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## Exploring institutional determinants of private equity and venture capital activity in Europe

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# EXPLORING INSTITUTIONAL DETERMINANTS OF PRIVATE EQUITY AND VENTURE CAPITAL ACTIVITY IN EUROPE

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IES Working Paper 30/2024

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# Exploring Institutional Determinants of Private Equity and Venture Capital Activity in Europe

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## **Abstract:**

This paper examines the determinants of private equity activity across Europe. We analyze a total of 43 explanatory variables, categorized into six groups: Economy; Finance and capital markets; Quality of institutions; Life quality; Economic freedom and Globalization. We assess their impact on three target variables representing overall private equity activity: Investments, Divestments and Fundraising. The study covers 26 European countries over the period from 2007 to 2022. First, we use Bayesian Model Averaging (BMA) to identify which variables are essential for further analysis. We then conduct a multicollinearity test and remove variables highly correlated with those deemed significant by BMA. The final step involves panel data analysis to identify the key variables that countries should prioritize in order to enhance their private equity activity and make the necessary policy adjustments to improve their attractiveness in the private equity sector. Our findings highlight the significance of certain variables that have not been previously analyzed, alongside some traditionally acknowledged factors. Notably, trade openness, bank credit to the private sector, public spending on education, inflation and labor force emerge as significant determinants across Investments, Divestments, and Fundraising.

**JEL:** C58, E44, G11, G24, G28, M13, O21

**Keywords:** Private equity, Venture capital, Fundraising, Investments, Divestments, Bayesian Model Averaging, Panel data analysis

## 1. Introduction

Private equity is a form of investment that involves investing in companies that are not listed on a public exchange (Cendrowski et al. 2012; Lerner, Hardyman and Leamon, 2012). The primary goal of private equity investing is to acquire significant equity ownership, implementing strategies to enhance value before exiting through sale or public offering. One of the most important subsets of private equity is venture capital, which focuses on investing in risky, early-stage, high-potential growth companies (Cendrowski et al. 2012).

In 2023, both private equity and venture capital activities in Europe declined following a record-breaking 2022. Total fundraising amounted to €132.9bn, marking a 32% decrease from the previous year; total equity investment in European companies was €99.8bn, down by 25%; divestments at cost reached €30.6bn, down by 15% (Invest Europe, 2024). This downturn can be attributed to heightened economic and geopolitical instability.

Despite the overall decline, investments by European private equity and venture capital funds accounted for 0.44% of European GDP in 2023, underscoring the sector's significance. Over the past decade, there has been a positive trend in investments as a percentage of European GDP, increasing from 0.29% in 2012 to 0.82% in 2021 (Invest Europe, 2024).

The expansion of private equity and venture capital activity in Europe has led to increased research interest in this field, marking a notable departure from the traditionally US-centric focus. However, significant open issues and controversies persist within the industry. Many studies examining the determinants of PE and VC activity begin with the premise that there are vast differences between individual countries and regions across Europe. Groh, Liechtenstein, and Lieser (2010) describe these differences as a "built-in bias", suggesting that the entire investment chain - from institutional investors to the ultimate funded companies - is influenced by geographic factors. They argue that there must be some additional factors that drive institutional investors' decisions regarding capital allocation. Alongside Groh, Liechtenstein, and Lieser (2010), several other authors have attempted to explain the variations in PE activity, with a primary focus on macroeconomic variables (Jeng and Wells, 2000; Bernoth and Colavecchio, 2014). More recently, attention has shifted towards cultural and socio-entrepreneurial variables (Espahbodi and Dahlman, 2023; Cumming et al., 2016).

This paper examines the significance of certain established variables while also introducing new variables that have not been previously studied in the context of European PE/VC activity. We observe a total of 46 variables: three dependent (Investments, Fundraising and Divestments) and 43 independent variables categorized into six groups: Economy, Finance and Capital Markets, Quality of institutions, Life quality, Economic freedom and Globalization. The analysis covers 26 European countries (for Investments and Divestments), and 23 European countries (for Fundraising) over a 16-year period from 2007 to 2022.

The first step in our analysis involved reviewing existing research to identify variables widely acknowledged as significant drivers of PE/VC activity. Through this process, several gaps in

the literature became apparent: (i) there is a lack of consensus regarding which variables are pertinent and their directional impact (positive or negative); (ii) most studies concentrate on traditional economic and regulatory factors, while some other factors, such as society development level and life quality are neglected; (iii) objective variable selection methodologies are rarely utilized in prior research; (iv) existing studies predominantly focus on the PE/VC market in the USA, leaving European countries relatively underexplored; (v) there is no research that covers overall PE activity consisting of Investments, Fundraising and Divestments.

To address these deficiencies, we explored a wide array of potential explanatory variables. First step in our quantitative analysis was to narrow the variable base and choose only those that are relevant for further research. We did so by conducting Bayesian Model Averaging (BMA). Additionally, we assessed multicollinearity among the variables and made informed decisions about which variables to retain based on the collective findings. Subsequently, we conducted panel data analysis using both fixed-effects and random-effects regressions on the remaining variables. The results we obtained make a difference compared to the previous course of research and are all presented in the final section of the paper.

Our research contributes significantly to the existing literature by introducing new variables that have not been previously explored, thereby paving the way for new research directions. Furthermore, we comprehensively examined all facets of PE activity (Investments, Fundraising, and Divestments), offering a holistic view of the industry in Europe. Most of the previous research focused only on one or two aspects of PE activity. Our research makes a notable contribution by being among the first to utilize panel data analysis specifically for generating strategic recommendations on policy reforms aimed at expanding the private equity sector in European countries. Additionally, we were among the first to apply Bayesian Model Averaging (BMA) as an objective methodology for variable selection, thereby enhancing the robustness and relevance of our findings.

The paper is structured as follows: In Section 2, we provide literature review discussing historical development of the topic and main findings. In Section 3, we present observed variables and sources of data for our research. Section 4 explains methodology, while Section 5 presents results and discussion. Section 6 summarizes our work with concluding remarks.

## 2. Literature review

Extensive research has investigated factors impacting private equity and venture capital activity across various countries and regions. However, there is no consensus on the key determinants. Gompers and Lerner (1998) were among pioneers in the examination of venture capital determinants, analyzing data on the US venture capital industry over the period 1972-1994. They found that GDP growth, increased R&D spending, and low capital gains tax positively influence levels of venture capital investment.

Jeng and Wells (2000) analyzed data from 21 developed countries, covering the period from 1986 to 1995. They found that IPOs were the strongest determinant of VC investing, while

GDP and market capitalization growth were surprisingly insignificant. Notably, Jeng and Wells's work builds on Black and Gilson's (1998), who confirmed the significance of well-developed stock markets and IPOs.

Balboa and Marti (2003) introduced new explanatory variables in their analysis of 17 European countries from 1987 to 2000. They found that previous investment activity, market liquidity, GDP growth, and the evolution of gross domestic savings significantly affected total funds raised.

Romain and van Pottelsberghe (2004) observed 16 major OECD countries over the period 1990-1998 and found that GDP growth, short-term interest rate, level of entrepreneurship as well as technological opportunity (number of triadic patents, business R&D growth and stock of knowledge) have a positive impact on VC activity in observed countries.

Groh, Liechtenstein, and Lieser (2010) investigated the factors that make a country attractive for private equity and venture capital investments. They developed a composite index that measures a country's overall attractiveness for PE/VC investments based on six key determinants: (1) economic activity, (2) depth of the capital market, (3) taxation, (4) investor protection and corporate governance, (5) human and social environment, and (6) entrepreneurial culture. This index was later expanded to include 125 countries and is published annually by the IESE Business School as The Venture Capital and Private Equity Country Attractiveness Index (IESE, 2023).

A major shortcoming in previous research on PE/VC determinants is the focus on developed countries, particularly the USA, which has created a significant gap in the literature regarding other countries and regions. Cumming et al. (2022) found that between 2001 and 2021, 51.58% of studies focused on the USA, 10.05% on the UK, and 8.47% on China. Interestingly, during the most recent period observed (2017-2021), there was a notable rise in studies focusing on China, at the expense of research previously centered on the USA and the UK. A majority of these studies concentrate on individual countries (40.17%), with a significant portion also analyzing multiple countries simultaneously (32.73%).

In addition to the geographical concentration of research, a major problem with previous studies is that the observed variables, i.e. potential drivers of PE/VC activity, are remarkably similar across the research base. Most studies focus on classic economic and regulatory factors such as GDP growth and taxes, along with cultural variables that have gained interest in recent years. Oberli (2014) categorizes the determinants studied in economic literature into five groups: capital market-related, macroeconomic, fiscal/legal environment, government intervention-related, and process and culture-related factors. These variables include past investor returns, IPOs, recent investment activity, GDP growth, interest rates, gross domestic savings, capital gains taxation, legal systems, fairness, property rights protection, liberal bankruptcy laws, investment regulations, labor market policies, the maturity and size of the private equity market, technological opportunities, risk capital culture, and managerial talent. This classification aligns partially with the framework proposed by Groh, Liechtenstein, and Lieser (2010).

The overall research base on drivers of PE/VC activity can be divided into two categories based on their main focus: 1) geographical criterion and 2) types of variables.

## 2.1. Geographical criterion

It is crucial to recognize the vast differences among individual European regions and countries. Some European countries are well-developed and consequently exhibit higher levels of PE/VC activity, while others are emerging or even frontier markets with lower levels of such activity. The most common division found in the literature categorizes countries into Central and Eastern European (CEE) countries and Western European (WE) countries.

Several studies compare VC/PE determinants between CEE and WE countries (Bernoth, Colavecchio, and Sas, 2010; Bernoth and Colavecchio, 2014; Kocenda and Rai, 2023). Bernoth, Colavecchio, and Sas (2010) find that commercial bank lending, equity market capitalization, unit labor costs, and corporate tax rates significantly affect PE activity. Bernoth and Colavecchio (2014) identify additional factors such as economic activity, the inflation rate, equity market capitalization, unit labor costs, the unemployment rate, and the institutional and legal environment. However, Kocenda and Rai (2023) find that most of the analyzed macroeconomic determinants do not significantly influence fundraising and investing activities in CEE and WE countries, noting a strong impact of factors directly related to the PE process.

Regarding emerging markets, Lerner et al. (2016) argue that while these markets exhibit high growth potential, they also pose significant risks. One significant risk is the uncertainty faced by PE investors regarding their ability to exit investments and achieve returns in these underdeveloped capital markets. It is clear that a strong capital market is a prerequisite for PE activity in any country, as investors require liquidity for their holdings. However, Štofa and Šoltez (2020) found that stock market development does not significantly affect PE investment activity in European countries. The rationale behind this finding is that divestments in Europe are not primarily executed via capital markets.

Groh and Liechtenstein (2009) conducted a survey among international investors in PE Limited Partnerships and found that the most important factors for PE investing in emerging markets are corporate governance and investor protection. Similarly, Groh and Wallmeroth (2016) argue that the critical factors for VC development in emerging markets are M&A activity, legal rights and investor protection, innovation, corruption, corporate tax, and the unemployment rate.

Karsai (2023) finds that differences between European countries increased sharply during the period 2016-2020: the Baltic countries of Estonia and Lithuania have a very strong VC industry given their liberal market regulation and high digitalization level; countries that operate under illiberal conditions, Hungary and Poland, rely heavily on EU funds and consequently have a number of artificially inflated startups; other EU countries are in the process of market liberalization and institutional transformation which is expected to boost



VC activity in the future; non-EU countries don't have developed VC market and its activity could be considered sporadic.

The CEE region remains relatively underexplored in terms of private equity and venture capital. Lerner, Leamon, and Hardyman (2012) argue that the fall of the Iron Curtain in 1989 facilitated new market openings in CEE countries, geographically proximate to Western Europe, marking the inception of the PE industry in this region<sup>1</sup>. Authors who have explored CEE countries include Ljumovic et al. (2020), Simic Saric and Maric (2021), Stefanova (2015), Precup (2015), Diaconu (2012), Malecka and Luszczka (2016), Klonowski (2011) etc.

## 2.2. Types of variables

Several studies examine how formal and informal institutions influence private equity and venture capital activity.

North (1990) was the first to introduce the classification of institutions into formal and informal categories. According to North, institutions are humanly devised constraints that shape human interaction. Formal institutions encompass economic, political and contractual rules, whereas informal institutions consist of social norms, codes of behavior, and conventions rooted in the cultural heritage of specific geographic contexts (North, 1990, 1994). Jeng and Wells (2000) define formal institutions as legally binding rules and regulations, contrasting them with informal institutions which encompass social norms, networks and trust.

Grilli et al. (2019) underscore the importance of both formal and informal institutions in assessing their influence on the evolution of the VC industry. Their analysis of 35 empirical studies identified key themes within formal institutions (regulatory institutions, government quality and financial market conditions) and informal institutions (entrepreneurialism, cultural dimensions and social capital). The results they presented are consistent with the main conclusion regarding the whole topic: there is no consensus on what variables are most important drivers of PE/VC activity.

For instance, Aggarwal and Goodell (2014) and Groh and Wallmeroth (2016) suggest that investor protection positively influences VC activity, whereas Jeng and Wells (2000) and Cumming et al. (2016) found no significant impact from this factor. High capital gains taxes are believed to negatively affect VC activity by Gompers and Lerner (1998) and Bedu and Montalban (2014), yet Jeng and Wells (2000) found no significant impact. Rigid labor market regulations are reported to have a negative impact by Bonini and Alkan (2012), Cumming and Li (2016), and Groh and Wallmeroth (2016), while Bedu and Montalban (2014) found no significant impact, and Schertler (2003) suggests a positive impact.

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<sup>1</sup> For comparison, the PE market in the US and other Western countries has been developing for more than 70 years (Lerner, 2016).

Felix et al. (2013) found that stock market development negatively impacts VC activity, contrasting with Jeng and Wells (2000), Bonini and Alkan (2012), and Cumming and Li (2016) who found no significant impact. Conversely, numerous authors including Black and Gilson (1998), Gompers and Lerner (1998), Schertler (2003), Cumming et al. (2016), and Groh and Wallmeroth (2016) argue for a positive impact of stock market development. Regarding macroeconomic factors, Jeng and Wells (2000) and Cumming and MacIntosh (2006) found no significant impact of GDP growth rate on VC activity, while Gompers and Lerner (1998), Romain and van Pottelsberghe (2004), Li and Zahra (2012), and Hain et al. (2016) argue for a positive impact.

Cherif and Gazdar (2009) analyzed public institutions and venture capital in Europe, concluding that governmental effectiveness, regulatory quality, political stability, voice and accountability, as well as corruption control, positively impact total VC activity.

In the realm of informal institutions, several authors examined culture through the well-established Hofstede dimensions (Li and Zahra, 2012; Aggarwal and Goodell, 2014; Gimenez-Jimenez, 2020; Espahbodi and Dahlman, 2022). The original Hofstede dimensions comprised power distance, individualism, masculinity and uncertainty avoidance (Hofstede, Hofstede, and Minkov, 2011). Subsequently, these dimensions were expanded to include two additional factors: long-term orientation and indulgence. Uncertainty avoidance is one of the most frequently analyzed indicators of VC activity and it is thought to have a negative impact (Li and Zahra (2012); Aggarwal and Goodell (2014); Cumming et al. (2016)).

In addition to the mentioned cultural dimensions, some authors consider entrepreneurialism as part of informal institutions. Felix et al. (2013) argue that entrepreneurialism negatively affects VC activity. Conversely, Armour and Cumming (2016) and Li and Zahra (2012) find no significant impact, while Romain and van Pottelsberghe (2004) and Bonini and Alkan (2012) suggest a positive impact.

### **3. Research design**

#### **3.1. Variables**

The aim of this paper is to examine variables acknowledged in the literature as drivers of PE/VC activity, along with new variables that have not been previously tested. The study focuses on three dependent variables: Investments, Fundraising and Divestments and 43 independent variables categorized into six groups: Economy, Finance and Capital Markets, Quality of Institutions, Life quality, Economic freedom and Globalization. Below is an overview of all independent variables, with detailed information available in Table 1.<sup>2</sup>

##### **3.1.1. Economy**

First group of independent variables consists of:

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<sup>2</sup> Note: for some of the variables a short explanation will be given.

- Classic economic variables:
  - GDP growth rate - the rate of change of real GDP [GDP\_G]
  - Inflation rate [INF\_R]
  - Labor force, million people [LAB\_F]
  - Unemployment rate [UNE\_R]
- Variables related to innovations:
  - Research and development expenditure, percent of GDP [RDE]
  - Patent applications by residents [PAT].

Many of these variables have been analyzed in previous studies, as documented in the Literature review. However, unresolved questions persist regarding their role as significant drivers of PE/VC activity. This uncertainty motivated us to reassess their importance.

### 3.1.2. Finance and Capital Markets

In the second group there are variables related to the financial sector:

- Interest rate [IR]
- Bank credit to the private sector, percent of GDP [BANK\_C]
- Bank assets, percent of GDP [BANK\_A]
- Stock market capitalization, percent of GDP [SM\_CAP]
- Stock market return, percent [SM\_RET]
- Stock price volatility, percent [SP\_VOL].

Previous research has predominantly focused on the capital markets for two main reasons. Firstly, this sector is highly developed in the USA, a country which is a primary focus of PE research. Secondly, Initial Public Offerings (IPOs) represent one of the most prevalent methods for exiting PE investments. However, in Europe banks dominate the capital market - a fact that has not received full recognition in studies examining the drivers of PE/VC activity. We aim to address this literature gap by highlighting the significance of the banking sector for the development of PE/VC industry across European countries. To our best knowledge, there has been no prior examination of Bank credit to the private sector (percent of GDP) and Bank assets (percent of GDP) as determinants of PE fundraising, investments, and divestments.

### 3.1.3. Quality of institutions

The group "Quality of Institutions" includes governance indicators that reflect the political and legal environment of each respective country:

- Rule of law index [RL\_I] - captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence (-2.5 weak; 2.5 strong)

- Government effectiveness index [GE\_I] - captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (-2.5 weak; 2.5 strong)
- Control of corruption [CCOR\_I] - captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests (-2.5 weak; 2.5 strong)
- Regulatory quality index [RQ\_I] - captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development (-2.5 weak; 2.5 strong)
- Voice and accountability index [VA\_I] - captures perceptions of the extent to which the citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media (-2.5 weak; 2.5 strong)
- Political stability index [PS\_I] - measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism (-2.5 weak; 2.5 strong)
- Corruption perceptions index [CORP\_I] - measures perceptions of public sector corruption, i.e. administrative and political corruption (100 = no corruption).

There is limited research that has considered these variables, with some notable exceptions such as Cherif and Gazdar (2009) and Kocenda and Rai (2023). We chose to examine these variables because they provide a robust means to quantify the quality of governance, institutions, and regulations—crucial but often difficult-to-measure social aspects that significantly impact the economy and investments within it.

### 3.1.4. Life quality

This group of variables indicates standard of living in a country:

- Human development index [HD\_I] - measures three basic dimensions of human development: long and healthy life, knowledge, and a decent standard of living (0 - 1)
- Uneven economic development index [UNED\_I] - considers inequality within the economy, irrespective of the actual performance of an economy. The higher the value of the index, the higher the inequality in the country's economy (0 low; 10 high)
- Human rights and rule of law index [HRRL\_I] - considers the relationship between the state and its population insofar as fundamental human rights are protected and freedoms are observed and respected. The higher the indicator's value, the less protected are the human rights and the rule of law in the country 0 (high) - 10 (low)
- Human flight and brain drain index [HFBD\_I] - considers the economic impact of human displacement (for economic or political reasons) and the consequences this

may have on a country's development. The higher the index, the greater the human displacement 0 (low) - 10 (high)

- Percent urban population [URB\_POP]
- Internet users, percent of population [INT\_US]
- Mobile phone subscribers, per 100 people [MOB\_PH]
- Public spending on education, percent of GDP [PS\_ED1]
- Public spending on education, percent of public spending [PS\_ED2]

To our best knowledge there is no research that examined the influence of above mentioned variables on overall PE/VC activity in Europe. Our primary rationale for selecting these variables was based on the assumption that societies with higher standards of living, increased investment in education, and greater adoption of technology are more likely to foster innovation and attract private equity funds and investments.

### **3.1.5. Economic freedom**

Variables in this group indicate the levels of freedom in different segments of the economic and social activity:

- Economic freedom, overall index [ECF\_OI] - comprehensive measure that evaluates the degree to which a country's policies and institutions support economic freedom and overall environment for economic activity (0 low; 100 high)
- Fiscal freedom index [FF\_I] - measures the extent of a country's tax burden on individuals and corporations (0 low; 100 high)
- Business freedom index [BF\_I] - evaluates the regulatory environment in which businesses operate, including the ease of starting, operating, and closing a business (0 low; 100 high)
- Labor freedom index [LF\_I] - evaluates the regulation of a country's labor market, including regulations concerning minimum wages, hiring and firing practices, and working hours (0 low; 100 high)
- Monetary freedom index [MF\_I] - assesses the stability of a country's currency and the absence of price controls (0 low; 100 high)
- Trade freedom index [TF\_I] - measures the absence of tariffs, quotas, and other barriers to free trade (0 low; 100 high)
- Investment freedom index [IF\_I] - evaluates the ability of individuals and businesses to move capital, both domestically and internationally, without restrictions (0 low; 100 high)
- Financial freedom index [FINF\_I] - assesses the openness of a country's banking and financial system, including the independence of financial institutions from

government control, the presence of competition in the financial sector, and the development of financial markets (0 low; 100 high)

- Freedom from corruption index [FCOR\_I] - measures the level of resilience to corruption within a country's government and institutions (0 low; 100 high)
- Property rights index [PR\_I] - evaluates the degree to which a country's legal system protects private property rights (0 low; 100 high).

These variables could be important because they indicate the investment climate, regulatory environment, and ease of doing business in a particular country. Previous research in this area has yielded varied conclusions without reaching a uniform consensus.

### **3.1.6. Globalization**

These variables indicate level of country openness and its inclusion in the overall globalization process:

- Globalization index [GLOB\_I] - composite measure that assesses the extent of a country's integration into the global economy, society, and politics (0 low; 100 high)
- Economic globalization index [EG\_I] - measures the degree to which a country is economically integrated with the rest of the world (0 low; 100 high)
- Political globalization index [PG\_I] - measures the extent of a country's political engagement and cooperation on the global level (0 low; 100 high)
- Social globalization index [SG\_I] - measures the extent of cultural, informational, and social integration between a country and the rest of the world (0 low; 100 high)
- Trade openness - exports plus imports as percent of GDP [T\_OP].

Globalization permeates nearly every aspect of life, including the economy, politics and society. In the context of our topic, countries that embrace globalization benefit from increased market opportunities and access to a broader pool of potential investments for both startups and private equity firms (i.e. investments and fundraising). To our best knowledge, there has been no research examining globalization indices obtained from The Swiss Institute of Technology in Zurich and trade openness in relation to our specific focus.

## **3.2. Data sources**

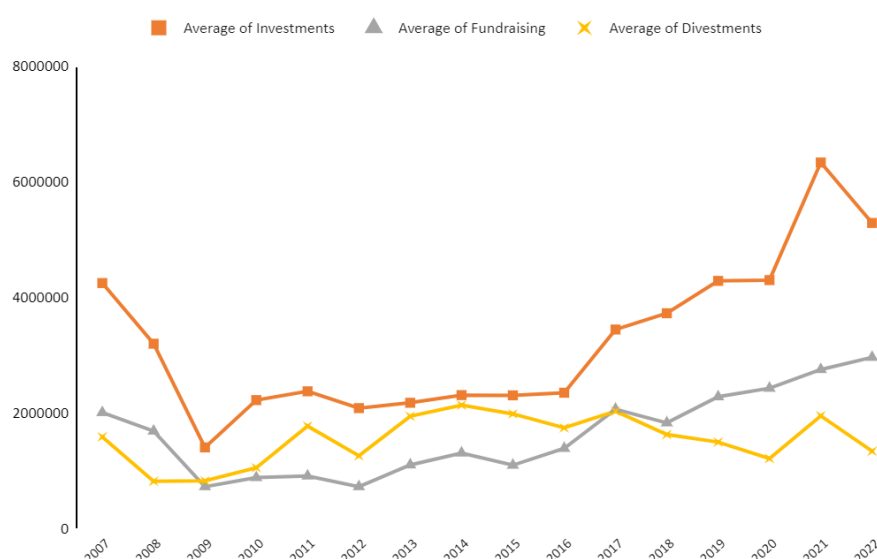
The primary data source for dependent variables was The European Data Cooperative (EDC) managed by Invest Europe, world's largest association of private capital providers. Invest Europe represents Europe's private equity, venture capital and infrastructure investment firms, along with their investors. In collaboration with national association partners, Invest Europe established the EDC as a joint initiative to gather comprehensive industry data on PE and VC activity across Europe, including its social impact.

While the EDC offers extensive datasets on indicators across individual countries, some countries were categorized into groups: the Baltic countries (Estonia, Latvia, Lithuania) and Other CEE countries (Bosnia and Herzegovina, Croatia, Macedonia, Moldova, Montenegro, Serbia, Slovakia, Slovenia). This posed challenges for analysis as independent variables were country-specific. Due to the limited significance of the Other CEE group, these countries were excluded from the analysis. Data on individual Baltic countries was subsequently obtained, but only for two out of three dependent variables (Investments and Divestments), since Invest Europe's reporting policy necessitates a minimum of five funds per year for data presentation and this condition was not fulfilled for Fundraising. In addition to Estonia, Latvia and Lithuania, our analysis encompassed the following countries: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Poland, Portugal, Romania, Spain, Sweden, United Kingdom, Norway, Switzerland, and Ukraine.

Data on independent variables was collected from various sources. The main source was The Global Economy, a comprehensive data provider aggregating indicators from authoritative institutions like the World Bank, International Monetary Fund, United Nations, World Economic Forum, Heritage Foundation, Fund for Peace, national agencies and statistical offices etc. Data on several independent variables was obtained directly from the World Bank (GDP growth rate and stock market capitalization) and the International Monetary Fund (interest rates).

### 3.3. Evolution of dependent and independent variables

Levels of PE/VC activity<sup>3</sup> vary significantly among European countries. During the observed period, the highest levels of activity were recorded in the United Kingdom, France, and Germany. The chart below provides an overview of the average values of investments, fundraising and divestments across the 26 countries studied.



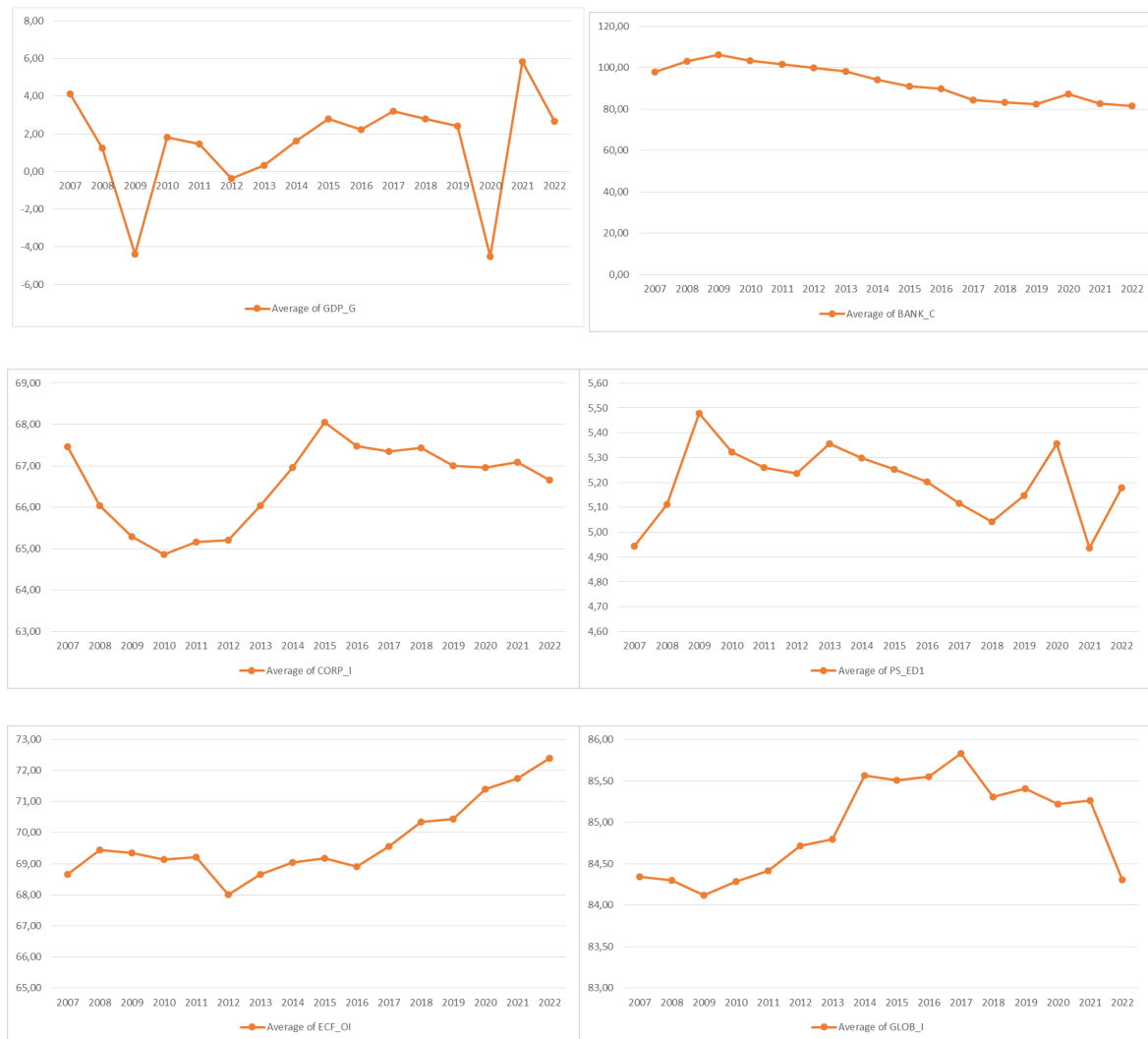
<sup>3</sup> Measured by average values of investments, fundraising and divestments in the period 2007-2022.



**Figure 1.** Average values of investments, fundraising and divestments over the period 2007 - 2022

It is evident that there was a sharp decline in investments and fundraising during the global financial crisis, with levels reaching historic lows in 2009 (€1,411,480 for investments and €732,617 for fundraising). Subsequently, the sector experienced a period of recovery and stabilization, culminating in a notable peak in 2021, when average investments surged to €6,339,311.

In order to gain perspective on the possible relationship between dependent and independent variables, we analyze the movement of selected independent variables - one from each group as presented in Section 3.1. Variables. These include: GDP growth rate [GDP\_G], Bank credit to the private sector, percent of GDP [BANK\_C], Corruption perceptions index [CORP\_I], Public spending on education, percent of GDP [PS\_ED1], Economic freedom, overall index [ECF\_OI] and Globalization index [GLOB\_I].



**Figure 2.** Average values of six independent variables over the period 2007 - 2022



There appears to be no evident correlation among the selected variables; each exhibits its own distinct movement pattern. The GDP growth rate is notably volatile, reflecting the numerous disruptions Europe has experienced during the last 20 years: the global financial crisis, the migrant crisis, Brexit, the COVID-19 pandemic, the war in Ukraine etc. In contrast, bank credit to the private sector is the least volatile of the variables, demonstrating a consistent negative trend. People's perception of corruption improved following the global financial crisis, as evidenced by a sharp increase in the Corruption Perceptions Index between 2010 and 2015. This improvement is likely attributable to the implementation of tighter regulations and enhanced supervision as part of the response to the crisis. Economic freedom, overall index and globalization index could be considered somewhat similar, but their movements in the observed period were not harmonized. Generally, higher economic freedom tends to foster greater globalization by improving market conditions and openness. However, the immediate impact of external shocks such as COVID-19 pandemic on globalization shows that global integration can be significantly disrupted even when economic freedom is on the rise. Variable whose trend is most dependent on country-specific decisions is public spending on education as a percentage of GDP. The high volatility observed in this variable suggests significant inconsistencies and varying degrees of autonomy in decision-making regarding education funding.

## 4. Methodology

Our dataset comprises 46 variables observed across 26 countries over a 16-year period (2007-2022). To comprehensively analyze the dataset, we employed panel data analysis, which offers significant statistical power and efficiency by integrating both cross-sectional and time-series dimensions of data. Due to the varying developmental stages and specific characteristics of individual countries in our sample, we needed to consider potential unobserved heterogeneity (cultural and historical contexts, political environments and other relevant factors). This was accomplished by employing fixed-effects and random-effects regressions. Prior to conducting panel data analysis, we assessed the importance of variables using Bayesian Model Averaging (BMA). The objective was to determine which variables should be included in the analysis.

### 4.1. Descriptive statistics

We obtained 416 observations for each dependent variable, except for Fundraising, where we had 368 observations due to unavailability of data from the Baltic countries. Complete descriptive statistics is presented in Appendix - Table 3.

### 4.2. Bayesian Model Averaging (BMA)

We applied Bayesian Model Averaging (BMA) as a robust approach to handle model uncertainty and improve the reliability of statistical inference. BMA provides a coherent and systematic mechanism for accounting for model uncertainty by assessing the relevance of different variables in selected models. It can be regarded as a direct application of Bayesian

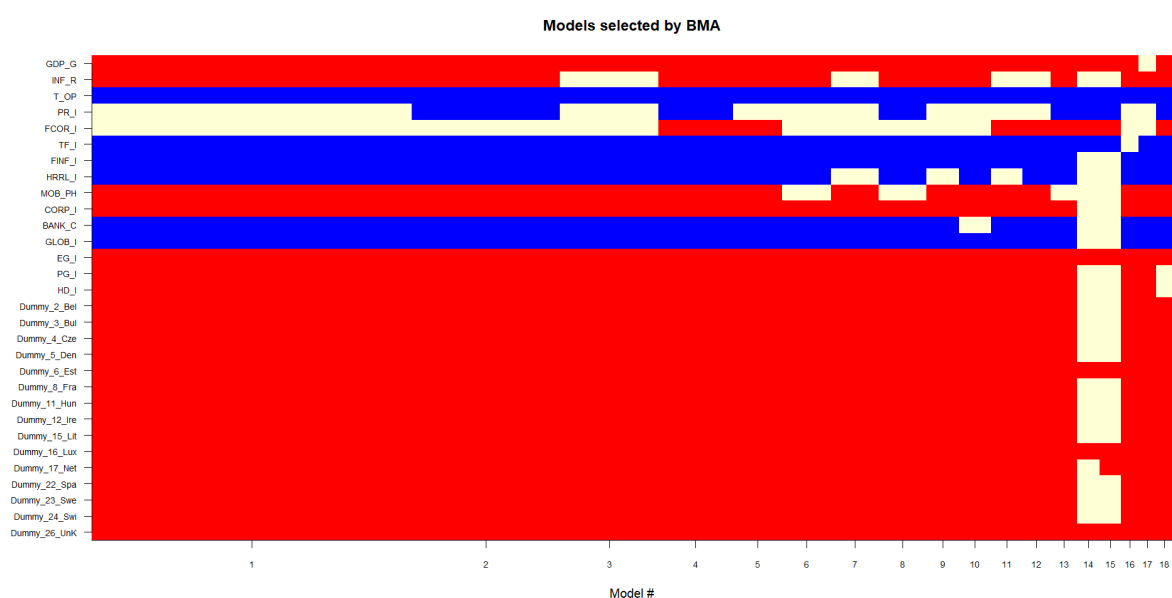
inference to the problem of model selection, combined estimation and prediction (Fragoso and Neto, 2015).

Key methodologies for applying BMA to linear regression, including the use of Bayes factors and Markov Chain Monte Carlo (MCMC) for model averaging, were established by Raftery, Madigan, and Hoeting (1997). Madigan and Raftery (1994) earlier introduced concepts like Occam's Window for model selection in graphical models, which facilitates handling model complexity by focusing on a subset of models that are significantly better. These works are considered foundational for Bayesian analysis. Hinne et al. (2017) define BMA as a parameter estimate (or a prediction of new observations) obtained by averaging the estimates (or predictions) of the different models under consideration, each weighted by its model probability). The reference of our highest interest is Posterior inclusion probability (PIP), i.e. an indicator of how relevant a predictor is across all possible models. Variables with high PIP values are considered relevant: the closer to 100 the better. Besides PIP, it is important to observe Expected value (EV) and Standard deviation (SD). EV represents the average effect of independent variable on dependent variable across all models. This effect can be positive (positive EV values) or negative (negative EV values). SD represents the variability of the variable's effect, where lower values suggest a more consistent effect across models.

We employed BMA individually for all three dependent variables. Detailed results are presented in Appendix - Tables 4-7, while in the continuation of the text there is graphical representation of the results which facilitates the identification of key variables to consider in further analysis.

#### 4.2.1. Investments

These are the best 5 models with the highest cumulative posterior probability (0.6385). The cumulative probability represents the combined probability of these 5 models being the best models based on the data and the model selection criteria.



**Figure 3.** Results of BMA – Investments based on yearly data (2007-2022)

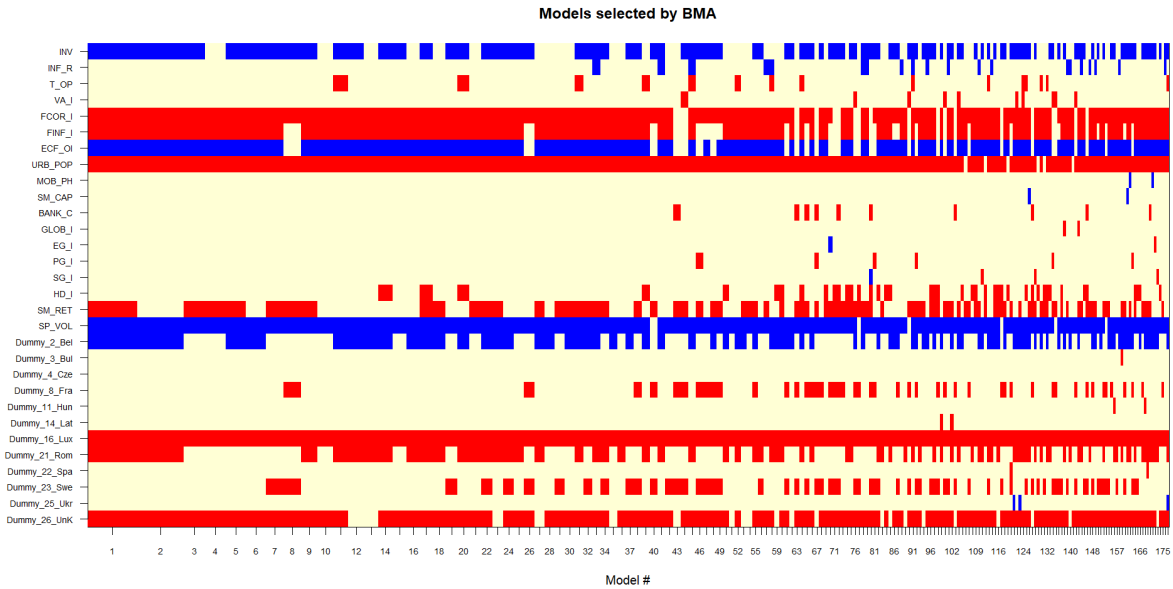
Variables that have a high probability of being included in the models ( $PIP > 0.8$ ) and are important for explaining the dependent variable Investments are: GDP\_G (GDP rate), T\_OP (Trade openness), TF\_I (Trade freedom index), FINF\_I (Financial freedom index), HRRL\_I (Human rights and rule of law index), MOB\_PH (Mobile phone subscribers), CORP\_I (Corruption perceptions index), BANK\_C (Bank credit to the private sector), GLOB\_I (Globalization index), EG\_I (Economic globalization index), PG\_I (Political globalization index), HD\_I (Human development index). The dummy variables representing country-specific effects are included in each model by default, i.e. they are not subjected to the selection procedure.

Taking into account PIP, EV and SD, as presented in Appendix - Table 5, we find that variables with highest inclusion probability are x4 (Trade openness) and x34 (Economic globalization index) ( $PIP = 100$ ). Trade openness has slightly negative effect on Investments ( $EV = -0.007585$ ), estimated with high precision ( $SD = 0.0013633$ ), and Economic globalization index has a positive effect on Investments ( $EV = 0.057294$ ), estimated with relatively high precision ( $SD = 0.0140887$ ). While the positive effect of economic globalization is expected, the negative effect of trade openness may seem counterintuitive. Same applies to Trade freedom index ( $PIP = 98.4$ ), which has a negative effect on dependent variable. This can be attributed to a shift in capital towards trade rather than the riskier start-up sector as trade conditions improve, coupled with increased competition from international firms. In contrast, the GDP growth rate ( $PIP = 98.4$ ) positively influences investments. This is expected, as higher GDP growth rates create a more favorable environment for various types of investments, including private equity.

Among other variables we would point out the negative effect of Bank credit to the private sector: as banks extend more credit, private equity investments tend to decrease. This can be attributed to the substitution effect, since banks and private equity firms are competing sources of capital. Companies with access to debt financing may prefer this source over equity financing. Furthermore, when commercial banks encounter stricter regulations or are reluctant to lend to high-risk clients, they may either refuse to provide credit or impose unfavorable terms, thereby creating opportunities for private equity investors.

#### 4.2.2. Divestments

Below are the best 5 models with cumulative posterior probability of 0.1466:



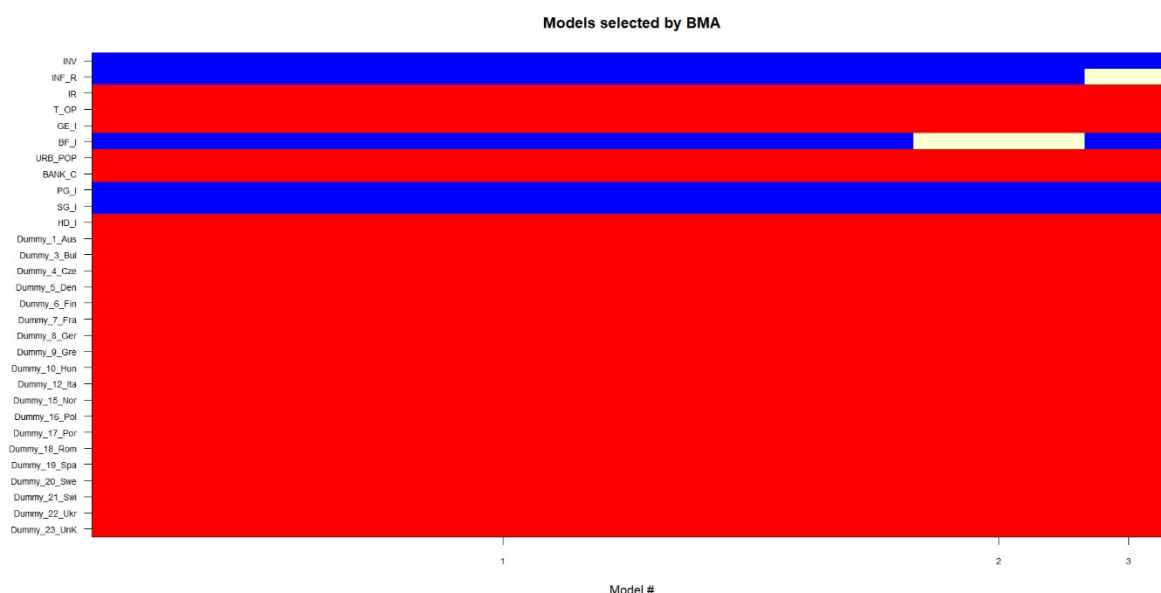
**Figure 4.** Results of BMA - Divestments based on yearly data (2007-2022)

Variables that are likely to be included in the models due to their high posterior inclusion probabilities (PIP > 0.8) are: FCOR\_I (Freedom from corruption index), FINF\_I (Financial freedom index), ECF\_OI (Economic freedom overall index), URB\_POP (Percent urban population), SP\_VOL (Stock price volatility). The dummy variables representing country-specific effects are included in each model by default, i.e. they are not subjected to the selection procedure.

The variable with highest probability of inclusion (PIP = 98.3) is Percent urban population. According to EV and SD, this variable has a significant positive effect on Divestments, arguably due to more developed economic activity and more investment and divestment opportunities in urban areas. Another variable with a high PIP value (97.8) is Stock price volatility, which has a negative effect on Divestments. This relationship can be attributed to increased risk during unstable market conditions, challenges in accurately assessing the fair value of private equity assets during IPOs, as well as liquidity constraints that complicate the execution of divestments. Variables Freedom from corruption and Financial freedom index have a positive effect on Divestments, implying that countries which have low corruption level and more freedom in the financial sector have more divestment, which is in line with intuition. On the other hand, Economic freedom overall index has a negative impact, but also high SD (5.55) which means that the estimate is not completely reliable.

#### 4.2.3. Fundraising

Below are the best 3 models with cumulative posterior probability of 1:



**Figure 5.** Results of BMA - Fundraising based on yearly data (2007-2022)

Variables that have high PIPs ( $> 0.8$ ) and are frequently included in the models are: INV (Investments), INF\_R (Inflation), IR (Interest rates), T\_OP (Trade openness), GE\_I (Government effectiveness index), BF\_I (Business freedom index), URB\_POP (Percent urban population), BANK\_C (Bank credit to the private sector), PG\_I (Political globalization index), SG\_I (Social globalization index), HD\_I (Human development index). The dummy variables representing country-specific effects are included in each model by default, i.e. they are not subjected to the selection procedure.

Almost all variables have PIP values of 100, meaning that they are significant across different models. Among variables with positive impact on Fundraising, highest EV value can be found in Human development index (12.36). This relationship is quite expected given that this index reflects overall development and well-being of a population: better life conditions imply higher education, better-skilled workforce, innovativeness and entrepreneurial spirit - all factors that contribute to increase in country attractiveness for PE fundraising. Furthermore, countries with higher Human development index usually have economic stability which is also important for potential investors.

Variables: Inflation, Business freedom index, Political globalization index and Social globalization index have a negative effect on Fundraising. The negative effect of inflation is aligned with expectations, since it implies the erosion of the real value of money. Conversely, the negative effects observed for the other variables are quite unexpected, given that improvements in the ease of doing business and various aspects of globalization are typically anticipated to attract more funds in the private equity industry.

### 4.3. Correlation

We constructed a correlation matrix<sup>4</sup> to assess multicollinearity among the variables. When deciding which variables to exclude from further analysis, we considered their correlation<sup>5</sup>, as well as the BMA results shown in the previous section. Our objective was to retain only those variables that were identified by BMA as significant and that had a high probability of inclusion across various models. In instances where two highly correlated variables were both identified as significant by BMA, we evaluated the individual impact of each variable on the dependent variables and considered their practical implications for the overall quality and interpretability of the models.

The following variables were excluded from further analysis:

**Investments:** Fundraising, Rule of law index, Government effectiveness index, Control of corruption, Regulatory quality index, Voice and accountability index, Property rights index, Freedom from corruption index, Business freedom index, Investment freedom index, Economic freedom overall index, Human flight and brain drain index, Human rights and rule of law index, Internet users, R&D expenditure, Globalization index, Social globalization index, Human development index, Bank assets and Patent applications by residents.

**Divestments:** Fundraising, Rule of law index, Government effectiveness index, Control of corruption, Regulatory quality index, Voice and accountability index, Property rights index, Freedom from corruption index, Investment freedom index, Financial freedom index, Globalization index, Economic globalization index, Social globalization index, Bank assets and Patent applications by residents.

**Fundraising:** Interest rates, Rule of law index, Government effectiveness index, Control of corruption, Regulatory quality index, Voice and accountability index, Property rights index, Freedom from corruption index, Investment freedom index, Financial freedom index, Economic freedom overall index, Human rights and rule of law index, Internet users, Human development index, Bank assets and Patent applications by residents.

### 4.4. Panel data analysis

Having prepared the variable base, we now turn our attention to panel data analysis, a critical step in our analytical framework. The aim of this transition is to leverage the advanced predictive capabilities of panel data methods, which provide significant benefits over traditional cross-sectional and time-series approaches. We run both fixed-effects and random-effects analyses. Fixed-effects (FE) regression is suitable when there are time-invariant unobserved factors that vary across the entities in the panel, while random-effects (RE) regression is appropriate when the unobserved factors affecting each entity are uncorrelated with the observed variables in the model.

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<sup>4</sup> Available upon request.

<sup>5</sup> A Pearson correlation coefficient greater than 0.7 or less than -0.7 is commonly considered to indicate a strong correlation.

Following the regressions for each dependent variable, we applied the Hausman test in order to determine which model is more appropriate for our analysis. This was done by testing whether the individual-specific effects are correlated with the explanatory variables. If they are correlated, the random effects model may be biased, making the fixed effects model preferable. The Hausman test questions the following hypotheses:

Null Hypothesis ( $H_0$ ): The RE model is appropriate.

Alternative Hypothesis ( $H_1$ ): The FE model is appropriate.

The results of the Hausman test are presented in the table below:

Target variable	Chi-square statistic	p-value	Result	Efficient estimation
Investments	4,425.08	0.0000	Rejected $H_0$	Fixed effects
Divestments	4.57	1.0000	Fail to reject $H_0$	Random effects
Fundraising	179.95	0.0000	Rejected $H_0$	Fixed effects

**Table 1.** Hausman test

We can conclude that the FE model is appropriate for Investments and Fundraising, while the RE model is appropriate for Divestments.

## 5. Results

This table presents the results of the FE estimation for target variables Investments and Fundraising, as well as the results of the RE estimation for target variable Divestments.

Variable		Coef. / Std. Err.		
		Investments FE	Divestments RE	Fundraising FE
Investments	INV		-0.01605 (0.03016)	-0.30323*** (0.11152)
Fundraising	FUND			
Divestments	DIV	-0.10741 (0.08174)		0.40522*** (0.15185)
GDP rate	GDP_G	0.01134*** (0.00436)	0.00217 (0.00257)	-0.0163* (0.00855)
Inflation	INF_R	0.0077* (0.00453)	-0.00464* (0.00282)	-0.02259*** (0.00864)
Interest rates	IR	0.00552 (0.01183)	0.00385 (0.00549)	
Trade openness	T_OP	-0.00951*** (0.0013)	0.00145*** (0.00028)	0.02911*** (0.00267)
Political stability index	PS_I	0.0386 (0.06576)	0.02217 (0.03248)	-0.2375* (0.12514)

Fiscal freedom index	FF_I	0.00094 (0.00217)	-0.0018 (0.00122)	-0.00976** (0.00405)
Business freedom index	BF_I		-0.00203 (0.0016)	-0.0116* (0.00646)
Labor freedom index	LF_I	0.00134 (0.00246)	-0.00209** (0.0009)	0.00684 (0.00469)
Monetary freedom index	MF_I	0.00288 (0.00419)	-0.00352 (0.00255)	-0.00558 (0.0082)
Trade freedom index	TF_I	-0.02629*** (0.00742)	0.00206 (0.0041)	-0.00115 (0.01466)
Financial freedom index	FINF_I	-0.01028*** (0.00303)		
Percent urban population	URB_POP	0.01434 (0.01511)	0.00468*** (0.00135)	0.06644** (0.02899)
Uneven economic development index	UNED_I	-0.02651 (0.03025)	0.00193 (0.01312)	0.11897** (0.05593)
Human flight and brain drain index	HFBD_I		0.02033 (0.01375)	-0.06959 (0.06262)
Human rights and rule of law index	HRRL_I		-0.00766 (0.01639)	
Labor force	LAB_F	0.06527*** (0.02207)	0.00275** (0.00115)	-0.10326** (0.04481)
Unemployment rate	UNE_R	-0.00392 (0.00639)	-0.00204 (0.00329)	-0.01342 (0.0124)
Mobile phone subscribers	MOB_PH	0.00422*** (0.00157)	0.00147** (0.00067)	-0.00422 (0.00331)
Market capitalization/GDP	SM_CAP	0.00115*** (0.00039)	0.00029 (0.00022)	0.00012 (0.00072)
Corruption perceptions index	CORP_I	0.00617* (0.00366)	0.00147 (0.0017)	-0.00541 (0.00723)
Bank credit of the private sector	BANK_C	-0.00146* (0.00086)	0.00162*** (0.0004)	0.00692*** (0.00158)
Research and development	RDE		-0.01173 (0.01694)	0.06707 (0.06151)
Globalization index	GLOB_I			0.04609 (0.21469)
Economic globalization index	EG_I	0.01386* (0.00726)		-0.0327 (0.07316)
Political globalization index	PG_I	-0.00588 (0.00544)	-0.001 (0.00219)	-0.05264 (0.07264)
Social globalization index	SG_I			-0.09151 (0.07486)
Public spending on education (total public spending)	PS_ED2	-0.04837*** (0.01849)	-0.02323*** (0.00735)	-0.0641* (0.03848)
Public spending on education (% of GDP)	PS_ED1	-0.04683* (0.0274)	0.01782 (0.0154)	0.01474 (0.05649)
Stock market return	SM_RET	-0.00016 (0.00086)	0.00057 (0.00055)	0.00012 (0.00169)
Stock price volatility	SP_VOL	0.00193 (0.00249)	-0.00465*** (0.0015)	0.00421 (0.00469)
R <sup>2</sup>		0.0009	0.4629	0.3526



F		F(25,365)=7.09	Wald chi2(30)=331.8	F(29,316)=11.92
		Prob > F=0	Prob > chi2=0	Prob > F=0

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
(Standard errors in parentheses)

**Table 2.** Fixed effects and random effects regression for three target variables  
(Investments, Divestments and Fundraising)

In the following text, we will analyze the results obtained for each dependent variable.

### 5.1. Investments

The fixed-effects regression model shows significant relationships between the dependent variable Investments and several independent variables:

- GDP growth rate, Trade openness, Trade freedom index, Financial freedom index, Labor force, Mobile phone subscribers, Market capitalization/GDP, Public spending on education - total public spending ( $p < 0.01$ );
- Inflation, Corruption perceptions index, Bank credit to the private sector, Economic globalization index, Public spending on education, percent of GDP ( $p < 0.1$ ).

The model is overall significant ( $F=7.09$ ,  $P=0$ ). This means that the independent variables, collectively, have a significant effect on the dependent variable.

Variables: GDP growth rate, Inflation, Labor force, Mobile phone subscribers, Market capitalization/GDP, Corruption perceptions index and Economic globalization index have a positive effect on Investments. Based on these results, we can argue that countries aiming to attract more private equity investments should implement several policy changes. Firstly, it would be useful to focus on fostering economic growth, since it leads to better developed markets, more innovations and higher returns on investment. Economic growth is often associated with an increase in the inflation rate; however, it is crucial to maintain inflation at a moderate level, avoiding excessive rates. Countries should also address corruption, as this can enhance investor confidence and improve their perception of country risk. Additional recommendations include adopting policies on strengthening of financial markets and economic globalization, which would provide better investment and exit options for PE investors, as well as enhancing labor conditions and the adoption of technology, which would contribute to higher productivity and foster innovation.

Variables: Trade openness, Trade freedom index, Financial freedom index, Bank credit to the private sector, Public spending on education (total public spending) and Public spending on education (% of GDP) have a negative effect on Investments. The negative effects of Trade openness and Trade freedom index imply that countries aiming to attract more PE investments should mitigate adverse effects of trade policies, such as too high liberalization which can lead to increased competition and capital flight. Similar to trade freedom, financial

freedom should be balanced with proper regulation. While promoting financial freedom is essential, it is important to maintain regulatory oversight to ensure investors confidence and reduce potential financial instability. Countries should also re-evaluate their public spending on education, as current funding may not be aligned with sectors that attract private equity investors. Lastly, the negative impact of bank credit to the private sector indicates a substitution effect between banks and private equity firms. To address this, countries should focus on balancing the financial sector by promoting alternative sources of finance, such as private equity.

## 5.2. Divestments

The random-effects regression model shows significant relationships between the dependent variable Divestments and several independent variables:

- Trade openness, Percent urban population, Bank credit to the private sector, Public spending on education - total public spending, Stock price volatility ( $p < 0.01$ );
- Labor freedom index, Labor force, Mobile phone subscribers ( $p < 0.05$ );
- Inflation ( $p < 0.1$ ).

The model is overall significant (Wald  $\chi^2 = 331.8$ ;  $P = 0$ ).

Variables: Trade openness, Percent urban population, Labor force, Mobile phone subscribers and Bank credit to the private sector have a positive effect on Divestments. In addressing divestments, we assume that countries aim to reduce their levels to enhance investor retention. Our analysis reveals that trade openness positively affects divestments, suggesting that a more open economy and relaxed regulations facilitate exits from investments. Consequently, countries seeking to decrease divestments should manage trade liberalization carefully. This recommendation aligns with our findings on the negative impact of trade openness on private equity investments. Improving urban living conditions and the labor force quality are also crucial, as they contribute to a more stable and attractive environment for private equity. While bank credit to the private sector positively influences divestments, indicating competitive financial sector conditions, it reinforces the need for a balanced financial system. However, it is important to limit intervention in order to avoid disrupting the self-regulating mechanisms of the markets. The positive effect of mobile phone subscribers on divestments is somewhat counterintuitive, given that technological advancement and higher living standards typically enhance investment environments. This relationship may reflect that in societies with advanced technology and high living standards, there are more exit options available for private equity investors, thereby facilitating divestments.

Variables: Inflation, Labor freedom index, Public spending on education (total public spending) and Stock price volatility have a negative effect on Divestments. Maintaining inflation at moderate levels is crucial, considering its impact on both investments and divestments. Improving labor freedom, as well as market flexibility and efficiency could encourage investors to maintain their positions longer. Public spending on education negatively impacts both investments and divestments, suggesting a need to reassess

government policies and resource allocation in this area. Additionally, high stock price volatility introduces risks for private equity investors by complicating asset valuation. Therefore, it would be beneficial for public policies to focus on stabilizing the stock market and create a more predictable investment environment.

### 5.3. Fundraising

This fixed-effects regression model indicates that certain variables have significant effects on the dependent variable Fundraising:

- Investments, Divestments, Inflation, Trade openness, Bank credit to the private sector ( $p < 0.01$ );
- Fiscal freedom index, Percent urban population, Uneven economic development index, Labor force ( $p < 0.05$ );
- GDP rate, Political stability index, Business freedom index, Public spending on education - total public spending ( $p < 0.1$ ).

The model is overall significant ( $F=11.92$ ,  $P=0$ ).

Variables: Divestments, Trade openness, Percent urban population, Uneven economic development index and Bank credit to the private sector have a positive effect on Fundraising. Countries aiming to attract private equity funds should integrate into the global economy, but avoid full deregulation, considering the previous findings on the impact of trade openness on investments and divestments. A higher urban population percentage often correlates with better infrastructure, higher economic activity, and a more skilled workforce. However, focusing on both the percentage and the quality of urban living is essential for sustaining private equity activity. The positive effect of bank credit to the private sector on fundraising, coupled with its negative effect on investments, suggests a natural market mechanism that should be supported rather than disrupted by government policies. Additionally, the positive impact of the uneven economic development index indicates potential untapped opportunities in various regions. Governments could enhance the investment climate in these areas to foster a more balanced and inclusive economic development.

Variables: Investments, GDP rate, Inflation, Political stability index, Fiscal freedom index, Business freedom index, Labor force and Public spending on education (total public spending) have a negative effect on Fundraising. To boost private equity fundraising, countries should focus on stabilizing economic conditions, including economic growth, inflation, and labor market conditions. Enhancing fiscal and business freedom, along with ensuring political stability, can also attract new capital. Public spending on education (total public spending) affects fundraising as well as investments and divestments, indicating the need for adjustments in government asset allocation and/or the distribution of educational funds.

## 6. Conclusion

This paper offers a comprehensive analysis of the determinants influencing private equity activity across Europe, addressing a significant gap in the existing literature. By incorporating 46 variables, including both established and novel factors, and utilizing advanced methodologies such as Bayesian Model Averaging (BMA) and panel data analysis, we provide new insights into the dynamics of PE investments, fundraising and divestments.

Our study highlights the critical role of economic indicators such as GDP growth rate and trade openness; financial factors such as the amount of bank credit extended to private sector and stock market capitalization; factors representing life quality such as urban population and the use of technology; factors representing quality of institutions such as political stability and corruption perception index; as well as indicators of economic freedom such as trade freedom and financial freedom, and indicators of globalization such as economic globalization. These findings point out the multifaceted nature of private equity activity and underscore the importance of considering a wide range of factors from various domains.

The decline in private equity and venture capital activity in Europe in recent years, as observed in 2023, underscores the importance of understanding the variables that drive these investments. By identifying and prioritizing factors that influence PE activity, our research not only contributes to a more holistic view of the industry but also provides actionable recommendations for countries seeking to rejuvenate their private equity sectors. Our use of panel data analysis for strategic policy recommendations marks a significant step in connecting theoretical and practical aspects of private equity research.

Overall, this study paves the way for future research by filling gaps in the literature and offering a robust framework for analyzing private equity activity. The insights gained from our analysis can guide policymakers in making informed decisions to foster a more dynamic and resilient private equity landscape across Europe.

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## Appendix

**Table 1. List of independent variables**

Economic	Finance and Capital Markets	Quality of institutions	Economic Freedom	Life quality	Globalization
Economic growth: the rate of change of real GDP	Interest rate	Rule of law index (-2.5 weak; 2.5 strong)	Economic freedom, overall index (0-100)	Internet users, percent of population	Globalization index (0-100)
Inflation	Bank credit to the private sector, percent of GDP	Government effectiveness index (-2.5 weak; 2.5 strong)	Fiscal freedom index (0-100)	Mobile phone subscribers, per 100 people	Economic globalization index (0-100)
Labor force, million people	Bank assets, percent of GDP	Control of corruption (-2.5 weak; 2.5 strong)	Business freedom index (0-100)	Uneven economic development index, 0 (low) - 10 (high)	Political globalization index (0-100)

Unemployment rate	Stock market capitalization, percent of GDP	Regulatory quality index (-2.5 weak; 2.5 strong)	Labor freedom index (0-100)	Human flight and brain drain index, 0 (low) - 10 (high)	Social globalization index (0-100)
R&D expenditure, percent of GDP	Stock market return, percent	Voice and accountability index (-2.5 weak; 2.5 strong)	Monetary freedom index (0-100)	Human rights and rule of law index, 0 (high) - 10 (low)	Trade openness: exports plus imports as percent of GDP
Patent applications by residents	Stock price volatility, percent	Political stability index (-2.5 weak; 2.5 strong)	Trade freedom index (0-100)	Percent urban population	
		Corruption Perceptions Index (100 = no corruption)	Investment freedom index (0-100)	Public spending on education, percent of GDP	
			Financial freedom index (0-100)	Public spending on education, percent of public spending	
			Freedom from corruption index (0-100)	Human Development Index	
			Property rights index (0-100)		

**Table 2. List of all variables with labels**

Invetments, Divestments	
Variable	Label
Investments	INV
Fundraising	FUND
Divestments	DIV
GDP rate	GDP_G
Inflation	INF_R
Interest rates	IR
Trade openness	T_OP
Rule of law index	RL_I
Government effectiveness index	GE_I
Control of corruption	CCOR_I
Regulatory quality index	RQ_I
Voice and accountability index	VA_I



Political stability index	PS_I
Property rights index	PR_I
Freedom from corruption index	FCOR_I
Fiscal freedom index	FF_I
Business freedom index	BF_I
Labor freedom index	LF_I
Monetary freedom index	MF_I
Trade freedom index	TF_I
Investment freedom index	IF_I
Financial freedom index	FINF_I
Economic freedom overall index	ECF_OI
Percent urban population	URB_POP
Uneven economic development index	UNED_I
Human flight and brain drain index	HFBD_I
Human rights and rule of law index	HRRL_I
Labor force	LAB_F
Unemployment rate	UNE_R
Mobile phone subscribers	MOB_PH
Internet users	INT_US
Market capitalization/GDP	SM_CAP
Corruption perceptions index	CORP_I
Bank credit of the private sector	BANK_C
Research and development	RDE
Globalization index	GLOB_I
Economic globalization index	EG_I
Political globalization index	PG_I
Social globalization index	SG_I
Human development index	HD_I
Bank assets	BANK_A
Public spending on education (total public spending)	PS_ED2
Patent applications by residents	PAT
Public spending on education (% of GDP)	PS_ED1
Stock market return	SM_RET
Stock price volatility	SP_VOL
Austria	Dummy_1_Aus
Belgium	Dummy_2_Bel
Bulgaria	Dummy_3_Bul
Czechia	Dummy_4_Cze
Denmark	Dummy_5_Den
Estonia	Dummy_6_Est
Finland	Dummy_7_Fin
France	Dummy_8_Fra
Germany	Dummy_9_Ger

Greece	Dummy_10_Gre
Hungary	Dummy_11_Hun
Ireland	Dummy_12_Ire
Italy	Dummy_13_Ita
Latvia	Dummy_14_Lat
Lithuania	Dummy_15_Lit
Luxembourg	Dummy_16_Lux
Netherlands	Dummy_17_Net
Norway	Dummy_18_Nor
Poland	Dummy_19_Pol
Portugal	Dummy_20_Por
Romania	Dummy_21_Rom
Spain	Dummy_22_Spa
Sweden	Dummy_23_Swe
Switzerland	Dummy_24_Swi
Ukraine	Dummy_25_Ukr
United Kingdom	Dummy_26_UnK

Fundraising	
Variable	Label
Investments	INV
Fundraising	FUND
Divestments	DIV
GDP rate	GDP_G
Inflation	INF_R
Interest rates	IR
Trade openness	T_OP
Rule of law index	RL_I
Government effectiveness index	GE_I
Control of corruption	CCOR_I
Regulatory quality index	RQ_I
Voice and accountability index	VA_I
Political stability index	PS_I
Property rights index	PR_I
Freedom from corruption index	FCOR_I
Fiscal freedom index	FF_I
Business freedom index	BF_I
Labor freedom index	LF_I
Monetary freedom index	MF_I
Trade freedom index	TF_I
Investment freedom index	IF_I

Financial freedom index	FINF_I
Economic freedom overall index	ECF_OI
Percent urban population	URB_POP
Uneven economic development index	UNED_I
Human flight and brain drain index	HFBD_I
Human rights and rule of law index	HRRL_I
Labor force	LAB_F
Unemployment rate	UNE_R
Mobile phone subscribers	MOB_PH
Internet users	INT_US
Market capitalization/GDP	SM_CAP
Corruption perceptions index	CORP_I
Bank credit of he private sector	BANK_C
Research and development	RDE
Globalization index	GLOB_I
Economic globalization index	EG_I
Political globalization index	PG_I
Social globalization index	SG_I
Human development index	HD_I
Bank assets	BANK_A
Public spending on education (total public spending)	PS_ED2
Patent applications by residents	PAT
Public spending on education (% of GDP)	PS_ED1
Stock market return	SM_RET
Stock price volatility	SP_VOL
Austria	Dummy_1_Aus
Belgium	Dummy_2_Bel
Bulgaria	Dummy_3_Bul
Czechia	Dummy_4_Cze
Denmark	Dummy_5_Den
Finland	Dummy_6_Fin
France	Dummy_7_Fra
Germany	Dummy_8_Ger
Greece	Dummy_9_Gre
Hungary	Dummy_10_Hun
Ireland	Dummy_11_Ire
Italy	Dummy_12_Ita
Luxembourg	Dummy_13_Lux
Netherlands	Dummy_14_Net
Norway	Dummy_15_Nor
Poland	Dummy_16_Pol
Portugal	Dummy_17_Por

Romania	Dummy_18_Rom
Spain	Dummy_19_Spa
Sweden	Dummy_20_Swe
Switzerland	Dummy_21_Swi
Ukraine	Dummy_22_Ukr
United Kingdom	Dummy_23_UnK

**Table 3. Descriptive statistics**

Investments, Divestments

Variable	Obs	Mean	Std. Dev.	Min	Max
Investments	416	0.3616	0.3692	0.0000	2.8317
Divestments	416	0.1756	0.2210	0.0000	2.4910
GDP rate	416	1.5100	4.2762	-29.1000	24.3700
Inflation	416	2.8555	4.2552	-4.5000	48.7000
Interest rates	416	4.5065	3.6377	-0.3583	21.8229
Trade openness	416	115.1649	59.9086	45.4200	393.5000
Rule of law index	416	1.1520	0.7202	-0.9200	2.1200
Government effectiveness index	416	1.1108	0.7071	-0.8700	2.3500
Control of corruption	416	1.0857	0.9092	-1.1800	2.4400
Regulatory quality index	416	1.2077	0.5516	-0.6200	2.0400

Variable	Obs	Mean	Std. Dev.	Min	Max
Voice and accountability index	416	1.1235	0.4240	-0.3200	1.7700
Political stability index	416	0.6724	0.5419	-2.0200	1.5100
Property rights index	416	74.4135	18.4295	20.0000	100.0000
Freedom from corruption index	416	66.8606	20.0082	22.0000	100.0000
Fiscal freedom index	416	66.0938	15.7883	23.0000	99.0000
Business freedom index	416	78.9327	10.6967	39.0000	100.0000
Labor freedom index	416	61.2933	12.9403	31.0000	100.0000
Monetary freedom index	416	80.4476	5.0199	47.4000	91.7000
Trade freedom index	416	85.9303	2.7132	71.0000	90.0000
Investment freedom index	416	76.9591	14.7247	15.0000	95.0000
Financial freedom index	416	68.8221	13.2740	30.0000	90.0000
Economic freedom overall index	416	70.1346	7.1965	46.0000	84.0000
Percent urban population	416	74.8165	10.7451	53.4400	98.1500
Uneven economic development index	416	3.3618	1.4116	0.5000	7.0000
Human flight and brain drain index	416	2.9889	1.4578	0.6000	7.5000
Human rights and rule of law index	416	2.3517	1.3141	0.3000	6.6000
Labor force	416	10.3621	11.5210	0.2200	44.4300
Unemployment rate	416	7.8617	4.3217	2.0100	27.4700
Mobile phone subscribers	416	123.3174	14.3550	90.2600	172.1500
Internet users	416	77.1410	16.4381	6.5500	99.0000
Market capitalization/GDP	416	62.2077	60.2667	1.5660	392.3570
Corruption perceptions index	416	65.7171	17.7112	22.0000	94.0000
Bank credit of he private sector	416	89.1227	40.1332	17.6200	201.2600
Research and development	416	1.6729	0.8854	0.0000	3.7340
Globalization index	416	84.3078	4.5454	69.4700	91.3100
Economic globalization index	416	79.1038	6.8391	57.3700	91.7900
Political globalization index	416	90.2134	7.6826	64.1800	98.5900
Social globalization index	416	83.6300	5.4243	64.3400	92.2700
Human development index	416	0.8790	0.0489	0.7270	0.9620
Bank assets	416	102.6643	39.8672	30.4400	219.0800
Public spending on education (total public spending)	416	11.4387	2.0596	7.1100	17.0100
Patent applications by residents	416	4,328.32	9,027.11	15.00	49,240.00
Public spending on education (% of GDP)	416	5.1787	1.0945	2.8200	8.5600
Stock market return	416	3.4432	18.6922	-62.6400	72.5900
Stock price volatility	416	21.0501	7.3846	6.7600	51.0800

## Fundraising

Variable	Obs	Mean	Std. Dev.	Min	Max
Investments	368	0.3696	0.3524	0.0046	2.8317
Fundraising	368	0.3808	1.0022	0.0005	9.7499
Divestments	368	0.1909	0.2292	0.0002	2.4910
GDP rate	368	1.4516	4.1206	-29.1000	24.3700
Inflation	368	2.7024	4.1209	-4.5000	48.7000
Interest rates	368	4.7259	3.7873	-0.3583	21.8229
Trade openness	368	112.3520	62.7257	45.4200	393.5000
Rule of law index	368	1.1733	0.7597	-0.9200	2.1200
Government effectiveness index	368	1.1339	0.7453	-0.8700	2.3500
Control of corruption	368	1.1348	0.9433	-1.1800	2.4400
Regulatory quality index	368	1.2049	0.5807	-0.6200	2.0400
Voice and accountability index	368	1.1428	0.4443	-0.3200	1.7700
Political stability index	368	0.6784	0.5732	-2.0200	1.5100
Property rights index	368	74.9810	18.7778	20.0000	100.0000
Freedom from corruption index	368	68.0136	20.5123	22.0000	100.0000
Fiscal freedom index	368	63.6957	15.1458	23.0000	99.0000
Business freedom index	368	78.9538	11.2790	39.0000	100.0000
Labor freedom index	368	61.3125	13.5435	31.0000	100.0000
Monetary freedom index	368	80.5272	5.0457	47.4000	91.7000
Trade freedom index	368	85.8723	2.7705	71.0000	90.0000
Investment freedom index	368	76.2908	15.3090	15.0000	95.0000
Financial freedom index	368	68.5870	13.5382	30.0000	90.0000
Economic freedom overall index	368	69.7147	7.4202	46.0000	84.0000
Percent urban population	368	75.7072	11.1177	53.4400	98.1500
Uneven economic development index	368	3.2057	1.3703	0.5000	7.0000
Human flight and brain drain index	368	2.7864	1.4181	0.6000	7.5000
Human rights and rule of law index	368	2.2986	1.3657	0.3000	6.6000
Labor force	368	11.5742	11.7181	0.2200	44.4300
Unemployment rate	368	7.6754	4.3320	2.0100	27.4700
Mobile phone subscribers	368	121.9286	13.4240	90.2600	172.1500
Internet users	368	77.1771	17.0593	6.5500	99.0000
Market capitalization/GDP	368	69.1073	60.7420	3.3734	392.3570
Corruption perceptions index	368	66.5633	18.3971	22.0000	94.0000
Bank credit of the private sector	368	92.8720	40.5352	17.6200	201.2600
Research and development	368	1.7511	0.8978	0.0000	3.7340
Globalization index	368	84.9335	4.3061	69.4700	91.3100

Variable	Obs	Mean	Std. Dev.	Min	Max
Economic globalization index	368	78.8755	7.0928	57.3700	91.7900
Political globalization index	368	92.0933	5.5791	70.6600	98.5900
Social globalization index	368	83.8477	5.6351	64.3400	92.2700
Human development index	368	0.8823	0.0504	0.7270	0.9620
Bank assets	368	107.3401	39.3488	30.4400	219.0800
Public spending on education (total public spending)	368	11.0435	1.7962	7.1100	15.6500
Patent applications by residents	368	4,846.26	9,469.82	15.00	49,240.00
Public spending on education (% of GDP)	368	5.2025	1.1390	2.8200	8.5600
Stock market return	368	2.8235	17.8878	-62.6400	59.0300
Stock price volatility	368	21.6301	7.2603	8.8600	51.0800

**Table 4. BMA results - Selected variables**

Variable	Obr.	Investment	Divestments
Investments	INV		
Fundraising	FUND		
Divestments	DIV		
GDP rate	GDP_G	X	
Inflation	INF_R		
Interest rates	IR		
Trade openness	T_OP	X	
Rule of law index	RL_I		
Government effectiveness index	GE_I		
Control of corruption	CCOR_I		
Regulatory quality index	RQ_I		
Voice and accountability index	VA_I		
Political stability index	PS_I		
Property rights index	PR_I		

Freedom from corruption index	FCOR_I		X
Fiscal freedom index	FF_I		
Business freedom index	BF_I		
Labor freedom index	LF_I		
Monetary freedom index	MF_I		
Trade freedom index	TF_I	X	
Investment freedom index	IF_I		
Financial freedom index	FINF_I	X	X
Economic freedom overall index	ECF_OI		X
Percent urban population	URB_POP		X
Uneven economic development index	UNED_I		
Human flight and brain drain index	HFBD_I		
Human rights and rule of law index	HRRL_I	X	
Labor force	LAB_F		
Unemployment rate	UNE_R		
Mobile phone subscribers	MOB_PH	X	
Internet users	INT_US		
Market capitalization gdp	SM_CAP		
Corruption perceptions index	CORP_I	X	
Bank credit of he private sector	BANK_C	X	
Research and development	RDE		
Globalization index	GLOB_I	X	
Economic globalization index	EG_I	X	
Political globalization index	PG_I	X	
Social globalization index	SG_I		
Human development index	HD_I	X	
Bank assets	BANK_A		
Public spending on education (total public spending)	PS_ED2		
Patent applications by residents	PAT		
Public spending on education (as a percentage of gdp)	PS_ED1		
Stock market return	SM_RET		
Stock price volatility	SP_VOL		X
Austria	Dummy_1_Aus		
Belgium	Dummy_2_Bel	X	
Bulgaria	Dummy_3_Bul	X	
Czechia	Dummy_4_Cze	X	
Denmark	Dummy_5_Den	X	
Estonia	Dummy_6_Est	X	
Finland	Dummy_7_Fin		
France	Dummy_8_Fra	X	
Germany	Dummy_9_Ger		
Greece	Dummy_10_Gre		
Hungary	Dummy_11_Hun	X	
Ireland	Dummy_12_Ire	X	
Italy	Dummy_13_Ita		
Latvia	Dummy_14_Lat		
Lithuania	Dummy_15_Lit	X	
Luxembourg	Dummy_16_Lux	X	X
Netherlands	Dummy_17_Net	X	
Norway	Dummy_18_Nor		
Poland	Dummy_19_Pol		
Portugal	Dummy_20_Por		



Romania	Dummy_21_Rom		
Spain	Dummy_22_Spa	X	
Sweden	Dummy_23_Swe	X	
Switzerland	Dummy_24_Swi	X	
Ukraine	Dummy_25_Ukr		
United Kingdom	Dummy_26_UnK	X	X

Note: The summary of the BMA results for the two target variables, Investments & Divestments are presented in this table. Variables with a PIP higher than 0.8 are marked X.

Variable	Obr.	Fundraising
Investments	INV	X
Fundraising	FUND	
Divestments	DIV	
GDP rate	GDP_G	
Inflation	INF_R	X
Interest rates	IR	X
Trade openness	T_OP	X
Rule of law index	RL_I	
Government effectiveness index	GE_I	X
Control of corruption	CCOR_I	
Regulatory quality index	RQ_I	
Voice and accountability index	VA_I	
Political stability index	PS_I	
Property rights index	PR_I	
Freedom from corruption index	FCOR_I	
Fiscal freedom index	FF_I	
Business freedom index	BF_I	
Labor freedom index	LF_I	
Monetary freedom index	MF_I	
Trade freedom index	TF_I	
Investment freedom index	IF_I	
Financial freedom index	FINF_I	
Economic freedom overall index	ECF_OI	
Percent urban population	URB_POP	X
Uneven economic development index	UNED_I	
Human flight and brain drain index	HFBD_I	
Human rights and rule of law index	HRRL_I	
Labor force	LAB_F	
Unemployment rate	UNE_R	
Mobile phone subscribers	MOB_PH	
Internet users	INT_US	
Market capitalization gdp	SM_CAP	
Corruption perceptions index	CORP_I	
Bank credit of he private sector	BANK_C	X
Research and development	RDE	
Globalization index	GLOB_I	
Economic globalization index	EG_I	
Political globalization index	PG_I	X
Social globalization index	SG_I	X

Human development index	HD_I	X
Bank assets	BANK_A	
Public spending on education (total public spending)	PS_ED2	
Patent applications by residents	PAT	
Public spending on education (as a percentage of gdp)	PS_ED1	
Stock market return	SM_RET	
Stock price volatility	SP_VOL	
Austria	Dummy_1_Aus	X
Belgium	Dummy_2_Bel	
Bulgaria	Dummy_3_Bul	X
Czechia	Dummy_4_Cze	X
Denmark	Dummy_5_Den	X
Finland	Dummy_6_Fin	
France	Dummy_7_Fra	
Germany	Dummy_8_Ger	
Greece	Dummy_9_Gre	
Hungary	Dummy_10_Hun	
Ireland	Dummy_11_Ire	
Italy	Dummy_12_Ita	
Luxembourg	Dummy_13_Lux	
Netherlands	Dummy_14_Net	
Norway	Dummy_15_Nor	
Poland	Dummy_16_Pol	
Portugal	Dummy_17_Por	
Romania	Dummy_18_Rom	
Spain	Dummy_19_Spa	
Sweden	Dummy_20_Swe	
Switzerland	Dummy_21_Swi	
Ukraine	Dummy_22_Ukr	
United Kingdom	Dummy_23_UnK	

Note: The summary of the BMA results for the target variables Fundraising are presented in this table. Variables with a PIP higher than 0.8 are marked X.

**Table 5. BMA results – Investments**

Variable	PIP	EV	SD	model 1	model 2	model 3	model 4	model 5
Intercept	100	3.433	0.943	3.498	3.579	4.173	3.402	3.363
T_OP	100	-0.008	0.001	-0.008	-0.008	-0.007	-0.008	-0.008
EG_I	100	0.057	0.014	0.060	0.059	0.059	0.057	0.059
Dummy_6_Est	100	0.680	0.127	0.691	0.722	0.670	0.717	0.682
Dummy_16_Lux	100	2.569	0.378	2.677	2.644	2.539	2.630	2.674
Dummy_26_UnK	100	0.663	0.120	0.686	0.699	0.702	0.692	0.678
GDP_G	98.4	0.010	0.003	0.011	0.011	0.010	0.011	0.011
TF_I	98.4	-0.022	0.007	-0.020	-0.022	-0.027	-0.021	-0.018
Dummy_17_Net	97.9	0.755	0.175	0.804	0.798	0.792	0.760	0.780
FINF_I	96	-0.010	0.003	-0.011	-0.010	-0.011	-0.010	-0.011
CORP_I	96	0.012	0.004	0.013	0.015	0.014	0.011	0.010
GLOB_I	96	-0.130	0.039	-0.140	-0.133	-0.138	-0.124	-0.135
Dummy_2_Bel	96	0.593	0.165	0.645	0.609	0.627	0.608	0.651
Dummy_3_Bul	96	0.353	0.109	0.387	0.354	0.359	0.339	0.383

Dummy_4_Cze	96	0.603	0.157	0.631	0.648	0.619	0.657	0.633
Dummy_5_Den	96	0.543	0.144	0.585	0.560	0.570	0.564	0.593
Dummy_8_Fra	96	0.333	0.112	0.365	0.358	0.341	0.355	0.365
Dummy_11_Hun	96	0.801	0.202	0.861	0.868	0.827	0.856	0.852
Dummy_12_Ire	96	0.782	0.201	0.837	0.838	0.787	0.828	0.831
Dummy_15_Lit	96	0.462	0.134	0.481	0.482	0.461	0.475	0.477
Dummy_22_Spa	96	0.295	0.102	0.309	0.310	0.326	0.322	0.316
Dummy_23_Swe	96	0.421	0.115	0.454	0.434	0.451	0.423	0.451
Dummy_24_Swi	96	0.544	0.144	0.589	0.572	0.567	0.562	0.586
PG_I	94.4	0.034	0.012	0.037	0.036	0.036	0.032	0.035
HD_I	94.4	2.610	1.056	2.811	2.742	2.555	2.499	2.659
BANK_C	93	-0.002	0.001	-0.002	-0.002	-0.002	-0.002	-0.002
HRRL_I	85.7	-0.063	0.034	-0.070	-0.083	-0.058	-0.078	-0.064
MOB_PH	84.6	0.003	0.002	0.004	0.003	0.004	0.003	0.004
INF_R	77	0.008	0.006	0.010	0.012	.	0.011	0.010
PR_I	33.1	-0.002	0.002	.	-0.004	.	-0.005	.
FCOR_I	25	0.001	0.003	.	.	.	0.005	0.003

Note: The BMA results for the target variable, Investments, are presented in this table.  
Variables with a PIP higher than 0.8 are highlighted in gray.

**Table 6. BMA results – Divestments**

Variable	PIP	EV	SD	model 1	model 2	model 3	model 4	model 5
Intercept	100	0.116	0.309	0.194	0.227	0.326	0.340	0.231
Dummy_16_Lux	100	0.511	0.072	0.516	0.513	0.543	0.508	0.526
URB_POP	98.3	0.005	0.002	0.006	0.006	0.003	0.003	0.005
SP_VOL	97.8	-0.005	0.002	-0.005	-0.006	-0.005	-0.005	-0.005
FCOR_I	92.9	0.004	0.001	0.004	0.005	0.004	0.004	0.004
Dummy_26_UnK	88	0.118	0.061	0.126	0.121	0.141	0.123	0.130
ECF_OI	85.2	-0.011	0.006	-0.013	-0.013	-0.012	-0.012	-0.012
FINF_I	82.5	0.003	0.002	0.004	0.004	0.004	0.004	0.004
INV	66.9	-0.050	0.042	-0.078	-0.078	-0.066	.	-0.073
Dummy_2_Bel	56.3	-0.077	0.079	-0.135	-0.142	.	.	-0.115
SM_RET	55	0.001	0.001	0.001	.	0.001	0.001	0.001
Dummy_21_Rom	50	0.063	0.073	0.126	0.126	.	.	.
Dummy_23_Swe	32.8	0.038	0.062	.	.	.	.	.
Dummy_8_Fra	20.6	0.027	0.058	.	.	.	.	.

HD_I	16.8	0.104	0.268	.	.	.	.	.
T_OP	8.2	0.000	0.000	.	.	.	.	.
INF_R	7.6	0.000	0.001	.	.	.	.	.
BANK_C	3.9	0.000	0.000	.	.	.	.	.
VA_I	3.4	0.003	0.015	.	.	.	.	.
PG_I	2.3	0.000	0.000	.	.	.	.	.
SG_I	1.2	0.000	0.001	.	.	.	.	.
Dummy_25_Ukr	0.8	0.000	0.007	.	.	.	.	.
EG_I	0.6	0.000	0.000	.	.	.	.	.
Dummy_14_Lat	0.6	0.000	0.005	.	.	.	.	.
MOB_PH	0.5	0.000	0.000	.	.	.	.	.
SM_CAP	0.5	0.000	0.000	.	.	.	.	.
GLOB_I	0.5	0.000	0.000	.	.	.	.	.
Dummy_11_Hun	0.5	0.000	0.003	.	.	.	.	.
Dummy_22_Spa	0.5	0.000	0.005	.	.	.	.	.
Dummy_3_Bul	0.2	0.000	0.002	.	.	.	.	.
Dummy_4_Cze	0	0.000	0.000	.	.	.	.	.

Note: The BMA results for the target variable, Divestments, are presented in this table.  
Variables with a PIP higher than 0.8 are highlighted in gray.

**Table 7. BMA results – Fundraising**

Variable	PIP	EV	SD	model 1	model 2	model 3
Intercept	100	-4.725	1.621	-4.586	-5.640	-4.256
INV	100	-0.390	0.088	-0.392	-0.365	-0.417
IR	100	0.077	0.017	0.080	0.068	0.069
T_OP	100	0.023	0.001	0.023	0.024	0.023
GE_I	100	0.676	0.176	0.683	0.601	0.758
URB_POP	100	0.050	0.006	0.049	0.054	0.049
BANK_C	100	0.010	0.001	0.010	0.010	0.010
PG_I	100	-0.041	0.012	-0.040	-0.044	-0.040
SG_I	100	-0.136	0.018	-0.134	-0.145	-0.129
HD_I	100	12.357	1.951	12.300	12.960	11.710
Dummy_1_Aus	100	2.873	0.296	2.821	3.201	2.724
Dummy_3_Bul	100	2.334	0.355	2.298	2.515	2.315
Dummy_4_Cze	100	1.441	0.231	1.400	1.684	1.345
Dummy_5_Den	100	1.086	0.199	1.106	1.018	1.037

Dummy_6_Fin	100	2.403	0.194	2.413	2.398	2.321
Dummy_7_Fra	100	3.452	0.213	3.424	3.623	3.381
Dummy_8_Ger	100	2.484	0.165	2.476	2.553	2.426
Dummy_9_Gre	100	3.015	0.277	2.988	3.166	2.977
Dummy_10_Hun	100	1.677	0.286	1.644	1.873	1.606
Dummy_12_Ita	100	3.713	0.291	3.676	3.916	3.673
Dummy_15_Nor	100	2.309	0.206	2.308	2.369	2.205
Dummy_16_Pol	100	3.193	0.329	3.139	3.520	3.067
Dummy_17_Por	100	2.812	0.247	2.779	2.999	2.762
Dummy_18_Rom	100	4.455	0.427	4.396	4.770	4.399
Dummy_19_Spa	100	2.630	0.234	2.598	2.833	2.537
Dummy_20_Swe	100	2.194	0.178	2.200	2.197	2.126
Dummy_21_Swi	100	1.471	0.220	1.437	1.686	1.368
Dummy_22_Ukr	100	2.773	0.545	2.688	3.273	2.594
Dummy_23_UnK	100	3.170	0.208	3.171	3.205	3.089
INF_R	91.8	-0.021	0.009	-0.022	-0.025	.
BF_I	84.2	-0.014	0.008	-0.016	.	-0.018

Note: The BMA results for the target variable, Fundraising, are presented in this table.  
Variables with a PIP higher than 0.8 are highlighted in gray.

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