R-squared value indicates a reasonable model fit. Although logit results were consistent with our probit findings, we favored the probit model due to its more flexible assumptions regarding the distribution of the error term, making it better suited for our dataset. Our statistical methodology follows related research in private equity (e.g., Nikoskelainen and Wright, 2007; Chen, Dai, and Schatzberg, 2010; Fidrmuc et al., 2017).

For our regressions the dependent variable investment is a dichotomous variable that equals 1 if we observe a deal by a PE fund in a given country *i* in year *t* (actual investment) and 0 otherwise (counterfactual investment). Our principal independent variable trade barriers is a continuous variable (ranging from 0 to 1) and captures the share of imports covered by protective measures in the target country. This covers any form of policy-induced restriction on imports and on the shares of imports where one or more local firm have received some form of state subsidy. This independent variable captures the exposure of the PE fund to the protectionism of each potential investment destination. In Appendices A3, A4, and A5, we observe significant variations in trade barriers across countries, regions, and years throughout our study period.

We use further specifications of the trade barriers variable which pertain to the share of imports affected by subsidies paid to local firms and by tariffs on imports (both ranging from 0 to 1). This allows us to analyze whether the PE investments are impacted by state largesse (subsidies) or import restrictions, which is discussed extensively in tariff-jumping FDI research. We use a distance measure to better capture the impact of trade barriers within the fund's mandate. We subtract the lowest trade barrier in $year_1$ within the fund's mandate from the trade barrier of the observed counterfactual deal ($country_a$, $year_1$). This approach allows us to incorporate the distance in trade barriers among the choices the fund has based on its mandate. We also use the difference measure for our control variables.

As control variables we include the rule of law and ease of doing business score to control for the institutional quality of the target country (e.g., Cherif and Gazdar, 2009; Levie and Autio, 2011; Cumming, Henriques and Sadorsky, 2016). The ease of doing business score gauges a country's performance compared to a measure of regulatory best practice across the Worldbank's entire sample of 41 indicators for 10 doing business topics. We use the log of GDP in US$ to account for differences in investment opportunities between the target countries. Target countries with a larger economy attract more PE investments (Aizenman and Kendall, 2008). Similar to Aldamatz, Brown, and Demirgüç-Kunt (2023) we include the variables GDP growth (%, annual), unemployment change (%, annual), stocks traded (% of GDP), and domestic credit to the private sector (% of GDP) to control for differences in attractiveness across countries to obtain PE investments. We hypothesize that countries with higher levels of growth, lower levels of unemployment, as well as those having more developed financial and credit markets will see more PE investments. Following Humphery-Jenner (2012) we control for fund size in US$ (natural log) and fund sequence number to account for investment drivers on a fund-level. There have been several studies that show performance persistence in PE funds and argue this can be attributed to GP skills and abilities (Kaplan and Schoar, 2005; Korteweg and Sorensen, 2017). Cumming, Fleming, and Schwienbacher (2009) find that funds with a later sequence number realize a higher return. Thus, we posit that larger and more experienced funds can accumulate better expertise to deal with trade barrier policies.

Table 3 reports the summary statistics for the variables used in our econometric analysis. We find that for the 9,142 completed investments, the mean share of the target nation's imports facing any trade policy is 10% (0.10). When only considering tariffs, the mean import exposure by target country is 2% (0.02). When we focus on subsidies to import-competing firms the mean import exposure of the target country is 10% (0.10). The mean ease of doing business score of the target countries for PE investments is 77.74. An economy's ease of doing business score is reflected on a scale from 0 to 100, where 0 represents the lowest and 100 represents the best regulatory performance constructed across all economies and across time. On average the deal size is $256 million in our dataset while the average fund size is $1,874 million. The average sequence number based on the fund family is 3.3 in the sample. The value of stocks traded (market capitalization), a commonly used factor for the depth of public markets, is on average 121% of GDP, while credit provided to the private sector is about 136% of GDP, which is an indicator of the depth of the credit markets. During the sample period the average GDP per capita growth is 2.03% per annum and the average unemployment rate remains almost unchanged (0.01%).

[Insert Table 3 about here]

We include fixed effects pertaining to the investment year and industry sector of the respective PE transaction. Standard errors are clustered on fund level in all our model specifications.

Table 4 reports the results of our probit regressions. Overall, we find a negative and significant relationship of trade policies restricting imports into the target country and the probability of a PE fund investment. This effect is more pronounced using the trade barriers variable pertaining to subsidies paid to import-competing firms in specification (4), where the coefficient is larger. We find a positive and statistically significant effect of tariffs on the probability of a PE fund investment in specification (5). Our results indicate that trade barriers discourage PE investments and that this effect is driven primarily by subsidies. This is in line with research on the negative impact of trade barriers on FDI flows (e.g., Barrel and Pain, 1999; Görg and Labonte, 2012) and cross-border M&A activity (e.g., Hijzen, Görg, and Manchin, 2008). We argue that subsidies are often firm-specific and can deter PE investments as they signal favoring of particular firms by local governments. Such favoritism could indicate underlying corruption. This is consistent with Groh and Wallmeroth (2016), who found corruption negatively affects VC investments in emerging markets.

Tariffs attract PE investments as they create an environment that allows local companies to achieve above-average profitability by reducing the competitiveness of firms located outside the country. This creates an opportunity for PE funds to earn a higher rate of return (Watson and George, 2010). Thus, the effect of trade barriers on the probability to invest should be more pronounced for non-exporting firms focusing on the domestic market. This distinction marks a compelling direction for subsequent research. With regards to control variables, we find a positive effect of the variables rule of law, GDP growth, stocks traded (% of GDP), and domestic credit to the private sector (% of GDP) on the probability of a PE investment in the target country, which is significant for all specifications. This confirms research on drivers of country attractiveness in private equity (e.g., Aldamatz, Brown, and Demirgüç-Kunt, 2023). Further, we find that GDP size (log) and unemployment change (%, annual) have a statistically significant and negative effect on PE investments.

[Insert Table 4 about here]

We run several subsample analyses to evaluate the robustness of our results and to gain additional insights into the effect of trade barriers. In Table 5, we re-run our probit regressions by fund location and separate the subsamples into funds with headquarters in Europe[15], North America and Asia[16]. We follow the regional classification of Braun, Jenkinson, and Stoff (2016). Interestingly, we observe different results for tariffs and subsidies for funds in each region. The results for North American funds are in line with our findings exhibiting a negative effect for subsidies and a positive effect for tariffs. For funds headquartered in Europe we find a positive effect for tariffs and observe a statistically significant and positive effect for subsidies (specification 2). For Asian funds we observe a negative effect for subsidies but no statistically significant effect for tariffs. We also find no significant effect of the rule of law and ease of doing business variables in contrast to North American and European funds.

Most investments are concentrated in the same region as the fund's headquarters, aligning with literature suggesting that international investment decreases with distance (Carr et al., 2001; Portes and Rey, 2005; Di Giovanni, 2005). However, significant M&A activity is observed between European and US firms (Hijzen, Görg, and Manchin, 2008). Comprehensive intra-Asian trade agreements, such as the ASEAN Free Trade Area (AFTA), can explain that tariffs are not a decisive factor for Asian funds (e.g., Thangavelu and Narjoko, 2015). Such agreements diminish the role of tariffs, making other factors more pivotal for Asian private equity funds' investment decisions. European countries have a long history of providing subsidies to promote specific industries, foster innovation, and ensure regional development. This is in line with research on subsidies attracting FDI flows (e.g., Taylor, 2000). These subsidies can make certain sectors more attractive for investments by reducing operational costs and risks. Europe's stable legal environment and lower levels of corruption instill greater confidence in PE funds regarding the region's subsidy framework. This confirms research on the positive impact of regulatory quality and political stability on VC and PE investment activity (e.g., Cherif and Gazdar, 2009; Guler and Guillen, 2010).

[Insert Table 5 about here]

In Table 6, we re-run our probit regressions using two investment subperiods, from 2010 to 2016 and from 2017 to 2020. The latter period was characterized by the election of Donald Trump and the trade war between the United States and China. We find interesting differences between these time periods. In specifications (1) and (3) we see that the negative effect of subsidies increases during the latter period. Interestingly, we find that the positive effect of tariffs decreases. This confirms our finding that subsidies are an important factor for private equity funds' decision-making and that their impact on portfolio companies has increased over time.

[15] Based on Preqin's definition. Includes funds headquartered in Albania, Alderney, Andorra, Armenia, Austria, Azerbaijan, Belarus, Belgium, Bosnia & Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Georgia, Germany, Gibraltar, Greece, Greenland, Guernsey, Hungary, Iceland, Ireland, Isle Of Man, Italy, Jersey, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malta, Moldova, Monaco, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russia, San Marino, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, UK, and Ukraine.

[16] Based on Preqin's definition. Includes funds headquartered in Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, Fiji, Hong Kong SAR – China, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Laos, Macao SAR – China, Malaysia, Maldives, Mongolia, Myanmar, Nepal, North Korea, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan – China, Tajikistan, Thailand, Timor-Leste, Turkmenistan, Uzbekistan, and Vietnam.

[Insert Table 6 about here]

We perform further robustness checks pertaining to fund size and fund performance. In Table 7 we split our sample into different fund sizes. Trade barriers may have varying impacts on private equity funds depending on their size. While large PE funds often benefit from better connections and a propensity for international diversification, small PE funds might hold advantages in providing specialized attention, leveraging reputational effects for IPOs, and possibly having a first-mover advantage in certain investment opportunities (Cumming and Dai, 2010; Lopez de Silanes, Phalippou, and Gottschalg, 2009; Pollock et al., 2010). We differentiate between small (<$500mm), mid-sized ($500-1,500mm) and large funds (>$1,500mm). We find that the positive effect of tariffs in specifications (1), (3) and (5) increases with larger fund sizes. We observe the opposite patterns with regards to subsidies. While subsidies have a similar negative effect in small- and mid-sized funds, we observe no effect on larger funds. We hypothesize that larger funds are more confident to invest in economies with higher tariffs and are less deterred by countries that favor local firms as they have more expertise to deal with policy questions. This is in line with findings that larger funds possess a better understanding of complex and opaque contracts (Phalippou, 2009; Metrick and Yasuda, 2010). Also, research has found that larger funds are better at managing information asymmetries (e.g., Lerner and Schoar, 2004; Lerner, Schoar, and Wongsunwai, 2007; Kaplan and Stromberg, 2009) and have better information processing capabilities (DaRin and Phalippou, 2014; Dyck and Pomorski, 2016).

Following the approach by Lerner et al. (2022), we divide our sample into above-median and below-median IRR funds in Table 8. This differentiation permits us to analyze whether trade barriers have distinct impacts on funds contingent on their performance. We observe similar effects for both groups. Interestingly, our regression results for tariffs show that the effect of tariffs is stronger for above median IRR funds. We hypothesize that successful funds are attracted by economics with higher tariffs, and that they developed skills to take advantage of these policies. This is in line with Ewens and Rhodes-Kropf (2015), who suggest that the skill and experience of fund managers allows them to achieve better performance.

In Table 9, we further analyze the differential effects of trade barriers on high IRR funds. The positive and significant coefficient for the moderator variable indicates a higher likelihood for high IRR funds to invest. Furthermore, the significant interaction between high IRR funds and trade barriers pertaining to tariffs suggests that high IRR funds are more inclined to invest in economies with pronounced tariffs. However, for other trade barriers, the behavior of these funds doesn't significantly differ from others. This may suggest that high IRR funds perceive distinct opportunities or advantages in tariff-imposed economies. Understanding the behavior of high IRR funds in various trade environments remains a question for future research.

6. Concluding remarks

Over the past years we witnessed a shift towards protectionism, which is reflected in growing shares of world trade facing policy-induced trade distortions, such as tariffs or restrictions on imports, or state-subsidized local rivals. In this paper, we analyze how trade distortions influence the investment behavior of private equity funds, controlling for other relevant factors. We build on the literature of determinants of PE and VC investments across countries using a novel dataset based on 9,142 PE transactions and augment this sample by trade barriers data from the Global Trade Alert database. Our analysis reveals that trade barriers decrease the probability of a private equity investment in a given country. Subsidies are often firm-specific and deter

investments by private equity funds as they signal favoring of certain firms by local governments. This effect is largely driven by subsidies paid to import-competing firms. Our results show that tariffs attract PE investment as they create an environment that allows local companies to achieve above-average profitability by reducing the competitiveness of firms located outside the country. This creates an opportunity for PE funds to earn a higher rate of return on their investments. Our research offers valuable insights into the impact of trade barriers on PE investment decisions, catering to both researchers and practitioners. Furthermore, we believe our findings can assist governments in tailoring their policy tools to attract investments more effectively.

Future research can further dissect regional variations in the effects of trade distortions, also beyond markets such as Europe, North America, and Asia. Delving deeper into diverse PE fund characteristics, including investment strategies and the cultural or educational backgrounds of PE managers, may provide a clearer understanding of how these factors interact with the impact of trade barriers on investment decisions. Further, extending the analysis beyond our 2010-2020 timeframe might offer more insights into the evolving long-term strategies of PE funds in the face of trade barriers.

References

Aizenman, Joshua, and Jake Kendall, 2008, The internationalization of venture capital and private equity, National Bureau of Economic Research.

Aizenman, Joshua, and Jake Kendall, 2012, The internationalization of venture capital, *Journal of Economic Studies*.

Aldatmaz, Serdar, Greg W Brown, and Asli Demirguc-Kunt, 2023, Determinants of international buyout investments, Journal of Financial and Quantitative Analysis, 58(2), 875-913.

Baik, Bok, Jun-Koo Kang, and Jin-Mo Kim, 2010, Local institutional investors, information asymmetries, and equity returns, *Journal of Financial Economics,* 97(1), 81-106.

Balcarcel, Ana, Michael G Hertzel, and Laura Anne Lindsey, 2010, Contracting frictions and cross-border capital flows: Evidence from venture capital, Available at SSRN 1571928.

Barber, Brad M., and Ayako Yasuda, 2017. Interim fund performance and fundraising in private equity. *Journal of Financial Economics*, 124(1), 172-194.

Barrell, Ray, and Nigel Pain, 1999, Trade restraints and Japanese direct investment flows, *European Economic Review,* 43, 29-45.

Belderbos, René A, 1997, Antidumping and tariff jumping: Japanese firms' DFI in the European Union and the United States, *Weltwirtschaftliches Archiv,* 133, 419-457.

Blonigen, Bruce A., and Robert C. Feenstra, 1997, Protectionist threats and foreign direct investment, in *Nber chapters* (National Bureau of Economic Research, Inc.).

Bottazzi, Laura, Marco Da Rin, and Thomas Hellmann, 2009, What is the role of legal systems in financial intermediation? Theory and evidence, *Journal of Financial Intermediation,* 18, 559-598.

Braun, Reiner, Tim Jenkinson, and Ingo Stoff, 2017, How persistent is private equity performance? Evidence from deal-level data, *Journal of Financial Economics,* 123(2), 273-291.

Brown, Jeffrey, Joshua Pollet, and Scott Weisbenner, 2012, The investment behavior of state pension plans, National Bureau of Economic Research (Unpublished Working Paper).

Cao, Jerry X, Douglas Cumming, Meijun Qian, and Xiaoming Wang, 2015, Cross-border LBOs, *Journal of Banking & Finance,* 50, 69-80.

Carr, David L., James R. Markusen, and Keith E. Maskus, 2001, Estimating the knowledge-capital model of the multinational enterprise, *American Economic Review,* 91(3), 693-708

Chava, Sudheer, Baridhi Malakar, and Manpreet Singh, 2019, Impact of corporate subsidies on borrowing costs of local governments: Evidence from municipal bonds. Available at SSRN 4035841.

Chen, Hsuan-Chi, Na Dai, and John D. Schatzberg, 2010, The choice of equity selling mechanisms: PIPEs versus SEOs. *Journal of Corporate Finance*, 16(1), 104-119.

Cherif, M. and Gazdar, K., 2009, Public institutions and venture capital in Europe: a cross-country panel data analysis, *International Journal of Public Sector Performance Management*, 1(3), 275-294.

Chhaochharia, Vidhi, and Luc Laeven, 2008, Sovereign wealth funds: Their investment strategies and performance, CEPR Discussion Papers 6959.

Cornelius, Peter, Karlijn Juttmann, and Broes Langelaar, 2009, Home bias in leveraged buyouts, *International Finance*, 12(3), 321-349.

Coeurdacier, Nicolas, De Santis, Roberto A., and Antonin Aviat, 2009, Cross-border mergers and acquisitions and European integration, *Economic Policy*, 24(57), 55-106.

Coval, Joshua D., and Tobias J. Moskowitz, 1999, Home bias at home: Local equity preference in domestic portfolios, *Journal of Finance*, 54(6), 2045-2073.
Coval, Joshua D., and Tobias J. Moskowitz, 2001, The geography of investment: Informed trading and asset prices, *Journal of Political Economy,* 109(4), 811-841.
Cumming, Douglas, Grant Fleming, Sofia Johan, and Mai Takeuchi, 2012, Legal protection, corruption and private equity returns in Asia, in *Entrepreneurship, Governance and Ethics* (Springer).
Cumming, Douglas, and Na Dai, 2010, Local bias in venture capital investments, *Journal of Empirical Finance*, 17(3), 362-380.
Cumming, Douglas, Grant Fleming, and Armin Schwienbacher, 2009, Style drift in private equity, *Journal of Business Finance & Accounting,* 36, 645-678.
Cumming, Douglas, Irene Henriques, and Perry Sadorsky, 2016, 'Cleantech' venture capital around the world, *International Review of Financial Analysis*, 44, 86-97.
Cumming, Douglas, and Sofia Johan, 2006, Provincial preferences in private equity, *Financial Markets and Portfolio Management,* 20, 369-398.
Cumming, Douglas, Daniel Schmidt, and Uwe Walz, 2010, Legality and venture capital governance around the world, *Journal of Business Venturing,* 25, 54-72.
Cumming, Douglas, and Uwe Walz, 2010, Private equity returns and disclosure around the world, *Journal of International Business Studies,* 41, 727-754.
Da Rin, Marco, and Ludovic Phalippou, 2014, There is something special about large investors: evidence from a survey of private equity limited partners. ECGI Working Paper Series in Finance, No. 408.
Demirgüç-Kunt, Asli, and Ross Levine, 1996, Stock markets, corporate finance, and economic growth: An overview, *World Bank Economic Review,* 10, 223-239.
di Giovanni, Julian, 2005, What drives capital flows? The case of cross-border M&A activity and financial deepening, *Journal of International Economics*, 65(1), 127-149.
Dyck, Alexander, and Lukasz Pomorski, 2016, Investor scale and performance in private equity investments, *Review of Finance*, 20(3), 1081-1106.
Erel, Isil, Liao, Rose C., and Michael S. Weisbach, 2012, Determinants of cross- border mergers and acquisitions, *Journal of Finance*, 67(3), 1045-1082.
Evenett, Simon and Johannes Fritz, 2021, Subsidies and Market Access Towards an Inventory of Corporate Subsidies by China, the European Union and the United States, The 28th Global Trade Alert Report.
Ewens, Michael, and Matthew Rhodes-Kropf, 2015, Is a VC Partnership Greater than the Sum of its Partners?, *Journal of Finance*, 70(3), 1081-1113.
Fajgelbaum, Pablo D, Eduardo Morales, Juan Carlos Suárez Serrato, and Owen Zidar, 2019, State taxes and spatial misallocation, *Review of Economic Studies,* 86, 333-376.
Fidrmuc, Jana P., Roosenboom, Peter, Paap, Richard, and Tim Teunissen, 2012, One size does not fit all: Selling firms to private equity versus strategic acquirers, *Journal of Corporate Finance*, 18(4), 828-848.
French, Kenneth R., and James M. Poterba, 1991, Investor diversification and international equity markets, *American Economic Review*, 81(2), 222-226.
Fuchs, Florian, Roland Füss, Tim Jenkinson, and Stefan Morkoetter, 2021, Winning a deal in private equity: Do educational ties matter? *Journal of Corporate Finance,* 66, 101740.
Gompers, Paul, and Josh Lerner, 1999, What drives venture capital fundraising?, No 6906, NBER Working Papers, National Bureau of Economic Research, Inc.
Gompers, Paul A., Vladimir Mukharlyamov, and Yuhai Xuan, 2016, The cost of friendship, *Journal of Financial Economics*, 119(3), 626-644.

Gottschalg, Oliver, Ralf Gleisberg, and Ramun Derungs, 2015. Size matters–small is beautiful: The impact of portfolio diversification and selection on risk and return in private equity. Available at SSRN 2630915.
Groh, Alexander Peter, Heinrich Von Liechtenstein, and Karsten Lieser, 2010, The European venture capital and private equity country attractiveness indices, *Journal of Corporate Finance* 16, 205-224.
Groh, Alexander Peter, and Johannes Wallmeroth, 2016, Determinants of venture capital investments in emerging markets, *Emerging Markets Review*, 29, 104-132.
Guler, Isin, and Mauro F. Guillen, 2010, Institutions and the internationalization of US venture capital firms, *Journal of International Business Studies,* 41, 185-205.
Görg, Holger, and Philipp Labonte, 2012, Trade protection during the crisis: Does it deter foreign direct investment?, *World Economy,* 35, 525-544.
Heckman, James J., 1979, Sample selection bias as a specification error, *Econometrica,* 47(1), 153-161.
Hijzen, Alexander, Holger Görg, and Miriam Manchin, 2008, Cross-border mergers and acquisitions and the role of trade costs, *European Economic Review* 52, 849-866.
Hochberg, Yael V., and Joshua D. Rauh, 2013, Local overweighting and underperformance: Evidence from limited partner private equity investments, *Review of Financial Studies*, 26(2), 403-451.
Humphery-Jenner, Mark, 2012, Private equity fund size, investment size, and value creation, *Review of Finance*, 16(3), 799-835.
Hyun, Hea-Jung, and Hyuk Hwang Kim, 2010, The determinants of cross-border M&As: The role of institutions and financial development in the gravity model. *World Economy*, 33(2), 292-310.
Johan, Sofia A, April Knill, and Nathan Mauck, 2013, Determinants of sovereign wealth fund investment in private equity vs public equity, *Journal of International Business Studies,* 44, 155-172.
Kaplan, Steven N., and Antoinette Schoar, 2005, Private equity performance: Returns, persistence, and capital flows. *Journal of Finance*, 60(4), 1791-1823.
Kaplan, Steven N., and Per Strömberg, 2009, Leveraged buyouts and private equity, *Journal of Economic Perspectives*, 23, 121-146.
Aizenman, Joshua, and Jake Kendall, 2008, The internationalization of venture capital and private equity, No. w14344. National Bureau of Economic Research.
Korteweg, Arthur, and Morten Sorensen, 2010, Risk and return characteristics of venture capital-backed entrepreneurial companies. *Review of Financial Studies*, 23(10), 3738-3772.
Korteweg, Arthur, and Morten Sorensen, 2017, Skill and luck in private equity performance, *Journal of Financial Economics*, 124(3), 535-562.
La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W Vishny, 1997, Legal determinants of external finance, *Journal of Finance,* 52, 1131-1150.
Lerner, Josh, 1995, Venture capitalists and the oversight of private firms, *Journal of Finance*, 50(1), 301-318.
Lerner, Josh, Jason Mao, Antoinette Schoar, and Nan R. Zhang, 2022, Investing outside the box: Evidence from alternative vehicles in private equity, *Journal of Financial Economics*, 143(1), 359-380.
Lerner, Josh, and Antoinette Schoar, 2004, The illiquidity puzzle: evidence from private equity partnerships, *Journal of Financial Economics*, 72, 3-40.
Lerner, Josh, and Antoinette Schoar, 2005, Does legal enforcement affect financial transactions? The contractual channel in private equity, *Quarterly Journal of Economics,* 120, 223-246.

Lerner, Josh, Antoinette Schoar, and Wan Wongsunwai, 2007, Smart institutions, foolish choices? the limited partner performance puzzle, *Journal of Finance*, 62, 731-764.
Lerner, Josh, Morten Sorensen, and Per Strömberg, 2009, What drives private equity activity and success globally, World Economic Forum, Globalization of Alternative Investments Working Papers.
Levie, Jonathan, and Erkko Autio, 2011, Regulatory burden, rule of law, and entry of strategic entrepreneurs: An international panel study, *Journal of Management Studies*, 48(6), 1392-1419.
Levine, Ross, 1998, The legal environment, banks, and long-run economic growth, *Journal of Money, Credit and Banking,* 596-613.
Levine, Ross, 1999, Law, finance, and economic growth, *Journal of Financial Intermediation* 8, 8-35.
Li, Yong, Ilan B. Vertinsky, and Jing Li, 2014, National distances, international experience, and venture capital investment performance, *Journal of Business Venturing,* 29, 471-489.
Litvak, Kate, 2009, Venture capital limited partnership agreements: Understanding compensation arrangements, *University of Chicago Law Review*, 161-218.
Lopez de Silanes, Florencio, Ludovic Phalippou, and Oliver Gottschalg, 2009, Giants at the gate: diseconomies of scale in private equity, *AFA 2010 Atlanta Meetings Paper*.
Mayer, Colin, Koen Schoors, and Yishay 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.
Metrick, Andrew, and Ayako Yasuda, 2010, The Economics of private equity funds, *Review of Financial Studies*, 23, 2303-2341.
Metrick, Andrew, and Ayako Yasuda, 2011, Venture capital and other private equity: A survey, *European Financial Management*, 17(4), 619-654.
Nikoskelainen, Erkki, and Mike Wright, 2007, The impact of corporate governance mechanisms on value increase in leveraged buyouts, *Journal of Corporate Finance*, 13(4), 511-537.
Ossa, Ralph, 2015, A quantitative analysis of subsidy competition in the US, (National Bureau of Economic Research).
Phalippou, Ludovic, 2009, Beware of venturing into private equity, *Journal of Economic Perspectives*, 23, 147–166.
Phalippou, Ludovic, and Oliver Gottschalg, 2009, The performance of private equity funds, *Review of Financial Studies*, 22(4), 1747-1776.
Pollock, Timothy G., Guoli Chen, Eric M. Jackson, and Donald C. Hambrick, 2010, How much prestige is enough? Assessing the value of multiple types of high-status affiliates for young firms, *Journal of Business Venturing,* 25(1), 6-23.
Portes, Richard, and Helene Rey, 2005. The determinants of cross-border equity flows, *Journal of International Economics*, 65, 269-296.
Robinson, David T., and Berk A. Sensoy, 2016. Cyclicality, performance measurement, and cash flow liquidity in private equity. *Journal of Financial Economics*, 122(3), 521-543.
Rossi, Stefano, and Paolo F. Volpin, 2004, Cross-country determinants of mergers and acquisitions, *Journal of Financial Economics*, 74(2), 277-304.
Schertler, Andrea, and Tereza Tykvová, 2011, Venture capital and internationalization, *International Business Review,* 20, 423-439.
Slattery, Cailin, 2018, Campaign spending and corporate subsidies: Evidence from citizens United v. FEC, (Working Paper).

Slattery, Cailin, 2019, Bidding for firms, Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association (JSTOR).
Slattery, Cailin, and Owen Zidar, 2020, Evaluating state and local business incentives, *Journal of Economic Perspectives,* 34, 90-118.
Stotz, Olaf, Gabrielle Wanzenried, and Karsten Döhnert, 2010, Open-market purchases of public equity by private equity investors: Size and home-bias effects, *Journal of Economics and Business*, 62(6), 562-576.
Suárez Serrato, Juan Carlos, and Owen Zidar, 2016, Who benefits from state corporate tax cuts? A local labor markets approach with heterogeneous firms, *American Economic Review,* 106, 2582-2624.
Taylor, Christopher T., 2000, The Impact of Host Country Government Policy on US Multinational Investment Decisions, *World Economy*, 23, 635-648.
Thangavelu, Shandre M., and Dionisius Narjoko, 2014, Human capital, FTAs and foreign direct investment flows into ASEAN, *Journal of Asian Economics*, 35, 65-76.
Tykvová, Tereza, and Andrea Schertler, 2011, Geographical and institutional distances in venture capital deals: How syndication and experience drive internationalization patterns, (ZEW Discussion Papers).
Wang, Lanfang, and Susheng Wang, 2012, Economic freedom and cross-border venture capital performance, *Journal of Empirical Finance,* 19, 26-50.
Watson, Sharon R, and Anthony J George, 2010, Host country effects on the success of international private equity investments, *Journal of Private Equity,* 13, 17-24.

Table 1: Characteristics of the fund sample

The table presents descriptive statistics of the buyout fund sample with an investment mandate for multiple countries and who invested at least once in the 2010-2020 timeframe. We only include funds with information on fund size, and the fund's geographic and industry focus. Fund region is based on classifications in the Preqin database.

	N	%
Total	1,623	
Panel A: Fund Region		
Africa	36	2.22%
Asia	155	9.55%
Australasia	54	3.33%
Europe	528	32.53%
Latin America & Caribbean	21	1.29%
Middle East	19	1.17%
North America	810	49.91%
Total	*1,623*	*100.00%*
Panel B: Vintage Year		
2003	2	0.12%
2004	4	0.25%
2005	32	1.97%
2006	77	4.74%
2007	118	7.27%
2008	110	6.78%
2009	55	3.39%
2010	70	4.31%
2011	99	6.10%
2012	106	6.53%
2013	110	6.78%
2014	131	8.07%
2015	107	6.59%
2016	131	8.07%
2017	132	8.13%
2018	127	7.83%
2019	125	7.70%
2020	73	4.50%
N/A	14	0.86%
Total	*1,623*	*100.00%*
Panel C: Fund size		
<$250mm	405	24.95%
$250-500mm	268	16.51%
$500-750mm	197	12.14%
$750-1,000mm	120	7.39%
$1,000-1,500mm	156	9.61%
$1,500-3,000mm	186	11.46%
>$3,000mm	291	17.93%
Total	*1,623*	*100.00%*
Panel D: Net IRR		
<10%	328	20.21%
10%-20%	360	22.18%
20%-30%	199	12.26%
30%-40%	81	4.99%
40%-50%	28	1.73%
>50%	627	38.63%
Total	*1,623*	*100.00%*
Panel E: Fund Sequence		
1	444	27.36%
2	304	18.73%
3	240	14.79%
4	199	12.26%
5	135	8.32%
>5	301	18.55%
Total	*1,623*	*100.00%*

Table 2: Characteristics of the investment sample

The table presents descriptive statistics on completed buyout, PIPE, public to private and growth capital transactions. Venture capital and add-on transactions are excluded. Only transactions with date, company's location and industry are included. Company region and industry classification are based on classifications in the Preqin database.

	N	%
Total	9142	
Panel A: Company Region		
Africa	109	1.19%
Asia	1,134	12.40%
Australasia	368	4.03%
Europe	3,520	38.50%
Latin America & Caribbean	320	3.50%
North America	3,691	40.37%
Total	*9,142*	*100.00%*
Panel B: Industry Classification		
Business Services	757	8.28%
Consumer Discretionary	1,946	21.29%
Energy & Utilities	777	8.50%
Financial & Insurance Services	932	10.19%
Healthcare	1,009	11.04%
Industrials	1,062	11.62%
Information Technology	1,504	16.45%
Raw Materials & Natural Resources	657	7.19%
Real Estate	102	1.12%
Telecoms & Media	396	4.33%
Total	*9,142*	*100.00%*
Panel C: Investment Year		
2010	754	8.25%
2011	764	8.36%
2012	721	7.89%
2013	740	8.09%
2014	880	9.63%
2015	861	9.42%
2016	898	9.82%
2017	961	10.51%
2018	916	10.02%
2019	840	9.19%
2020	807	8.83%
Total	*9,142*	*100.00%*

Table 3: Summary statistics

This table reports the summary statistics (i.e., number of observations, mean, median, standard deviation, min/max and the coefficient of variation) of the sample comprising private equity investments (buyout, PIPE, public to private, growth capital) conducted by multi-country funds (mandate) between 2010-2020.

Variable	N	Mean	Median	Std	Min	Max	CV
Trade barriers (all instruments)	8,771	0.10	0.00	0.22	0.00	1.00	213.93
Trade barriers (excl. subsidies)	8,771	0.02	0.00	0.07	0.00	0.59	299.23
Trade barriers (subsidies only)	8,771	0.10	0.00	0.22	0.00	1.00	219.87
Trade barriers (tariffs only)	8,771	0.05	0.00	0.13	0.00	0.96	275.44
Rule of law (d)	9,142	1.26	1.59	0.73	-1.18	2.12	58.07
Ease of doing business (%)	7,503	77.74	80.40	7.77	40.80	88.70	10.00
GDP growth (%)	9,142	2.03	2.24	2.99	-11.33	24.37	147.32
GDP (log)	9,142	28.96	28.68	1.48	23.18	30.69	5.09
Unemployment change (%)	9,142	0.01	-0.06	0.25	-0.58	1.33	4,292.22
Stocks traded of GDP (%)	7,235	121.05	98.50	83.95	0.01	355.52	69.35
Domestic credit to private sector (%)	8,796	136.26	140.24	51.19	10.25	249.22	37.57
Fund size (USDmm) ^	1,623	1,873.90	647.55	3,881.65	1.80	98,583.00	207.14
Fund sequence ^	1,595	3.38	3.00	2.57	1.00	24.00	75.86
Deal size (USDmm)	9,142	256.17	72.37	768.95	0.03	19,159.37	300.17

Note: ^ Unique funds only.

Table 4: Determinants of private equity investments on the country-level

This table reports the determinants of private equity investments completed between 2010 and 2020. We estimate the following model for the baseline estimation.

$$\text{Prob (investment}_{i,t}) = \alpha_1 + \beta_2 \text{ (trade barriers}_{i,t}) + \gamma_3 \text{ (controls}_{i,t}) + \delta_4 \text{ (FE year, industry)} + \varepsilon_5$$

The dependent variable is defined as 1 if there is an observed private equity investment in a given country, and 0 otherwise. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Trade barriers (all instruments)		-0.214***					
		(0.050)					
Trade barriers (excl. subsidies)			0.081				0.213***
			(0.079)				(0.077)
Trade barriers (subsidies only)				-0.309***		-0.228***	-0.264***
				(0.049)		(0.047)	(0.052)
Trade barriers (tariffs only)					0.665***	0.719***	
					(0.138)	(0.127)	
Rule of law (d)	0.297***	0.312***	0.325***	0.311***	0.324***	0.308***	0.308***
	(0.031)	(0.034)	(0.034)	(0.034)	(0.034)	(0.034)	(0.034)
Ease of doing business (%)	-0.016***	-0.019***	-0.019***	-0.019***	-0.019***	-0.018***	-0.018***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
GDP growth (%)	0.037***	0.035***	0.035***	0.035***	0.035***	0.034***	0.034***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
GDP (log)	-0.152***	-0.144***	-0.149***	-0.142***	-0.152***	-0.145***	-0.143***
	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Unemployment change (%)	-0.893***	-0.949***	-0.935***	-0.960***	-0.934***	-0.933***	-0.945***
	(0.108)	(0.116)	(0.115)	(0.116)	(0.115)	(0.114)	(0.115)
Stocks traded of GDP (%)	0.002***	0.001***	0.001***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Domestic credit to private sector (%)	0.001**	0.001**	0.001**	0.001**	0.001***	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Fund size (log)	0.051***	0.052***	0.052***	0.052***	0.054***	0.053***	0.052***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.009)	(0.009)	(0.010)
Fund sequence (log)	-0.000	0.005	0.004	0.004	0.004	0.005	0.005
	(0.020)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
Constant	2.151***	1.872***	2.030***	1.792***	2.108***	1.889***	1.823***
	(0.300)	(0.345)	(0.340)	(0.344)	(0.341)	(0.344)	(0.342)
Observations	840,686	813,627	813,609	813,655	813,599	813,558	813,570
F.E. Deal Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes
F.E. Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.0979	0.0945	0.0936	0.0957	0.0945	0.0944	0.0935

Table 5: Determinants of private equity investments on a country-level – subsample analyses investor location (HQ)

This table reports the summary results for the subsample analyses on the determinants of private equity investments for investments committed by funds headquartered in Europe, North America and Asia. Marginal effects are reported as coefficients. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1					
	HQ Europe		HQ North America		HQ Asia	
	(1)	(2)	(3)	(4)	(5)	(6)
Trade barriers (excl. subsidies)		-0.326		0.211*		0.099
		(0.216)		(0.114)		(0.146)
Trade barriers (subsidies only)	0.127	0.239**	-0.272***	-0.337***	-0.464***	-0.475***
	(0.088)	(0.103)	(0.070)	(0.072)	(0.125)	(0.122)
Trade barriers (tariffs only)	0.566*		0.604***		0.215	
	(0.292)		(0.195)		(0.270)	
Rule of law (d)	0.281***	0.275***	0.466***	0.470***	0.114	0.111
	(0.071)	(0.071)	(0.054)	(0.055)	(0.087)	(0.087)
Ease of doing business (%)	-0.018***	-0.018***	-0.035***	-0.035***	-0.007	-0.006
	(0.006)	(0.006)	(0.004)	(0.004)	(0.008)	(0.008)
GDP growth (%)	0.051***	0.052***	0.029***	0.029***	0.036***	0.036***
	(0.006)	(0.006)	(0.004)	(0.004)	(0.010)	(0.010)
GDP (log)	-0.136***	-0.135***	-0.080***	-0.078***	-0.238***	-0.234***
	(0.021)	(0.020)	(0.019)	(0.019)	(0.036)	(0.035)
Unemployment change (%)	-1.209***	-1.208***	-0.997***	-1.014***	-0.615	-0.604
	(0.243)	(0.246)	(0.163)	(0.165)	(0.393)	(0.391)
Stocks traded of GDP (%)	0.002***	0.002***	0.001***	0.001***	0.001**	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Domestic credit to private sector (%)	0.002***	0.002***	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)
Fund size (log)	0.049***	0.048***	0.022	0.022	0.126***	0.125***
	(0.016)	(0.016)	(0.015)	(0.015)	(0.023)	(0.023)
Fund sequence (log)	0.071**	0.074**	-0.008	-0.008	-0.059	-0.063
	(0.035)	(0.035)	(0.027)	(0.027)	(0.061)	(0.061)
Constant	1.800***	1.756***	0.304	0.219	3.871***	3.761***
	(0.606)	(0.605)	(0.608)	(0.610)	(1.039)	(1.024)
Observations	231,540	231,542	434,027	434,043	116,054	116,054
F.E. Deal Year	Yes	Yes	Yes	Yes	Yes	Yes
F.E. Industry	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.118	0.118	0.0815	0.0816	0.137	0.135

Table 6: Determinants of private equity investments on a country-level – subsample analyses investment periods

This table reports the summary results for the subsample analyses on the determinants of private equity investments for investments committed during the time periods 2010-2016 and 2017-2020. Marginal effects are reported as coefficients. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1			
	2010-2016		2017-2020	
	(1)	(2)	(3)	(4)
Trade barriers (excl. subsidies)		0.187		0.085
		(0.145)		(0.102)
Trade barriers (subsidies only)	-0.180***	-0.192***	-0.313***	-0.372***
	(0.058)	(0.064)	(0.084)	(0.080)
Trade barriers (tariffs only)	0.974***		0.585***	
	(0.190)		(0.186)	
Rule of law (d)	0.256***	0.259***	0.413***	0.411***
	(0.040)	(0.040)	(0.054)	(0.054)
Ease of doing business (%)	-0.014***	-0.014***	-0.019***	-0.019***
	(0.003)	(0.003)	(0.005)	(0.005)
GDP growth (%)	0.028***	0.028***	0.067***	0.067***
	(0.003)	(0.003)	(0.007)	(0.007)
GDP (log)	-0.139***	-0.139***	-0.148***	-0.140***
	(0.013)	(0.013)	(0.020)	(0.020)
Unemployment change (%)	-0.712***	-0.731***	-0.573***	-0.582***
	(0.131)	(0.132)	(0.220)	(0.222)
Stocks traded of GDP (%)	0.001***	0.001***	0.004***	0.004***
	(0.000)	(0.000)	(0.001)	(0.001)
Domestic credit to private sector (%)	0.002***	0.002***	-0.004***	-0.004***
	(0.000)	(0.000)	(0.001)	(0.001)
Fund size (log)	0.061***	0.060***	0.046***	0.045***
	(0.011)	(0.011)	(0.015)	(0.016)
Fund sequence (log)	-0.000	-0.000	0.021	0.021
	(0.024)	(0.024)	(0.028)	(0.028)
Constant	1.731***	1.737***	1.901***	1.663***
	(0.398)	(0.399)	(0.613)	(0.612)
Observations	475,312	475,320	338,246	338,250
F.E. Deal Year	Yes	Yes	Yes	Yes
F.E. Industry	Yes	Yes	Yes	Yes
Pseudo R2	0.0865	0.0858	0.122	0.120

Table 7: Determinants of private equity investments on a country-level – subsample analyses fund size

This table reports the summary results for the subsample analyses on the determinants of private equity investments for small (<$500mm), mid-sized ($501-1,500mm), and large (>$1,501mm) private equity funds. Marginal effects are reported as coefficients. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1					
	Small (<$500mm)		Mid ($500-$1,500mm)		Large (>$1,500mm)	
	(1)	(2)	(3)	(4)	(5)	(6)
Trade barriers (excl. subsidies)		0.087		0.304**		0.194
		(0.148)		(0.147)		(0.119)
Trade barriers (subsidies only)	-0.265***	-0.281***	-0.386***	-0.421***	-0.068	-0.120
	(0.086)	(0.096)	(0.102)	(0.104)	(0.070)	(0.075)
Trade barriers (tariffs only)	0.463*		0.732***		0.814***	
	(0.257)		(0.260)		(0.176)	
Rule of law (d)	0.366***	0.364***	0.260***	0.262***	0.270***	0.268***
	(0.063)	(0.063)	(0.074)	(0.074)	(0.050)	(0.050)
Ease of doing business (%)	-0.016***	-0.016***	-0.015**	-0.015**	-0.020***	-0.021***
	(0.005)	(0.005)	(0.006)	(0.006)	(0.004)	(0.004)
GDP growth (%)	0.042***	0.042***	0.032***	0.032***	0.028***	0.028***
	(0.007)	(0.007)	(0.006)	(0.006)	(0.004)	(0.004)
GDP (log)	-0.170***	-0.167***	-0.178***	-0.175***	-0.094***	-0.093***
	(0.018)	(0.018)	(0.023)	(0.023)	(0.016)	(0.016)
Unemployment change (%)	-0.958***	-0.966***	-1.376***	-1.381***	-0.661***	-0.675***
	(0.273)	(0.274)	(0.213)	(0.214)	(0.141)	(0.142)
Stocks traded of GDP (%)	0.002***	0.002***	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Domestic credit to private sector (%)	0.001**	0.001**	0.001	0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Fund size (log)	0.223***	0.226***	0.051	0.051	-0.067***	-0.068***
	(0.027)	(0.028)	(0.082)	(0.082)	(0.025)	(0.025)
Fund sequence (log)	-0.025	-0.024	0.086**	0.089**	0.067**	0.067**
	(0.040)	(0.040)	(0.037)	(0.037)	(0.030)	(0.030)
Constant	1.816***	1.736***	2.789***	2.679***	1.300**	1.270**
	(0.557)	(0.556)	(0.902)	(0.905)	(0.539)	(0.536)
Observations	261,191	261,199	163,294	163,293	389,020	389,025
F.E. Deal Year	Yes	Yes	Yes	Yes	Yes	Yes
F.E. Industry	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	0.140	0.140	0.120	0.118	0.0742	0.0737

Table 8: Determinants of private equity investments on a country-level – subsample analyses fund performance

This table reports the summary results for the subsample analyses on the determinants of private equity investments for funds with below and above median Net IRR. Marginal effects are reported as coefficients. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1			
	Below Median Net IRR		Above Median Net IRR	
	(1)	(2)	(3)	(4)
Trade barriers (excl. subsidies)		0.274*		0.273**
		(0.144)		(0.116)
Trade barriers (subsidies only)	-0.337***	-0.373***	-0.246***	-0.301***
	(0.073)	(0.082)	(0.086)	(0.091)
Trade barriers (tariffs only)	0.702***		1.007***	
	(0.218)		(0.201)	
Rule of law (d)	0.218***	0.220***	0.319***	0.316***
	(0.050)	(0.050)	(0.060)	(0.060)
Ease of doing business (%)	-0.015***	-0.015***	-0.020***	-0.020***
	(0.004)	(0.004)	(0.006)	(0.006)
GDP growth (%)	0.029***	0.029***	0.033***	0.033***
	(0.005)	(0.005)	(0.005)	(0.005)
GDP (log)	-0.145***	-0.143***	-0.131***	-0.127***
	(0.019)	(0.019)	(0.019)	(0.019)
Unemployment change (%)	-0.546***	-0.545***	-1.087***	-1.103***
	(0.155)	(0.156)	(0.214)	(0.217)
Stocks traded of GDP (%)	0.001***	0.001***	0.001*	0.001*
	(0.000)	(0.000)	(0.000)	(0.000)
Domestic credit to private sector (%)	0.000	0.000	0.001*	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Fund size (log)	0.010	0.009	0.010	0.008
	(0.018)	(0.019)	(0.020)	(0.020)
Fund sequence (log)	0.054	0.057*	0.043	0.043
	(0.034)	(0.034)	(0.034)	(0.034)
Constant	2.059***	1.986***	1.779***	1.640***
	(0.584)	(0.578)	(0.613)	(0.608)
Observations	273,678	273,677	283,698	283,682
F.E. Deal Year	Yes	Yes	Yes	Yes
F.E. Industry	Yes	Yes	Yes	Yes
Pseudo R2	0.0758	0.0749	0.108	0.107

Table 9: Determinants of private equity investments on a country-level – interaction analyses with trade barriers and fund performance

This table reports the summary results for the interaction analyses on the determinants of private equity investments, focusing on the influence of trade barriers (including and excluding subsidies) in conjunction with funds having above median IRR. Marginal effects are reported as coefficients. Standard errors are clustered on fund level (in brackets) and significance levels are * <10%, ** < 5%, *** <1%.

	Dependent variable: Investment = 1	
	(1)	(2)
Independent variables		
Trade barriers (excl. subsidies)		0.147
		(0.103)
Trade barriers (subsidies only)	-0.185***	-0.217***
	(0.052)	(0.059)
Trade barriers (tariffs only)	0.538***	
	(0.160)	
Moderator		
High IRR fund	0.092***	0.093***
	(0.029)	(0.029)
Interaction effects		
Trade barriers (excl. subsidies)		0.166
x High IRR fund		(0.149)
Trade barriers (subsidies only)	-0.104	-0.113
x High IRR fund	(0.067)	(0.086)
Trade barriers (tariffs only)	0.428*	
x High IRR fund	(0.226)	
Controls		
Rule of law (d)	0.306***	0.306***
	(0.034)	(0.034)
Ease of doing business (%)	-0.018***	-0.019***
	(0.003)	(0.003)
GDP growth (%)	0.034***	0.034***
	(0.003)	(0.003)
GDP (log)	-0.146***	-0.144***
	(0.011)	(0.011)
Unemployment change (%)	-0.928***	-0.939***
	(0.114)	(0.115)
Stocks traded of GDP (%)	0.001***	0.001***
	(0.000)	(0.000)
Domestic credit to private sector (%)	0.001***	0.001**
	(0.000)	(0.000)
Fund size (log)	0.050***	0.049***
	(0.009)	(0.009)
Fund sequence (log)	0.001	0.001
	(0.020)	(0.020)
Constant	1.924***	1.858***
	(0.346)	(0.345)
Observations	813,558	813,570
F.E. Deal Year	Yes	Yes
F.E. Industry	Yes	Yes
Pseudo R2	0.0955	0.0946

Appendix A1: Observations by portfolio company location and transaction year

This table reports the PE investments by portfolio company location and transaction year for the respective investments. Included are transactions (buyout, PIPE, public to private, growth capital) conducted by multi-country funds (mandate) between 2010-2020.

	Investment year											Investment					
												Actual		Counterfactual (unique)		Total	
Portfolio Company Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Number	%	Number	%	Number	%
Algeria	0	0	0	1	1	0	0	0	0	0	0	2	0.0%	14	0.0%	87	0.0%
Argentina	1	2	1	0	1	0	0	2	3	3	1	14	0.2%	262	0.2%	1,314	0.1%
Armenia	0	0	0	0	0	0	0	0	0	0	0	-	0.0%	10	0.0%	108	0.0%
Australia	24	24	26	23	26	42	33	34	45	54	37	368	4.0%	5,421	4.9%	32,033	2.1%
Austria	0	1	1	4	0	3	1	2	2	1	1	16	0.2%	209	0.2%	4,607	0.3%
Belarus	0	0	0	0	0	0	0	0	1	1	0	2	0.0%	28	0.0%	196	0.0%
Belgium	8	9	5	4	5	14	11	12	11	6	7	92	1.0%	510	0.5%	10,453	0.7%
Brazil	15	14	19	23	20	20	22	21	22	11	11	198	2.2%	1,721	1.6%	13,176	0.9%
Bulgaria	1	0	0	2	0	1	1	0	2	0	0	7	0.1%	115	0.1%	1,246	0.1%
Canada	17	26	22	30	35	43	41	21	23	21	27	306	3.3%	6,615	6.0%	69,990	4.7%
Chile	1	0	1	1	4	0	3	2	2	4	2	20	0.2%	415	0.4%	2,844	0.2%
China	46	46	51	34	56	36	26	16	23	25	21	380	4.2%	18,386	16.7%	154,294	10.3%
Colombia	3	4	3	6	4	3	1	3	3	4	3	37	0.4%	267	0.2%	1,593	0.1%
Croatia	0	1	0	0	0	0	1	0	2	0	1	5	0.1%	104	0.1%	896	0.1%
Cyprus	0	0	1	0	0	0	0	0	0	1	0	2	0.0%	140	0.1%	1,699	0.1%
Denmark	3	3	8	9	13	22	16	15	13	10	10	122	1.3%	625	0.6%	9,606	0.6%
Egypt	4	1	1	1	5	1	1	1	2	2	0	19	0.2%	201	0.2%	1,078	0.1%
Estonia	0	0	0	0	1	3	0	1	4	1	1	11	0.1%	73	0.1%	644	0.0%
Finland	4	3	1	1	8	4	7	6	14	9	5	62	0.7%	511	0.5%	7,096	0.5%
France	40	75	39	44	55	51	57	72	64	50	54	601	6.6%	3,459	3.1%	62,280	4.2%
Germany	28	32	23	27	34	37	39	51	54	53	45	423	4.6%	2,273	2.1%	53,580	3.6%
Greece	2	1	0	1	2	0	0	3	1	0	2	12	0.1%	256	0.2%	3,769	0.3%
Hungary	2	2	0	1	1	1	2	0	0	0	1	10	0.1%	116	0.1%	1,501	0.1%
Iceland	0	0	0	0	0	0	0	0	0	0	0	-	0.0%	23	0.0%	341	0.0%
India	38	42	34	49	27	29	30	33	40	31	42	395	4.3%	2,863	2.6%	22,877	1.5%
Indonesia	1	5	2	4	3	11	8	4	3	0	1	42	0.5%	787	0.7%	5,849	0.4%
Ireland	11	4	4	4	6	7	7	5	12	13	5	78	0.9%	581	0.5%	11,411	0.8%
Italy	16	6	11	13	21	23	20	31	23	30	23	217	2.4%	2,461	2.2%	41,104	2.7%
Japan	10	3	9	10	5	11	7	15	9	7	17	103	1.1%	5,799	5.3%	45,390	3.0%
Kazakhstan	0	1	2	0	1	0	0	0	0	0	0	4	0.0%	108	0.1%	1,210	0.1%
Kenya	4	3	4	6	9	5	4	3	3	6	2	49	0.5%	101	0.1%	464	0.0%
Latvia	0	1	0	2	0	1	1	2	1	0	2	10	0.1%	60	0.1%	596	0.0%
Lithuania	0	0	0	0	1	3	0	0	0	4	2	10	0.1%	99	0.1%	717	0.0%
Luxembourg	3	1	1	2	3	4	1	1	3	2	2	23	0.3%	163	0.1%	4,652	0.3%
Macedonia	0	0	0	0	0	0	0	0	0	0	0	-	0.0%	13	0.0%	148	0.0%
Malaysia	3	2	3	2	8	3	5	3	5	6	3	43	0.5%	2,092	1.9%	11,484	0.8%
Malta	0	0	0	0	1	0	1	1	0	1	0	4	0.0%	56	0.1%	868	0.1%
Mexico	1	4	3	1	7	7	5	7	5	2	2	44	0.5%	522	0.5%	3,525	0.2%
Netherlands	13	11	12	19	24	29	31	30	23	35	18	245	2.7%	1,193	1.1%	27,646	1.8%
Nigeria	3	2	4	4	9	4	7	1	4	1	0	39	0.4%	116	0.1%	919	0.1%
Pakistan	0	0	1	0	0	0	0	0	0	0	0	1	0.0%	53	0.0%	457	0.0%
Peru	0	0	2	0	1	0	1	1	1	0	1	7	0.1%	253	0.2%	1,404	0.1%
Philippines	0	1	0	2	1	0	0	1	1	3	1	10	0.1%	346	0.3%	2,768	0.2%
Poland	19	12	12	12	6	18	12	8	8	6	6	119	1.3%	1,320	1.2%	12,438	0.8%
Portugal	1	2	1	2	3	4	4	1	4	4	1	27	0.3%	299	0.3%	5,837	0.4%
Romania	5	2	2	1	3	2	1	4	0	5	3	28	0.3%	195	0.2%	1,882	0.1%
Russia	4	5	12	10	7	3	4	6	4	2	2	59	0.6%	1,890	1.7%	17,682	1.2%
Serbia	0	0	0	0	0	3	1	0	0	0	0	4	0.0%	115	0.1%	927	0.1%
Singapore	6	5	5	17	19	9	12	10	9	5	6	103	1.1%	1,869	1.7%	16,132	1.1%
Slovakia	0	0	0	0	2	0	0	1	0	0	0	3	0.0%	27	0.0%	324	0.0%
Slovenia	0	0	0	0	0	5	1	0	0	0	0	6	0.1%	75	0.1%	1,146	0.1%
Spain	32	25	15	18	28	21	18	24	20	21	22	244	2.7%	2,205	2.0%	41,157	2.7%
Sweden	14	14	14	11	17	17	23	32	31	16	29	218	2.4%	1,719	1.6%	20,251	1.4%
Switzerland	6	6	6	14	7	6	7	8	4	8	9	81	0.9%	534	0.5%	14,125	0.9%
Thailand	1	1	0	1	6	1	2	4	4	4	0	24	0.3%	659	0.6%	4,477	0.3%
UK	73	77	54	62	71	67	69	82	65	79	65	764	8.4%	9,128	8.3%	151,137	10.1%
US	287	280	305	258	311	283	348	377	336	290	310	3,385	37.0%	29,828	27.1%	588,013	39.3%
Ukraine	4	4	0	0	0	2	1	0	2	0	2	15	0.2%	166	0.2%	1,172	0.1%
Venezuela	0	0	0	0	0	0	0	0	0	0	0	-	0.0%	12	0.0%	105	0.0%
Vietnam	0	1	1	4	2	2	5	4	5	3	2	29	0.3%	504	0.5%	2,700	0.2%
Total	754	764	721	740	880	861	898	961	916	840	807	9,142	100.0%	109,965	100.0%	1,497,425	100.0%
%	8.2%	8.4%	7.9%	8.1%	9.6%	9.4%	9.8%	10.5%	10.0%	9.2%	8.8%	100.0%					

Appendix A2: Breakdown of fund sample by vintage year

This table reports descriptive statistics for each vintage year of the PE funds included in the dataset. Funds must have completed at least one buyout, PIPE, public to private, or growth capital transaction within the 2010-2020 timeframe. The sample is restricted to funds with a mandate for multiple countries and for which size, sequence number, and location is available.

Fund count				Fund profile			Fund performance			
Vintage	Total	w/	w/	Avg	Avg	Med	Avg	Med	Avg	Med
Year	Funds	IRR	TVPI	Seq.	Size	Size	IRR	IRR	TVPI	TVPI
	#	#	#	#	*$m*	*$m*	*%*	*%*	*x*	*x*
2003	2	1	0	3.0	4125	4125	36.0	36.0	-	-
2004	4	3	3	2.8	1299	750	11.8	11.0	1.7	1.8
2005	32	16	22	2.8	1120	626	11.2	8.3	1.3	1.4
2006	77	56	61	3.9	2552	783	8.1	9.6	1.5	1.5
2007	118	77	80	2.7	1873	607	7.7	9.1	1.6	1.5
2008	110	72	77	3.0	1968	632	11.7	10.8	1.7	1.6
2009	55	31	31	2.8	1007	528	12.4	10.0	1.6	1.5
2010	70	40	45	2.5	615	438	14.0	12.1	1.6	1.6
2011	99	58	65	3.2	1312	478	13.5	12.6	1.6	1.6
2012	106	68	64	3.4	1287	373	15.4	14.0	1.9	1.7
2013	110	70	68	3.3	1367	542	13.5	13.0	1.8	1.7
2014	131	74	81	3.0	1393	500	17.3	17.3	1.9	1.8
2015	107	76	68	3.3	1500	696	14.9	16.5	1.7	1.7
2016	131	81	82	4.1	1668	615	20.4	19.0	1.9	1.8
2017	132	78	73	3.4	2245	696	24.1	23.0	1.8	1.8
2018	127	80	82	3.5	2591	841	21.3	20.1	1.5	1.5
2019	125	84	79	4.2	2510	1200	24.1	21.4	1.4	1.3
2020	73	51	49	4.4	4102	1560	16.2	16.3	1.2	1.2
N/A	14	2	9	3.8	1627	988	7.4	7.4	1.0	1.0
Total	1623	1018	1039	3.3	1903	894	15.8	15.1	1.60	1.54
U.S.	773	570	554	3.6	2523	1597	16.7	15.8	1.6	1.6
Other	850	448	485	3.1	1138	441	13.9	13.8	1.5	1.5

Appendix A3: Average and median trade barriers by industry

This table reports the average and median trade barriers on the value of imports (%) from 2010-2020 by industry classification.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Panel A: Trade barriers (all instruments)											
Business Services	0.03	0.04	0.05	0.08	0.09	0.09	0.09	0.10	0.11	0.12	0.12
Consumer Discretionary	0.02	0.02	0.03	0.05	0.06	0.10	0.11	0.12	0.13	0.13	0.14
Energy & Utilities	0.11	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.16	0.16	0.16
Financial & Insurance Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare	0.02	0.03	0.03	0.04	0.04	0.05	0.05	0.05	0.06	0.06	0.06
Industrials	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.04
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Materials & Natural Resources	0.04	0.06	0.06	0.16	0.17	0.18	0.20	0.21	0.24	0.25	0.27
Real Estate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Telecoms & Media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average	0.02	0.03	0.03	0.05	0.05	0.06	0.06	0.07	0.07	0.07	0.08
Median	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05	0.05
Panel B: Trade barriers (excl. subsidies)											
Business Services	0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.07	0.08
Consumer Discretionary	0.02	0.02	0.02	0.03	0.05	0.05	0.06	0.06	0.07	0.08	0.08
Energy & Utilities	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.05
Financial & Insurance Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03
Industrials	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Materials & Natural Resources	0.02	0.02	0.04	0.07	0.10	0.11	0.11	0.12	0.14	0.15	0.16
Real Estate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Telecoms & Media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04
Median	0.00	0.00	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03
Panel C: Trade barriers (subsidies only)											
Business Services	0.03	0.04	0.05	0.08	0.09	0.09	0.09	0.09	0.10	0.10	0.11
Consumer Discretionary	0.02	0.02	0.02	0.04	0.06	0.09	0.10	0.10	0.11	0.11	0.12
Energy & Utilities	0.11	0.12	0.13	0.13	0.14	0.14	0.15	0.15	0.16	0.16	0.16
Financial & Insurance Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05
Industrials	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Materials & Natural Resources	0.03	0.05	0.05	0.14	0.16	0.16	0.16	0.19	0.19	0.20	0.22
Real Estate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Telecoms & Media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average	0.02	0.03	0.03	0.05	0.05	0.05	0.06	0.06	0.06	0.07	0.07
Median	0.01	0.01	0.01	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04
Panel D: Trade barriers (tariffs only)											
Business Services	0.00	0.01	0.01	0.02	0.03	0.03	0.03	0.04	0.05	0.05	0.06
Consumer Discretionary	0.01	0.01	0.01	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.07
Energy & Utilities	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Financial & Insurance Services	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Healthcare	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
Industrials	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02
Information Technology	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Raw Materials & Natural Resources	0.01	0.01	0.02	0.04	0.06	0.07	0.08	0.08	0.10	0.10	0.12
Real Estate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Telecoms & Media	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average	0.00	0.00	0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.03
Median	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01

Appendix A4: Average and median trade barriers by region

This table reports the average and median trade barriers on the value of imports (%) from 2010-2020 by region.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Panel A: Trade barriers (all instruments)											
Africa	0.01	0.01	0.01	0.02	0.03	0.05	0.06	0.06	0.07	0.08	0.09
Asia	0.01	0.03	0.03	0.03	0.03	0.04	0.05	0.05	0.06	0.06	0.07
Australasia	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Europe	0.03	0.03	0.03	0.06	0.07	0.08	0.08	0.08	0.09	0.09	0.10
Latin America & Caribbean	0.01	0.01	0.01	0.01	0.02	0.04	0.04	0.04	0.05	0.05	0.05
Middle East	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
North America	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.08	0.08	0.09	0.10
Average	0.01	0.02	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.06	0.06
Median	0.01	0.01	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06	0.07
Panel B: Trade barriers (excl. subsidies)											
Africa	0.01	0.01	0.04	0.05	0.06	0.06	0.06	0.06	0.07	0.07	0.07
Asia	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.06
Australasia	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.02	0.02
Europe	0.01	0.00	0.00	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.04
Latin America & Caribbean	0.01	0.01	0.02	0.03	0.02	0.04	0.04	0.04	0.04	0.04	0.05
Middle East	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.02
North America	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.06	0.06
Average	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	0.04	0.05
Median	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	0.04	0.04	0.05
Panel C: Trade barriers (subsidies only)											
Africa	0.00	0.00	0.01	0.01	0.02	0.04	0.05	0.05	0.06	0.07	0.08
Asia	0.01	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.04	0.04	0.04
Australasia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Europe	0.03	0.03	0.03	0.06	0.07	0.07	0.08	0.08	0.09	0.09	0.09
Latin America & Caribbean	0.00	0.00	0.00	0.01	0.02	0.03	0.04	0.03	0.03	0.04	0.04
Middle East	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
North America	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.07	0.08	0.08	0.09
Average	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.04	0.05	0.05	0.05
Median	0.00	0.00	0.01	0.02	0.02	0.03	0.04	0.04	0.04	0.04	0.04
Panel D: Trade barriers (tariffs only)											
Africa	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03
Asia	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04
Australasia	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01
Europe	0.00	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Latin America & Caribbean	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
Middle East	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
North America	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.02	0.02
Average	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03
Median	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02

Appendix A5: Average trade barriers by year and country

This table reports the average trade barriers on the value of imports in % (all instruments) across all industries by country and year between 2010-2020.

	Year										
Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
Belgium	0.04	0.03	0.03	0.07	0.08	0.09	0.08	0.08	0.09	0.09	0.10
Brazil	0.01	0.01	0.02	0.04	0.06	0.09	0.09	0.08	0.08	0.08	0.08
Canada	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.05	0.06	0.07	0.08
Chile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
China	0.08	0.09	0.11	0.11	0.11	0.11	0.12	0.13	0.13	0.14	0.15
Denmark	0.03	0.03	0.04	0.06	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Finland	0.05	0.04	0.04	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
France	0.03	0.04	0.04	0.08	0.09	0.10	0.10	0.11	0.11	0.11	0.11
Germany	0.04	0.04	0.04	0.09	0.11	0.12	0.12	0.12	0.12	0.12	0.12
Greece	0.02	0.02	0.02	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.08
India	0.02	0.02	0.03	0.05	0.06	0.07	0.07	0.07	0.10	0.10	0.12
Indonesia	0.02	0.03	0.02	0.01	0.02	0.07	0.11	0.11	0.12	0.12	0.16
Ireland	0.02	0.02	0.02	0.06	0.06	0.07	0.07	0.07	0.08	0.08	0.08
Israel	0.00	0.00	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.03
Italy	0.03	0.04	0.05	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.13
Japan	0.00	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.04
Luxembourg	0.00	0.00	0.00	0.01	0.01	0.02	0.03	0.06	0.06	0.06	0.06
Malaysia	0.00	0.06	0.06	0.06	0.07	0.06	0.06	0.06	0.06	0.06	0.06
Mexico	0.01	0.01	0.00	0.00	0.00	0.01	0.03	0.05	0.06	0.06	0.06
Netherlands	0.01	0.02	0.01	0.07	0.08	0.10	0.10	0.10	0.10	0.10	0.10
New Zealand	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Norway	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.04	0.05
Poland	0.06	0.04	0.04	0.09	0.08	0.09	0.10	0.10	0.11	0.11	0.11
Russia	0.08	0.07	0.07	0.07	0.08	0.09	0.10	0.11	0.14	0.15	0.16
Saudi Arabia	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.04
Singapore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02
South Africa	0.01	0.01	0.01	0.02	0.03	0.05	0.06	0.06	0.07	0.08	0.09
South Korea	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03
Spain	0.03	0.03	0.04	0.08	0.07	0.09	0.09	0.09	0.09	0.10	0.11
Sweden	0.02	0.02	0.02	0.07	0.07	0.09	0.09	0.09	0.10	0.10	0.10
Switzerland	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Taiwan - China	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Thailand	0.00	0.02	0.03	0.03	0.03	0.01	0.03	0.03	0.04	0.04	0.05
Turkey	0.01	0.02	0.03	0.04	0.04	0.07	0.07	0.07	0.14	0.14	0.17
UK	0.04	0.02	0.02	0.08	0.09	0.10	0.10	0.11	0.11	0.11	0.11
US	0.04	0.05	0.06	0.07	0.09	0.09	0.09	0.10	0.11	0.11	0.12
United Arab Emirates	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02

Appendix A6: Global Trade Alert intervention types

This table reports the Global Trade Alert intervention types and their correspondence to UN MAST classifications.

MAST chapter	Description	GTA intervention type
A	A Sanitary and phytosanitary measure	Sanitary and phytosanitary measure
B	B Technical barriers to trade	Technical barrier to trade
CAP	Capital control measures	Repatriation & surrenderrequirements
CAP	Capital control measures	Controls on commercial transactionsand investment instruments
CAP	Capital control measures	Controls on credit operations
CAP	Capital control measures	Control on personal transactions
D	D Contingent trade-protective measures	Import monitoring
D1	D1 Antidumping	Anti-dumping
D1	D1 Antidumping	Anti-circumvention
D2	D2 Countervailing measure	Anti-subsidy
D31	D31 General (multilateral) safeguard	Safeguard
D32	D32 Agricultural special safeguard	Special safeguard
E1	E1 Non-automatic import-licensing procedures other than authorizations for SPS or TBT reasons	Import licensing requirement
E2	E2 Quotas	Import quota
E3	E3 Prohibitions other than for SPS and TBT reasons	Import ban
E6	E6 Tariff-rate quotas (TRQ)	Import tariff quota
P12	Export quotas	Foreign customer limit
F7	F7 Internal taxes and charges levied on imports	Internal taxation of imports
FDI	FDI measures	FDI: Entry and ownership rule
FDI	FDI measures	FDI: Treatment and operations, nes
FDI	FDI measures	FDI: Financial incentive
G	G Finance measures	Competitive devaluation
G	G Finance measures	Trade payment measure
I1	I1 Local content measures	Local sourcing
I1	I1 Local content measures	Local operations
I1	I1 Local content measures	Local labour
I1	I1 Local content measures	Localisation incentive
I2	I2 Trade-balancing measures	Trade balancing measure
X	Instrument unclear	Import-related non-tariff measure,nes
X	Instrument unclear	Instrument unclear
L	L Subsidies (excluding export subsidies under P7)	Bailout (capital injection or equityparticipation)
L	L Subsidies (excluding export subsidies under P7)	State loan
L	L Subsidies (excluding export subsidies under P7)	Financial grant
L	L Subsidies (excluding export subsidies under P7)	In-kind grant
L	L Subsidies (excluding export subsidies under P7)	Production subsidy
L	L Subsidies (excluding export subsidies under P7)	Interest payment subsidy
L	L Subsidies (excluding export subsidies under P7)	Loan guarantee
L	L Subsidies (excluding export subsidies under P7)	Tax or social insurance relief
L	L Subsidies (excluding export subsidies under P7)	Consumption subsidy
L	L Subsidies (excluding export subsidies under P7)	Import incentive
L	L Subsidies (excluding export subsidies under P7)	Financial assistance in foreign market
L	L Subsidies (excluding export subsidies under P7)	State aid, nes
L	L Subsidies (excluding export subsidies under P7)	Price stabilisation
M1	M1 Government Procurement Market AccessRestrictions	Public procurement access
M2	M2 Government Procurement Domestic PricePreference	Public procurement preferencemargin
M3	M3 Government Procurement Local ContentRequirement	Public procurement localisation
M5	M5 Government Procurement Tendering Process	Public procurement, nes
MIG	Migration measures	Labour market access
MIG	Migration measures	Post-migration treatment
N	N Intellectual Property	Intellectual property protection
P11	P11 Export prohibition	Export ban
P12	P12 Export quotas	Export tariff quota
P12	P12 Export quotas	Export quota
P13	P13 Licensing- or permit requirements to export	Export licensing requirement
P5	P5 Export taxes and charges	Export tax
P7	P7 Export subsidies	Tax-based export incentive
P7	P7 Export subsidies	Export subsidy
P7	P7 Export subsidies	Trade finance
P8	P8 Export credits	Other export incentive
P9	P9 Export measures, n.e.s.	Export-related non-tariff measure,nes
TARIFF	Tariff measures	Import tariff

Appendix A7: Summary statistics - subsample European funds (HQ)

This table reports the summary statistics (i.e., number of observations, mean, median, standard deviation, min/max and the coefficient of variation) of the sample comprising private equity investments (buyout, PIPE, public to private, growth capital) conducted by multi-country funds (mandate) headquartered in Europe between 2010-2020.

Variable	N	Mean	Median	Std	Min	Max	CV
Trade barriers (all instruments) *	2,777	0.11	0.00	0.23	0.00	1.00	201.60
Trade barriers (excl. subsidies) *	2,772	0.03	0.00	0.06	0.00	0.58	247.98
Trade barriers (subsidies only) *	2,786	0.11	0.00	0.23	0.00	1.00	204.97
Trade barriers (tariffs only) *	2,777	0.03	0.00	0.08	0.00	0.90	253.92
Rule of law (d)	3,022	1.33	1.59	0.67	-1.18	2.12	50.25
Ease of doing business (%)	2,888	76.93	77.60	6.36	40.80	88.70	8.26
GDP growth (%)	3,022	1.49	1.87	3.09	-11.33	24.37	207.24
GDP (log)	3,022	28.09	28.52	1.21	23.18	30.69	4.31
Unemployment change (%)	3,022	-0.02	-0.05	0.13	-0.30	1.19	-542.63
Stocks traded of GDP (%)	1,783	66.63	46.42	59.15	0.01	355.52	88.78
Domestic credit to private sector (%)	2,989	111.35	105.49	41.33	10.25	216.16	37.12
Fund size (USDmm) ^	528	1,547.69	442.75	4,933.96	7.78	98,583.00	318.80
Fund sequence ^	516	3.17	3.00	2.31	1.00	16.00	73.04
Deal size (USDmm)	3,022	218.21	51.54	673.28	0.48	19,159.37	308.55

Note: * Defined as difference measure: trade barrier of observed counterfactual deal ($country_a$, $year_1$) - lowest trade barrier in $year_1$ within the fund's mandate; ^ Unique funds only.

Appendix A8: Summary statistics - subsample North American funds (HQ)

This table reports the summary statistics (i.e., number of observations, mean, median, standard deviation, min/max and the coefficient of variation) of the sample comprising private equity investments (buyout, PIPE, public to private, growth capital) conducted by multi-country funds (mandate) headquartered in North America between 2010-2020.

Variable	N	Mean	Median	Std	Min	Max	CV
Trade barriers (all instruments) *	4,776	0.08	0.00	0.20	0.00	1.00	255.52
Trade barriers (excl. subsidies) *	4,768	0.02	0.00	0.06	0.00	0.58	385.40
Trade barriers (subsidies only) *	4,791	0.08	0.00	0.20	0.00	1.00	259.91
Trade barriers (tariffs only) *	4,772	0.04	0.00	0.11	0.00	0.96	314.78
Rule of law (d)	4,934	1.37	1.59	0.60	-1.06	2.10	43.69
Ease of doing business (%)	3,685	79.71	82.60	7.10	45.40	88.70	8.91
GDP growth (%)	4,934	1.93	2.28	2.64	-11.33	24.37	136.72
GDP (log)	4,934	29.66	30.42	1.28	23.33	30.69	4.33
Unemployment change (%)	4,934	0.02	-0.07	0.31	-0.57	1.32	1,464.07
Stocks traded of GDP (%)	4,310	155.59	197.39	79.47	0.07	355.52	51.07
Domestic credit to private sector (%)	4,634	158.78	180.73	47.33	10.25	249.22	29.81
Fund size (USDmm) ^	810	2,510.39	1,086.75	3,595.57	2.46	26,200.00	143.23
Fund sequence ^	800	3.81	3.00	2.87	1.00	24.00	75.35
Deal size (USDmm)	4,934	303.30	95.00	872.12	0.03	19,159.37	287.54

Note: * Defined as difference measure: trade barrier of observed counterfactual deal ($country_a$, $year_1$) - lowest trade barrier in $year_1$ within the fund's mandate; ^ Unique funds only.

Appendix A9: Summary statistics - subsample Asian funds (HQ)

This table reports the summary statistics (i.e., number of observations, mean, median, standard deviation, min/max and the coefficient of variation) of the sample comprising private equity investments (buyout, PIPE, public to private, growth capital) conducted by multi-country funds (mandate) headquartered in Asia between 2010-2020.

Variable	N	Mean	Median	Std	Min	Max	CV
Trade barriers (all instruments) *	606	0.12	0.00	0.25	0.00	0.97	204.94
Trade barriers (excl. subsidies) *	605	0.03	0.00	0.10	0.00	0.59	322.69
Trade barriers (subsidies only) *	606	0.11	0.00	0.24	0.00	0.97	222.83
Trade barriers (tariffs only) *	606	0.08	0.00	0.19	0.00	0.96	239.62
Rule of law (d)	641	0.38	-0.05	0.90	-1.03	1.97	240.09
Ease of doing business (%)	449	72.06	74.00	10.52	48.40	88.70	14.59
GDP growth (%)	641	5.02	5.81	3.39	-10.15	14.52	67.56
GDP (log)	641	28.66	29.12	1.41	24.14	30.68	4.91
Unemployment change (%)	641	0.01	-0.01	0.18	-0.38	1.33	1,678.82
Stocks traded of GDP (%)	626	93.08	74.40	73.90	0.16	355.52	79.39
Domestic credit to private sector (%)	636	120.25	128.13	44.51	12.85	216.16	37.01
Fund size (USDmm) ^	155	863.06	365.00	1,405.47	1.80	10,600.00	162.85
Fund sequence ^	151	2.48	2.00	1.73	1.00	9.00	69.57
Deal size (USDmm)	641	211.44	45.00	610.41	0.05	6,843.11	288.69

Note: * Defined as difference measure: trade barrier of observed counterfactual deal ($country_a$, $year_1$) - lowest trade barrier in $year_1$ within the fund's mandate; ^ Unique funds only.