



## The European Venture Capital and Private Equity country attractiveness indices

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### ABSTRACT

We calculate composite indices to compare the attractiveness of 27 European countries for institutional investments into the Venture Capital and Private Equity asset class. To achieve this we use 42 different parameters, and propose an aggregation structure that allows for benchmarking on more granulated levels. The United Kingdom leads our ranking, followed by Ireland, Denmark, Sweden, and Norway. While Germany is slightly above the average European attractiveness level, the scores are rather disappointing for France, Italy, Spain, and Greece. Our analyses reveal that while the UK is similar to the other European countries with respect to many criteria, there are two major differences, which ultimately affect its attractiveness: its investor protection and corporate governance rules, and the size and liquidity of its capital market. The state of the capital market is likewise a proxy for the professionalism of the financial community, for deal flow and exit opportunities. We determine a reasonable correlation between our attractiveness index scores and actual Venture Capital and Private Equity fundraising activities and prove the robustness of our calculations. Our findings across all the European countries suggest that, while investor protection and capital markets are in fact very important determinants for attractiveness, there are numerous other criteria to consider.

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### 1. Introduction

Why is there such a strong market for Venture Capital (VC) and Private Equity (PE) in the United Kingdom or in the US? Conversely, why is there relatively little activity in Germany, the largest European economy, and why is activity close to zero in Greece or in some of the new European Union accession countries? Spatial variations in VC/PE activity result from numerous factors. In part, they can be explained by built-in bias mechanisms. The whole investment process from institutional investors (the Limited Partners, or LPs) to the ultimately funded companies is geographically biased: the largest, most prominent, and most active institutional investors in the VC/PE asset class are located in the US. This certainly contributes to the dominant role of the US Venture Capital and Private Equity market.

However, institutional investors everywhere allocate their capital via chains of agents and networks in certain regions, and among certain countries. Usually, there is a concentration in 'hotspots' or core economic centers. These hotspots evolve mainly for two reasons. First, there is a professional community to support transactions, and to promote the flow of capital. Second, there must be expectation for demand of the committed capital.

The last elements along the chain of agents are the Venture Capital and Private Equity funds (the General Partners, or GPs). They prefer spatial proximity to their investments to facilitate the transaction processes of monitoring and oversight. In fact, GPs often focus on a particular region, or even one single country when searching for corporations that deserve financial backing.

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Hence, the geographical source of VC/PE is generally not very distant from the demand. This built-in bias mechanism is intensified by the institutional investors' international allocation approaches. Diversification needs urge the LPs to commit capital to funds that cover a particular country or region. Therefore, LPs make a geographical selection of promising spots. The selection depends on their expectation of the demand for VC/PE, and on their evaluation of the host country's professional community.

In this paper, we address the international VC/PE allocation issue and propose a composite measure to compare the attractiveness of 27 European countries (the EU-25 with Estonia, Latvia and Lithuania grouped as "The Baltic States", plus Switzerland and Norway). We review the literature and search for parameters that determine both supply and demand for VC and PE in a country. The higher the quality score of given parameters, the more attractive a particular country is for institutional investors. We find 42 data series for our sample countries as proxies for these parameters and aggregate them into the "Venture Capital and Private Equity Country Attractiveness Index". In this first step, we combine all the 42 data series into one single index and develop an attractiveness ranking of the European countries. The index structure allows for benchmarking, and we report our results for the first-ranked, for the largest European, and for the last-ranked countries: namely, the United Kingdom, Germany, and Romania. Our analyses reveal that, while the European countries are similar with respect to many criteria, there are two major differences, which ultimately affect a country's attractiveness: the protection of investors and corporate governance, and the size and liquidity of its capital market (which is likewise a proxy for the professionalism of the financial community, for deal flow, and exit opportunities). In sensitivity analyses, we show that our index is robust with respect to different aggregation methods.

In a second approach, we control for the fact that some of the parameters are more meaningful for either of the two market segments, Venture Capital and Private Equity. Venture Capital is used to back young and start-up corporations in markets with high growth expectations. Private Equity finances changes of ownership in established businesses, often supported by debt finance. Hence, we calculate two more indices, one of them focused on VC, and one on PE only. Finally, as a further robustness check, we analyze whether our initially chosen 42 data parameters over-determine the index, and present a calculation where we discard parameters. This "tight index" version consists of 17 parameters only, and aims to improve the results in a statistical sense.

With the initially proposed index structure, its sensitivity analyses, and the three alternative index definitions, we show that there are five tier groups of attractiveness of European countries for VC and PE investments. The attractiveness ranking is robust to different aggregation methods, and to the deletion of individual data series. Some countries would change ranks within their tier group, especially when we focus on the individual VC and PE indices. However, there is hardly any transition across the tier groups. We also compare the indices from the sensitivity analyses and the tight index version with the actual VC and PE fundraising activities in the particular countries and reveal reasonable correlations of both figures. We achieve the highest correlation for the initially proposed "base-case" index structure consisting of 42 data series. This signals that, while investor protection, corporate governance, and the extent of liquid and secure capital markets are in fact very important determinants in assessing the attractiveness of a country for VC and PE investors, there are many more parameters to consider. Neglecting them can lead to inferior tracking results.

Our paper makes the following contributions: First, we provide a comprehensive discussion of the important parameters that determine the international allocation process of institutional investors in the VC and PE asset class. Second, we propose a composite measure, data sources, and the methodology to quantify how individual economies attract these investors. Third, we apply the suggested method, perform sensitivity analyses and robustness checks, and create a ranking for 24 European countries plus the Baltic States. Fourth, with these analyses, we are able to benchmark the individual countries with respect to detailed strengths and weaknesses, and to illustrate, explicitly for the United Kingdom, Germany and Romania. Fifth, we show that all of the included parameters are important; neglecting some of them reduces the tracking power of the index. Sixth, while there are many similarities among the European countries, we claim that the size and liquidity of their capital markets, and hence the professional environment, deal flow, and exit opportunities therein, finally distinguish their attractiveness.

The paper is structured as follows: We review the most important literature on the parameters for vibrant VC and PE markets, and discuss the relevant parameters for our index. Next, we explain the data and the technical background for our calculations. We verify the appropriateness of the sub-indicators included, and discuss different aggregation methods. Then we present the index results, interpret them, perform the sensitivity analyses and robustness checks, and determine tier groups regarding the attractiveness of the various economies for VC/PE investors. Finally, we measure the tracking power of our index, summarize this paper, and conclude.

## 2. Literature review

Much prior research discusses and analyzes the determinants of Venture Capital and Private Equity activity in national economies or regions. However, only some of the papers explicitly distinguish between the Venture Capital and Private Equity market segments. One can intuit whether the reported finding is more relevant for backing corporations in early stages or later stages of their lifetime. Some parameters have a stronger impact on young and start-up corporations, some of them more closely affect established businesses, while others are valid for all corporations and, hence, both market segments. In our literature review here initially, we do not differentiate between the two segments, but rather present all the relevant findings that should influence the institutional investors' allocation decisions. In a subsequent section of this paper, we separately focus on relevance for either the Venture Capital or the Private Equity segment, and briefly discuss the more important determinants in each market.

We present this review in six parts that concomitantly reflect the structure of our index, as we subsequently explain. Each heading represents one of six "key drivers" that we deem important, appropriate and quantifiable to determine the attractiveness of a country for institutional VC/PE investments. The following six parts collectively define a set of criteria we need to proxy with our index.

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