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Policy Brief on Venture Capital in Europe

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Financial and Institutional Reforms for Entrepreneurial Society (FIRES)

Policy brief on Venture Capital in Europe

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Abstract

In this policy brief we argue why the venture capital industry, as one of the critical channels for funding innovative entrepreneurial ventures, has failed to fully develop in the European Union (EU) to date and propose ways forwards. Vast previous research endeavors have been carried out to understand the antecedents of the laggardness, however, the focus has been rather limited and accounted almost exclusively for formal features of institutional environments, leaving the informal dimensions unexplored. Instead, we posit that informal institutions represent relevant determinants of VC activity in Europe, which sheds new light on the adopted policy approaches. Based on longitudinal country-level data on 18 European countries, we provide a comprehensive test of VC determinants that include the "usual suspects" embodied in *reformable formal institutions* (i.e. investors protection laws, taxation regulations, labour market regulations) as well as more structural formal (e.g. rule of law, government effectiveness, etc.) and informal institutions (i.e. social capital). We find that the levels of social capital, which is deeply embedded in and diverse across the EU countries, have significantly shaped the VC industry. Moreover, a large portion of the effect is reflected through the formation of structural formal institutions, which in turn affect VC activity themselves. In that setting, regulations such as investor protection laws and labour market regulations are found to have no tangible effect, and only taxation level is found to play a significant role for VC activity. These findings suggest EU governments are facing a profound challenge when trying to foster VC industry, as in majority of the countries the social structures, which are rooted and difficult to alter, are not supportive of it. Hence, we argue that support to alternative funding vehicles (e.g. government guaranteed bank loans) cannot be totally dismissed, at least in the short-run; while, in the medium term, policy's attention is needed to more recent funding methods (e.g. crowdfunding) that could prove themselves to represent successful new models of entrepreneurial finance if appropriately supported and/or (non-) regulated. On the constructive note, as VC is concerned and its development in Europe remains a key policy objective, our analysis recommends to focus on vertical tax incentives targeting equity investors and promising innovative startups which appear as the only reformable mechanisms in the short term capable of spurring VC activity in Europe.

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Introduction

Entrepreneurship has been documented to contribute to the real economy (Audretsch and Keilbach 2007), as new ventures are considered to be an engine of both the static and the dynamic efficiency of economic systems (e.g. Kirzner 1997; Schumpeter 1934). One of the critical aspects of entrepreneurial success is access to financial resources. However, innovative startups (particularly the high-tech ones) are capital constrained as they lack a track record of past success (and hence reputation and credibility), they often do not have tangible resources to use as collateral, and they typically face the so-called "Valley of Death" (Ghosh and Nanda 2010; Murphy and Edwards 2003). The information asymmetry and uncertainty tightly coupled with entrepreneurship represent extensive barriers for debt providers, which has led to the establishment of specialized financial intermediaries called Venture Capital (VC) firms, more capable to overcome the hurdles and more prone to provide these inherently risky investments (Hall and Lerner 2010).

Despite the proven importance of VC, there have been evident spatial variations in VC activity across the World (Groh et al. 2010; Jeng and Wells 2000). Surprisingly, continental European countries have shown relatively little activity (e.g. France, Italy, Spain), or even close to none (Greece, Poland, Czech Republic, Romania). Hence, we holistically test different institutional determinants of VC industry, and based on the results provide a viable explanation for the laggardness and possible short- and long-term remedies. We conduct the analysis on country-level data in the European context during 1997-2015 period.

The rest of the brief is organized as follows. We first explain the methodology and data used. We proceed with presenting and discussing the results, and conclude with recommendations for public policy.

Methodology

Our analysis is based on a longitudinal European cross-country dataset composed of information from multiple secondary sources. We focus on the 1997-2015 period, so that we can compare VC activity over a period that covers the years during which VC became "institutionalized" and gained significance in Europe (Da Rin et al. 2006; Li and Zahra 2012). Overall, we have an unbalanced panel dataset of 18 European countries that are extensively heterogeneous in financial market conditions, economic development, and technological opportunities, as well as in the levels of informal institutions development.[1]

The key variable measuring *VC activity* is sourced from the Invest Europe (former European Venture Capital Association), and it is constructed as an aggregate amount of total investments in the country in a given year. The variable includes the following three groups of investments: seed, start-up and expansion. We normalized the aggregate amount of VC investments per GDP to facilitate a valid comparison among the countries of various size classes.

Our main econometric approach is based on random effects generalized least squares (GLS). We test separately the effect of social capital variables, *structural formal institutions* and finally the *reformable formal institutions*. We then test the interaction effect between the former two, and estimate the full specification of the model with all the variables included. We run a plethora of robustness test to corroborate the findings.

[1] The countries included in the study are Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

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Results and discussion

The main results suggest social capital yields to be a significant determinant of VC activity. These findings are in line with those put forward by Bottazzi et al. (2016), who prove that trust is a critical feature of the environment for investments in general and for VC in particular, and Hain et al. (2016) who show how countries with high levels of trust attract more cross-border VC investments. We complement this view by providing evidence that not only trust but also the other features of social capital (social networks and civic norms) facilitate VC transactions.

Based on further analysis, *structural formal institutions* are found to have a significant positive impact on VC activity too, which corroborates the findings of Li and Zahra (2012), by verifying them also when one looks at the sole European context.

Thirdly, out of the three *reformable formal institutions*, only the level of taxations appears to be a significant determinant of VC activity in our sample. High tax rates (on capital gains, income and profits) negatively influence VC activity in Europe and represent a major obstacle for the development of the VC industry. This result confirms the findings of Da Rin et al. (2006) and Schroeder (2011) on similar samples of European countries. The result is not only significant in statistical but also economic terms. For instance, based on our estimates, *ceteris paribus*, decreasing the total taxation level from 50 to 40 per cent would lead a country to a stable 10.11 per cent more of VC activity in 15 years. Nevertheless, it is worth noting that the effect of the taxation level change is relatively lower than what would be the effect of changing the *structural formal institutions*. If the *structural formal institutions* were improved to the same degree as the taxation level in the example above (from 37th to 71st percentile in our sample), the VC surge after 5 years would be 8.96 per cent; after 10 years 18.72 per cent; and after 15 years 29.36 per cent. While the impact of the *structural formal institutions* on VC activity is, in principle, greater than the one exerted by the overall taxation level, changing the former is by far more demanding and uncertain than the latter. Furthermore, we do not find clear support for a significant effect of the rigidity of labour regulations on VC activity, similarly to Bedu and Montalban (2014), who reach the same conclusion while focusing on leveraged buyouts and not narrowly defined VC investments. Likewise, the impact of the minority investors protection is yields to be positive yet non-significant in our analysis, coherent with the results of Cumming et al. (2016) and Jeng and Wells (2000). While these two latter policy instruments seem to push the VC activity in the right direction, they do not appear to be capable of providing a strong effect in the EU context.

Finally, the relationship between social capital and VC activity is mediated by *structural formal institutions*. This finding provides a mechanism through which social capital impacts VC – social capital *per se* is not crucial for the volume of VC investment, but the fact that it determines the level of development of *structural formal institutions* makes it relevant as an indirect driver of VC activity. This finding highlights that even if social capital is 'in the back seat', its role cannot be neglected when VC activity is studied. In fact, it might be the main cause of the laggardness of the VC industry in the EU.

Our analysis yields additional findings. We confirm that exit markets play a significant role for VC activity. In particular, similarly to Félix et al. (2013), we find that rich M&A markets represent a substantial driver in Europe, where start-ups typically get acquired and IPO markets are not as vibrant. The results also confirm that the exogenous worldwide trends play a major role. The Internet bubble has brought more VC activity across the old continent, while the latest financial crisis has hindered the industry. Additionally, we find that GDP growth is positively correlated with VC activity, in line with the extant literature

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(e.g. Gompers and Lerner 1999; Ning et al. 2015).

Then, we also provide additional insights into the dynamics of VC industry. We first analyze the major subgroups of VC–investments in start-up and expansion phase of new ventures–separately. The findings are coherent with the results based on the aggregate measure of VC activity. However, there are a few differences worth remarking. First, neither the fiscal policy nor inflation rate appear to have an impact on the VC investments in the start-up stage, while the Scandinavian legal system seems to be favorable for these early stage investments. As for the VC investments in the expansion stage, the most notable difference is that the direct effect of social capital on the VC investment is not as significant. This could be possibly explained by the fact that later stage investments are done between professional and mature ventures with a track record of success and more tangible assets, meaning the information asymmetries are not as severe as in the initial rounds of funding and strong country-level social capital does not add much of value to it. Another interesting difference is that minority investor protection regulation appears to be a significant factor in the expansion phase. The later stage investments require higher capital commitment leading to higher risk, and investor protection regulation could be an effective formal mechanism to abate some portion of that hazard.

Recommendations

The findings of our study provide valuable insights to policy makers. First, policy makers should be mindful about the features of informal institutions within which they operate, as social capital can be an insurmountable impediment (but also a facilitator) for fostering smoother entrepreneurial finance dynamics in the long term. Moreover, our study offers neat evidence that the impact of social capital structures on VC is mainly channeled through their role in establishing those *structural formal institutions*, which are responsible for the development of the VC activity, If *structural formal institutions* might be relatively easier to change than social capital, at least in the mid-term, nonetheless the picture that emerges from our analysis is the one for which VC is mostly influenced by deeply rooted (formal and informal) institutional features which evolve slowly and are unlikely to change for the effect of a rapid 'Deus ex Machina' intervention.

The conceptual distinction between *structural* and *reformable* institutions is particularly relevant, as only the latter are in the short-run under governments' control and their change can be implemented more easily. In this respect, the only *reformable formal institution* that is found to exert a non-negligible effect is taxation regulation. While, reforms aiming at increasing flexibility in labour markets or raising investors' protection do not appear to provide an effective stimulus for the VC industry in Europe. This way, we provide scientific insights on the reasons behind the often documented difficulty to trigger and sustain a florid VC industry in most European countries, despite all the governmental efforts lavished over the years. By doing so, we draw two important implications.

On the one hand, informal and *structural formal institutions* do represent the most important drivers for VC and these are, at least in the short term, as "matter of facts" for policy makers. We believe that this awareness should lead European administrators to divert their exclusive attention to VC as the only possible best financial model for creating successful firms, and instead push them to monitor with increasing interest (and probably regulate appropriately) all those recent alternative financial mechanisms (e.g. crowdfunding, blockchain) that may revolutionize in the near future the way start-ups finance themselves and that might be more favorable to the European landscape

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than VC. For the same reason, it would also be equally advisable from the point of view of policy makers not to channel support to alternative and more traditional forms of financing (e.g.

On the other hand, our analysis also delivers prescriptive implications on which are the *reformable formal institutions* that have to be modified for effectively sustaining VC, at least in the short term. Of course, in this domain, cautious approach should also be recommended since if strong institutional complementarities are present, the same institutional change may perform differently in different institutional contexts. Having said that, our study provides a clear roadmap, by setting a sort of order of priorities for the European regulators. In fact, public policy measures such as fiscal policies (i.e. taxations) are shown to have a significant impact on VC activity, and regulators should bear that in mind when proposing new wide-ranging instruments. In any case, when the 'type of capitalism' or considerations on national budgets badly comply with a generalized reduction in taxation, our analysis suggests that also vertical ad-hoc policy interventions in this domain could be equally effective. For example, all those VC-specific policies which aim at removing tax obstacles for VCs across EU countries (see the recent EU Commission's initiative on the pan-European passport for VCs, EU Regulation No. 345/2013, which will be further amended and strengthened in the near future as prospected by the European Commission, see the relative plan of actions published in 2016) and offer specific tax deductions to selected typologies of equity investors and innovative investee start-ups (as embodied in many recent national Start-up Acts, for a review see the European Digital Forum 2016) should be particularly welcome, according to our analysis. Conversely, other (often more difficult to implement) reforms like those aiming at introducing flexibility in labour markets, whether of course could have additional purposes, do not appear to provide an effective stimulus for VC industry. In this picture, more targeted instruments, such as investor protection regulations, could also be important for specific segments (i.e. expansion VC), yet their overall impact appears to be limited in the European context.

Concluding remarks

Venture capital is widely argued to provide a solution to funding difficulties faced by young and innovative companies, the drivers of economic growth, yet what a suitable institutional environment for well-functioning VC industry is and how it can be adjusted, is still unclear. We provide a plausible argumentation and test it in a comprehensive framework. Based on the findings, we underline that when designing regulations targeting VC industry, policy makers should understand the embedded institutional features and complement them with appropriate instruments. In particular, any reform strategy will have to build on that foundation of present social structures in EU countries in order to be successful.

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