THE UNIVERSITY of EDINBURGH

Edinburgh Research Explorer

“Pennies from heaven”? Market failure, circuits of capital and policy support for business angels

Citation for published version:
Harrison, RT 2022, '“Pennies from heaven”? Market failure, circuits of capital and policy support for business angels: The case of cross-border angel investment', *Journal of Business Venturing Insights*, vol. 17, e00311. https://doi.org/10.1016/j.jbvi.2022.e00311

Digital Object Identifier (DOI):
10.1016/j.jbvi.2022.e00311

Link:
Link to publication record in Edinburgh Research Explorer

Document Version:
Publisher's PDF, also known as Version of record

Published In:
Journal of Business Venturing Insights

General rights
Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy
The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 25. Nov. 2022

Journal of Business Venturing Insights 17 (2022) e00311

Contents lists available at ScienceDirect

Journal of Business Venturing Insights

journal homepage: www.elsevier.com/locate/jbvi

“Pennies from heaven”? Market failure, circuits of capital and policy support for business angels: The case of cross-border angel investment

Richard T. Harrison

Professor Emeritus of Entrepreneurship and Innovation, University of Edinburgh Business School, University of Edinburgh, Edinburgh, Scotland, EH8 9JS, UK

A R T I C L E I N F O

Keywords:
Market failure
Circuits of capital
Angel finance
Venture capital
Economic development
Internationalisation
Policy mix

A B S T R A C T

Angel investment is widely associated with economic development through entrepreneurial activities, and has attracted the attention of policy makers internationally, nationally and regionally, resulting in a range of measures to support the development of the market. In this paper we challenge this policy orientation and identify three key flawed assumptions on which it rests: the presence of market failure in the early stage risk capital market, the complementarity of angel and other sources of early stage finance, and the integration between the angel and venture capital circuits of capital. We develop a framework for the identification of market failure as both a supply-side and a demand-side phenomenon, demonstrate that venture capital and angel finance are substitutes not complementary funding sources and draw out the association between angel investment and venture underperformance, and build on the ‘circuits of capital’ literature to identify the increasing structural independence of the VC and angel investment markets which has implications for the link between angel financing and local and regional economic development. These issues are discussed in the context that stimulation of cross-border (international) investments by angel investors has emerged as an important topic of academic analysis and policy debate in Europe, not least on the basis that such investment will support the otherwise constrained growth and scale-up of entrepreneurial ventures. The paper concludes by outlining, in the policy mix concept, a basis for the systemic analysis of the development, implementation and impact of entrepreneurial finance policy.

> *Every time it rains it rains/Pennies from heaven/Don’t you know each cloud contains/Pennies from heaven/You’ll find your fortune falling all over town/Be sure that your umbrella is upside down* (Johnson and Burke 1936)

1. Introduction

Notwithstanding some scepticism over the claims made for angel investing (Harrison et al., 2020a), it is widely accepted that, as with venture capital (Breuer and Pinkwart 2018), it is central to economic development through the funding of new and high growth entrepreneurial ventures exploiting new technologies and markets (Drover et al., 2017; Edelman et al., 2017; White and Dumay 2017). It is also an increasingly international phenomenon, with evidence emerging from countries on all continents and at different levels of

E-mail addresses: r.harrison@ed.ac.uk, r.harrison@ed.ac.uk.

https://doi.org/10.1016/j.jbvi.2022.e00311
Received 29 October 2021; Received in revised form 16 February 2022; Accepted 3 March 2022
Available online 8 March 2022
2352-6734/© 2022 The Author. Published by Elsevier Inc. This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).

Table 1
The case for cross-border business angel investment.

Commentator/Source	Rationale for cross-border angel investment	Proposals
European Business Angel Network[a]	Relative lack of scale-ups in Europe	Focus on improving the connectivity of ecosystems within and between member states, for example by addressing fiscal and legal barriers that hamper cross-border investment,
European Commission[b]	Under-performance of EU vis a vis the US and China in terms of the start-up and growth of entrepreneurial ventures, attributed to (a) overall lower levels of risk capital investment and (b) the fragmentation of EU capital markets, both of which restrict the supply of capital to growth ventures	EU must play more active role in stimulating cross-border angel investment Capital Markets Union initiative (launched 2014) Proposed regulatory changes Pan-European VC funds-of-funds programme (VentureEU) managed by EIF
European Union High Level Forum[c] (2020)	EU has struggled to make its capital markets work as one and still has 27 capital markets	Develop measures to move the EU closer to a single market for savings, investments and capital raising
European Investment Bank[d]	EU – poor track record in forming start-ups and scaling up young firms, especially compared to United States and China EU scale-ups significantly more likely to report access to finance as an issue – reliance on angel funding is higher among scale-ups in EU than in US (as angels invest less and for a smaller stake in the investee company this limits growth)	Address structural issues that hamper firm growth (market access, access to top talent, relatively weak VC market) Policy makers need to 'think backward' – focus on pull factors that support growth (eg encourage more corporate acquisitions of start-ups, develop an EU harmonised tech stock market, overcome regulatory bottlenecks in providing stock options)
Association of Financial Markets in Europe[e]	Europe has a shortage of risk capital for small, early-stage growing businesses and is still at a significant disadvantage to the United States - holds back development of high-growth sectors essential for economic competitiveness. Europe was home to just 16 unicorns in January 2017. This compared to 91 in the US and 44 in Asia; 17 of the world's 50 most valuable companies in 2006 were from the EU, falling to 6 in 2017. The EU's fragmented internal market is partly to blame - different rules, taxes and standards across the 28 Member States hamper young businesses seeking to scale up across borders.	Need for harmonised and clearer tax incentives for cross-border angel investment in EU
Association of Financial Markets in Europe[f]	Risk capital availability in Europe significantly behind the US – in absolute terms the US has almost six times the capital available in Europe; pre-IPO risk capital represents 0.8% of GDP in US, 0.15% GDP in EU.	Create a single market for business angel investors, syndicates and networks - the Commission, working together with business angels, should create a passport for business angel investors. The Business Angel community can support the Commission by facilitating the coordination of pilot programmes intended to stimulate intra-EU business angel investment and cross-border investment outside the EU. Current regulations on marketing restrictions impede high net worth individuals to invest directly in venture capital funds - amend MiFID II to ensure that "sophisticated" or "semi-professional" investors are recognised as a specific investor category, accompanied by the adequate safeguards from a consumer protection perspective. We encourage the Commission to undertake a study addressing current tax and fiscal incentives provided by Member States to business angel investment, with the view of producing best practices recommendations (eg on mutual recognition of existing fiscal incentives).
Association of Financial Markets in Europe[g]	Availability of pre-IPO risk capital (Equity crowdfunding, Business Angel Growth, Private Equity investment, and venture capital investment as % of loan and risk capital financing) has improved (2% in 2015; 5.6% in 2021, H1) Capital markets integration within Europe remains low (0.22 on a scale of 0–1 in 2021, down from 0.24 in 2020)	The European Crowdfunding Service Provider Regulation (November 2021) provides a harmonised legal framework for crowdfunding and should be appropriately evaluated. Set the regulatory framework to facilitate the inception of pan European business angel fund structures to promote cross border investment syndication and reduce existing complexity of cross-border angel investment. Streamline a legal entity structure for start-ups with a commonly recognised limited liability legal entity structure.
Early Stage Investing Launchpad[h]	Early Stage Investing Launchpad (ESIL) programme - private sector initiative (funded by European Commission's Horizon 2020 programme) to develop the capacity of angel investors across Europe by connecting them with suitable companies and peer investors, both locally and internationally. Knowledge exchange and collaborations between experienced and novice business angels can accelerate the development of start-up companies across Europe. Provide access to like-minded business angels and crowdfunders across Europe, which greatly increases the potential for cross-border investment and access to opportunities that they would not find in their home country alone.	The programme is delivered in partnership with selected local partners in each EU28 country and other non-EU eastern European countries. ESIL offers business angel investors a wide range of activities, including access to online-based matchmaking platforms to connect with SMEs; online educational videos and webinars; training and workshop activities; and networking events.

(*continued on next page*)

Table 1 (*continued*)

Commentator/Source	Rationale for cross-border angel investment	Proposals
European Investment Fund[i]	Smaller EU VC industry due to fragmentation of capital markets Review impact of European Angels Fund, a national coinvestment programme between EIF and individual experienced angels, with a €30m pan-European element	Limitations on cross-border angel investment arise from higher fixed costs (deal sourcing, due diligence, deal transaction, post-investment monitoring) and from investor preferences (eg to exhaust local opportunities before looking cross-border)
Academic commentators[j] Mason et al. (2021)	Increase number of competitive start-ups Enable European companies to scale-up to attract global investors to support international expansion	Improve visibility of investment-ready opportunities in other countries Build trusting relationships between angels in different jurisdictions Support multi-jurisdictional angel groups (but make no reference to the ECIL programme)
Industry commentator[k]: Mollen (2018a; 2018b, 2019a; 2019b)	Potential loss of high-growth potential businesses to the US/ China to access funding Insufficient access to early stage funding for high-growth potential ventures in Europe may lead to loss of competitiveness or failure Support scale-up of firms to attract global investors and foreign investors who can facilitate their international expansion	Build cross-border investment as basis for building unified EU funding market Address legal and fiscal obstacles to cross-border angel investment

Sources:

[a] Quas, A., Mason, C., Compano, R., Gavigan, J. and Testa, G., (2021) Tackling the Scale-up Gap, EUR 30948 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-46712-0, https://doi.org/10.2760/982079, JRC127232.

[b] *Report of the Chairman of the Expert Group on the Cross Border Matching of Innovative Firms with Suitable Investors*. http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=6008&no=1.*Effectiveness of tax incentives for venture capital and business angels to foster the investment of SMEs and start-ups: Final report*. Working Paper No. 68. European Commission. https://ec.europa.eu/taxation_customs/system/files/2017-09/taxation_paper_69_vc-ba.pdf.

[c] *A new vision for Europe's capital markets: Final report*. European Union.https://ec.europa.eu/info/publications/cmu-high-level-forum_en.

[d] https://www.eib.org/en/publications/investment-report-2019.

[e] *The Shortage of Risk Capital for Europe's High Growth Businesses* https://www.afme.eu/publications/reports/details/the-shortage-of-risk-capital-for-europes-high-growth-businesses.

[f] *Capital Markets Union: Measuring progress and planning for success* https://www.afme.eu/publications/reports/details/CMU-KPIs.

[g] *Capital Markets Union Key Performance Indicators, Fourth Edition: European Capital Markets – a turning point?* https://www.afme.eu/Portals/0/DispatchFeaturedImages/AFME_CMU_KPIs2021_05-2.pdf.

[h] Empowering early stage investors https://www.europeanesil.eu/.

[i] Gvetadze, S, Pal K and Torfs W (2020) *The business angel portfolio under the European Angels Fund: An empirical analysis,* EIF Working Paper, No. 2020/62, European Investment Fund (EIF), Luxembourg, https://www.eif.org/news_centre/publications/EIF_Working_Paper_2020_62.htm. Kraemer-Eis, H., Signore, S., & Prencipe, D. (2018). *The European venture capital landscape: An EIF perspective, Volume I: The impact of EIF on the VC ecosystem*. Working Paper No. 2016/34. http://www.eif.org/news_centre/publications/eif_wp_34.pdf.

[j] Mason, C, Botelho T and Duggett J (2021): Promoting crossborder investing by business angels in the European Union, *Regional Studies*, DOI: 10.1080/00343404.2021.1960961.

[k] Mollen R (2018/2019): Can we build cross-border angel investment in Europe? https://www.leadingedgeonly.com/article/can-we-build-cross-border-angel-investment-in-europe-. Constraints for cross border angel investing in Europe. EBAN. http://www.eban.org/article-robert-p-mollen-can-build-cross-border-angel-investment-europe. Can European angels fly cross-border? https://www.leadingedgeonly.com/blogs/can-european-angels-fly-cross-border-. US Angels can fly cross-border. https://www.leadingedgeonly.com/article/us-angels-can-fly-cross-border.

development (Harrison 2017). As such, it is unsurprising that angel investment has attracted the attention of policy makers internationally, nationally and regionally (Wilson 2014; OECD 2011), resulting in a range of measures to support the development of the market (Mason 2009; Lundström et al., 2014; Meuleman and De Maeseneire, 2012). These include support for the establishment and operation of angel groups and networks designed to connect investors with ventures seeking capital (Harrison and Mason 1996; Lahti and Keinonen 2016), government investment in coinvestment schemes to increase the capital available in the market (Harrison 2018) and tax incentives to induce more angel investors to enter the market by adjusting the risk-reward trade-off (Harrison et al., 2020a; Carpentier and Suret 2007, 2016).

I argue in this paper that these policy measures rely on three interconnected and increasingly inaccurate assumptions about the structuring and dynamics of the angel investment market. First, the presence of market failure in the early stage risk capital market is primarily understood as a deficit in the supply of (rather than demand for) capital, which constrains the start-up and scale-up of high-growth potential ventures. Second, this supply deficit is magnified by the assumed complementarity of angel and other sources of entrepreneurial finance, captured in the metaphors of the relay race or funding escalator, such that the deficit in the supply of angel investment reduces the flow of companies seeking venture capital investment to support their further growth and expansion. Third, this assumed complementarity of angel and VC finance is itself the outcome of an assumption that the angel and VC circuits of capital are structurally integrated in well-functioning ecosystems. We examine each of these policy assumptions in turn in the following sections of the paper, and conclude that they are embedded in a partial understanding of the overall policy intervention framework which arises out of a fragmented linear pattern of thinking rather than a systems perspective and its associated complexity and feedback loops (Hyytinen 2021; Berglund et al., 2018; Dimov 2016; Ricciardi et al., 2021; Acs, Stam, Audretsch and O'Connor 2017; Patel and Mehta 2017). The argument is developed in the specific context of the most recent policy initiative, to encourage cross-border angel investment, the absence of which is believed to constrain the start-up and scale-up of entrepreneurial ventures in Europe (Mason et al., 2021). The paper concludes by proposing an integrated policy mix perspective – a combination of interactive instruments embraced by an overarching policy strategy (Flanagan et al., 2011; Rogge and Reichardt, 2016) - in the design, implementation and evaluation of entrepreneurship policy, including that targeted at improving the supply of and demand for risk capital, which more fully reflects the complexity of the entrepreneurial process and addresses the flawed assumptions underlying current policy approaches.

2. Cross-border angel investment

Recently in the EU there has been growing interest in and advocacy for the stimulation of and policy support for cross-border investment (Table 1), notwithstanding the current low levels of such investment (under 10 per cent for angels in most studies, compared with over 40 per cent for venture capital) (Bradley et al., 2019; Mason et al., 2021; Harrison et al., 2010a). The primary rationale for this is the market supply failure argument that the fragmented early stage capital market in Europe (organised on a nation-state rather than pan-European basis) is smaller than in the US in terms of the smaller size of funds, smaller average funding rounds, fewer funding rounds and fewer later stage rounds, and that this constrains the emergence of high-growth potential start-ups and scale-ups relative to the US and China (Duruflé et al., 2018). More specifically, it has been argued that EU scale-ups are more likely than in the US to report access to finance as an issue: this may lead to the loss of such ventures to jurisdictions where access to growth capital is more relaxed and to the loss of competitiveness and increased risk of failure through capital starvation for those that remain in Europe. The response has been a number of initiatives to move the EU closer to a single market for savings, investments and capital raising, through capital supply initiatives such as the European VC funds-of-funds programme (VentureEU) managed by the European Investment Fund and regulatory changes under the Capital Markets Union initiative (launched in 2014).

Increasingly both the European Commission and industry commentators and analysts have argued that as part of this wider capital market integration initiative it is necessary that the EU plays a more active role in stimulating cross-border angel investment in particular: '[t]he need to facilitate more cross-border investments by European business angels to increase the number of competitive start-ups has also been recognised. Business angels play a critical role in the entrepreneurial ecosystem, funding the start of the entrepreneurial pipeline' and 'increased cross-border investing by business angels is required to enable European companies to scale up to the point where they can attract global investors who can play a role in facilitating their international expansion' (Mason et al., 2021, 2). The argument is, therefore, that there is an assumed complementarity between angel investment and other sources of early stage and growth finance, that angel finance is critical to the development of an entrepreneurial economy and that increased cross-border angel investment in particular will facilitate entrepreneurial start-ups and scale-ups, notably through access to foreign investors, by building and exploiting the structural integration of the angel and VC investment markets. While there have been some attempts to improve the cross-border flow of angel investment, such as the ESIL programme (Table 1), there is a widespread recognition of the legal, fiscal, regulatory and institutional obstacles that need to be overcome if this goal is to be achieved.

From a practitioner perspective, angel groups and representative bodies see increased cross-border investment as an opportunity to broaden and deepen the deal flow available to investors (Mason et al., 2021). This, it is argued, will facilitate portfolio diversification and risk mitigation by exposing angel investors to opportunities in different geographies, giving them access to deals in new technology hubs and more dynamic ecosystems and in locations with lower cost structures and hence lower cash burn rates (and thereby increasing potential returns on investment), and facilitating increased syndication with experienced investors already familiar with these geographies. Throughout the policy, practitioner and academic debate it is taken for granted that there needs to be more angel cross-border investment and discussion is focused on how that may be achieved as part of a more general harmonisation of EU capital markets, but there is no systematic analysis of or justification for this proposed policy orientation. In this paper we seek to address this shortcoming. Specifically, we argue that as a policy the encouragement of increased cross-border investment by angel investors to support the scale-up of entrepreneurial ventures and enhance angel investors' portfolios is misguided and rests on the same three flawed assumptions that underpin policy support for the angel investment market more generally. As such, it provides a useful context in which to explore these more general assumptions.

3. Market failure

Increased angel investment, and cross-border investment in particular, is justified on the basis that the key constraint on entrepreneurial venture growth is on the supply side: there is insufficient investment capital to meet the demand from high-growth potential ventures, and increased cross-border investment by angel investors is identified as the mechanism by which this constraint can be overcome. This is understood to reflect a market failure, reflected in a funding or equity gap (Martin et al., 2005), which requires and justifies government intervention (Guerini and Quas 2016; Colombo et al., 2016). As one recent UK analysis expressed it, the fact that 62% of equity investment was in London, which accounted for only 19% of the UK's smaller businesses, was evidence that the lack of local investors leads to wasted economic potential in other regions (British Business Bank 2021). In other words, the unequal distribution of equity investment was attributed to deficiencies in the supply of capital and not to spatial variations in effective demand.

In general terms a market failure in a market-based system is associated with welfare-suboptimal investments, defined as an 'allocation problem that can be resolved through various instruments to correct the misallocation of resources' (Karlson et al., 2021, 84). This provides a justification for government intervention to stimulate entrepreneurship as a contribution to economic development and social change (Rotger et al., 2012). More specifically, the funding gap has been defined as 'the difference between the amount of (risk) capital that would be invested under conditions of well-informed and competitive markets and the amount of capital actually invested' (Wilson et al., 2018, 626). The existence of this gap underpins calls for government intervention in the capital markets (Cumming and Li 2013; Cumming et al., 2018; Lerner 2002, 2009), although simply identifying the gap is a necessary but not sufficient justification for government action (Vogelaar and Stam 2021).

Against this background the proposal to support greater cross-border angel investment follows the tradition of interventions in the angel investment market to focus on mobilising and incentivising the flow of capital into the market (eg through tax incentives) and improving the efficiency of information flows (and hence capital flows) in the market (eg through supporting angel networks). However, angel investors have consistently reported that they have capital available for investment, but cannot find sufficient deals that meet their investment criteria. Despite some attention to support for investment readiness programmes designed to improve the quality and presentation of investment opportunities (Mason and Harrison 2001, 2004; Mason and Kwok 2010), which more often than not focus on the presentation to a greater extent than the substance of the opportunity/venture (Chapple et al., 2021; Teague et al., 2019), policy has essentially neglected the demand side of the market. The scale-up and growth of entrepreneurial ventures in the UK and the rest of Europe is in practice constrained by structural characteristics (eg the fragmentation of markets) and internal factors (eg low skill levels, inadequate leadership, constraints on the availability of talent, and attitudes and motivation) that constrain the effective demand for investment capital (Hellmann et al., 2016; Piaskowska et al., 2021). Given the difficulties in assessing definitively the counterfactual ‘amount of risk capital that would be invested under conditions of well-informed and competitive markets’, the funding gap is most commonly identified as a gap between the actual level of investment and the desired target level. However, the existence of such a gap is not itself necessarily an indicator of market failure, but may simply reflect the efficient operation of the market in which the supply of capital is moderated by the balance between risk and reward.

This prompts a reconsideration of the concept of market failure in the early stage risk capital market as the basis for considering government intervention (Fig. 1). In a transparent efficient market the financing needs of entrepreneurial ventures drive a justified demand for finance, support the provision of appropriate finance and lead to new venture creation and growth. Where there is a justified demand for finance but no appropriate finance provision, for a combination of supply side and demand side reasons, there is market failure which may justify or require government intervention. There is, however, a second case of market failure, where there is a demand for finance in the absence of need (artificial demand) which leads to the inappropriate provision (over-supply) of finance. As the discussion of the impact of tax incentives for angel investors has suggested, such over-supply of investment can lead to sub-optimal welfare outcomes for both the individual investor and the market (Harrison et al., 2020a). Furthermore, there are circumstances where although there is a need for finance for entrepreneurial ventures there is an absence of demand (which may reflect, for example, entrepreneur anti-growth preferences, their ownership and control expectations, uncertainty about the success of the venture and asymmetric information between the firm and the potential outside investor – Zimmermann, 2020) and a consequent absence of the supply of appropriate finance. This absence in turn further discourages demand for finance (Harrison et al., 2010b): this dual demand failure, rather than the supply-side market failure, is in practice the situation that may justify government intervention. The proposal to support increased cross-border investment by angels (Mason et al., 2021), however, does not address these demand side issues but represents the continuation of supply-side interventions without demonstrating that there is a lack of capital relative to the effective demand for capital. Furthermore, even if this case were made, the cross-border investment proposal flies in the face of the long term

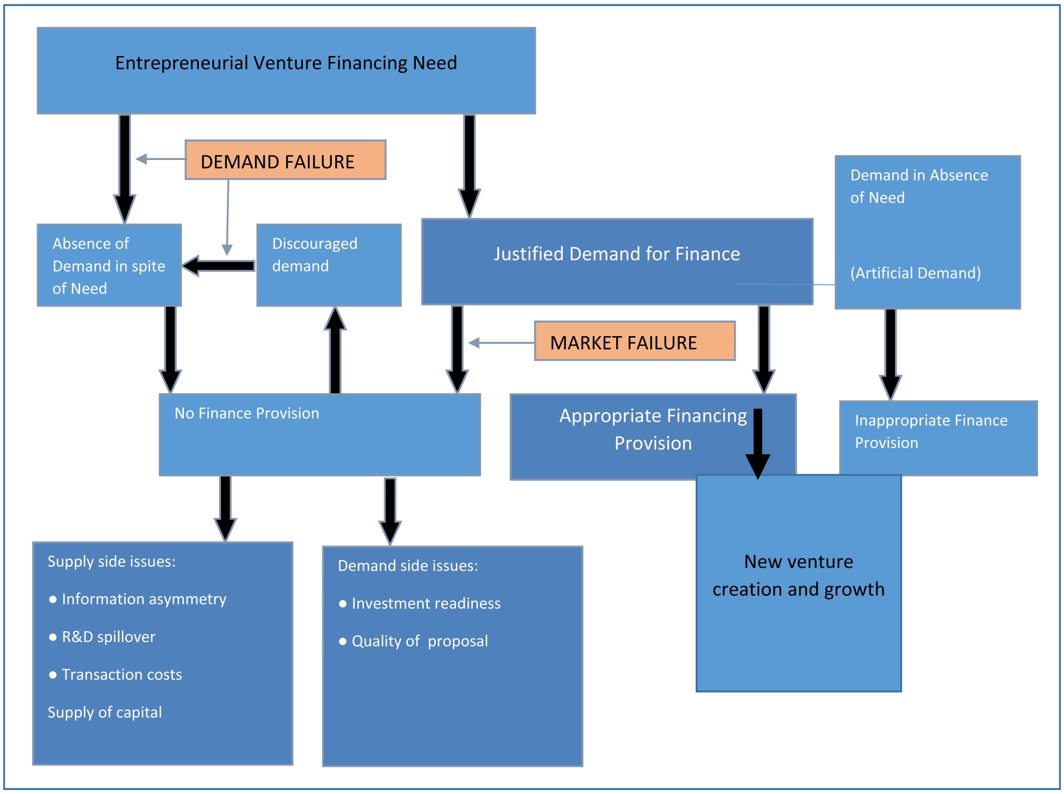


Fig. 1. Market failure in the early stage risk capital market.

structural evolution of the risk capital market, to which we now turn.

4. Dynamics of the early stage capital market

The second flawed assumption underlying support for increased angel investment, and cross-border investment in particular, to support the scale-up of entrepreneurial ventures is that there is a complementarity of angel investors and venture capitalists in the early stage capital market, and that angel investors are critical to the scale-up of high-growth potential firms. There was evidence in the past to support the assumption of complementarity (Harrison and Mason 2000), captured in the metaphors of the relay race (Benjamin and Margulis, 2000) or the funding escalator (Wright et al., 2016; Grilli 2019), which saw entrepreneurial ventures raising capital successively and seamlessly from internal sources, family and friends, angel investors and venture capital before an IPO or acquisition. However, it has increasingly become clear that the entrepreneurial finance market has bifurcated as VC has retreated from start-up and small scale investments and angel investors, increasingly organised in groups rather than investing as individuals (Mason et al., 2019), have become 'cradle to grave' funders, investing in their portfolio companies through multiple funding rounds to exit. In other words, the funding escalator has broken down and the relay race has been abandoned[1] (Gregson et al., 2013; Mason and Harrison 2015; North et al., 2013). This bifurcation has been intensified as a consequence of the impact of the COVID19 pandemic on the demand for and supply of entrepreneurial finance (Brown and Rocha 2020; Brown et al., 2020; Acharya and Steffen 2020; Ellul et al., 2020; Bańkowska et al., 2020): although there is some evidence that angel investment has increased during the pandemic (Mason and Botelho 2021) this largely reflects defensive investment in existing portfolio companies rather than investment in new (to the angel investor) ventures, replicating the situation during the post-2007 global financial crisis (Mason and Harrison 2015; Harrison and Baldock 2015).

One key implication of this evolution of the early stage risk capital market is that rather than being complements in the market, VC and angel investment are increasingly substitutes, serving very different sets of firms (in terms of the location, industry and timing of their investments) ((Johnson and Sohl, 2012a; 2012b). As a result, it appears that if a venture has received VC investment it is less likely to have received angel investment and vice versa (Hellmann and Thiele, 2015; Hellmann et al., 2019). Specifically, a comparison of early stage firms raising venture capital with those raising other forms of financing (eg from angel investors, crowdfunding or accelerators) suggests that while there is an overlap between venture capital and other forms of early stage financing, VC is focused on larger transactions, the characteristics of firms selecting/being selected for early stage venture capital are very different (in sector and location) from those using other sources of financing, and having raised early stage venture capital, firms are more likely to raise subsequent venture capital investment (Hellmann et al., 2019). Furthermore, the assumption that angel investors are critical to the scale-up of entrepreneurial ventures is difficult to support. For example, one analysis of US IPOs discovered that of 636 IPOs identified, 268 (42.1%) had VC backing, 37 (5.8%) had angel investment and 52 (8.2%) had both VC and angel investment (Johnson and Sohl, 2012a; 2012b). Furthermore, the post-IPO operating performance of VC backed IPOs exceeded that of angel backed ventures, and angel backed IPOs performed no better than non-angel backed ones, leading the authors to conclude that angel backed IPOs are of lower quality than non-angel backed ventures. Indeed, international research evidence clearly demonstrates that angel backed ventures are less likely to IPO or successfully exit through a trade sale (Cumming and Zhang 2019). These findings are confirmed by other analyses: relative to VC funded start-ups, angel-backed start-ups are associated with a lower likelihood of successful exit (by IPO or acquisition), report lower sales and employment growth, and experience a lower quantity and quality of innovation (Chemmanur et al., 2021). Furthermore, there is strong evidence of a substitutionary rather than complementary relationship: a firm receiving primarily VC or angel funding initially was likely to receive a larger fraction of the same type of funding in subsequent rounds; and firms that received VC in both first and subsequent rounds, or received VC in subsequent rounds after angel investing in the first round, were more likely to successfully exit compared to those receiving angel funding (Chemmanur et al., 2021). In summary, in terms of both market structure and investee firm performance, the assumption that angel investors are so critical to high-growth ventures that their cross-border investment activity needs to be stimulated is unjustified.

5. Circuits of capital

This discussion of the changing structure and organisation of the early stage risk capital market raises an important issue of the wider context in which angel investing takes place, and its connection to local and regional development and entrepreneurial activity. Underlying the breakdown in the funding escalator and the flight of venture capital away from smaller scale early stage investments has been a major and longstanding shift in investment patterns in terms of the internationalisation of venture capital and private equity (Alhorr et al., 2008; Wright et al., 2005; Devigne et al., 2018; Bradley et al., 2019; Harrison et al., 2020b). This has major potential implications for how we construe the developing role of and policy support for angel funding. Since the mid-1990s the VC industry has become increasingly internationalised. For example, over one third of VC backed companies had received investment from a VC not located in the same country (Schertler and Tykvová, 2009), and in the decade up to 2008, between 15% and 25% of VC deals per year in the US involved at least some degree of cross-border investment into the portfolio companies (Aizenman and Kendall 2012). These cross-border flows are both inward and outward: since the mid-1990s, portfolio companies in over 50 countries have received VC investment from US-based investors, portfolio companies in both the US and the UK have received investment from VC firms in over 30 countries, and in Europe and Asia as a whole foreign VC represents over 50% of venture investments (Pandya and Leblang 2011).

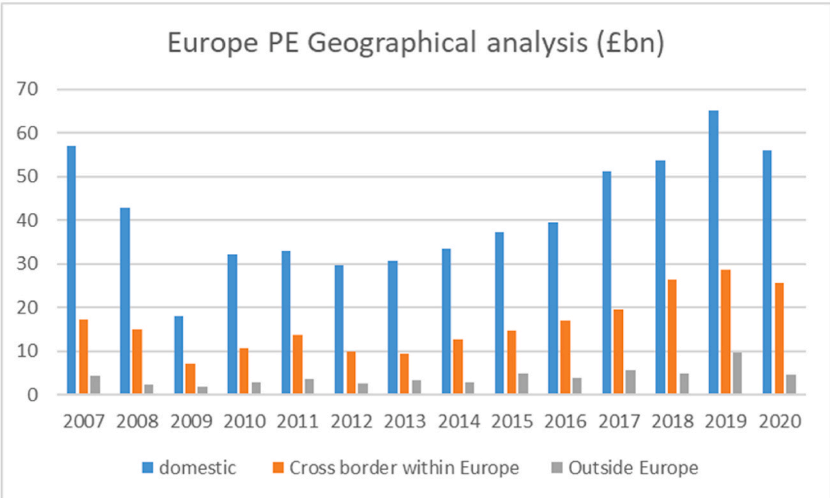
[1] These metaphors continue to have considerable influence: notwithstanding their argument that the funding escalator is broken and that the angel finance market has changed structurally as a result (Mason and Harrison 2015; Mason et al., 2019), Mason and Botelho (2021) and Mason et al. (2021) continue to rely heavily on the escalator metaphor in their analysis of and policy prescriptions for the angel market.

In Europe, the most recent geographical analysis of investments by the private equity industry (Invest Europe 2021) suggests that the proportion of domestic investment (that is, where the PE investor and portfolio company are located in the same country) has fallen over time, from around 72 per cent in 2007 to around 64 per cent in 2020 (Fig. 2). Correspondingly, cross-border investment within Europe has increased from 23 per cent to 30 per cent over the same period and investment in portfolio companies outside Europe by European investors has fluctuated from four per cent to almost 10 per cent, averaging around 6 per cent over the period. For venture capital investment specifically, non-domestic investment is even higher: overall in 2020, only 57 per cent of VC investment was domestic, 30 per cent was cross-border and almost 13 per cent was in non-European portfolio companies, compared with 65 per cent, 30 per cent and 5 per cent respectively for all private equity (Invest Europe 2021).

Increasingly, this internationalisation is being associated with the emergence of global cities (Brenner 1998; Doel and Hubbard 2007) in which the city not the nation state becomes the appropriate unit of analysis for the start-up and venture-backed economy. Investment flows become increasingly flows across and within these urban-denominated entrepreneurial hotspots which transcend traditional geographical boundaries (Florida 2013), with relatively limited spillover effects elsewhere in the space economy (Harrison et al., 2020b). This in turn raises the issue of who or what, if anything, steps into the gap, including angel groups and public sector VC. On this argument public sector policy is motivated not by market failure but by the economic and welfare consequences of an efficiently functioning market.

As a primarily local phenomenon, reliant to a large extent on networks of social and relational capital for the identification and monitoring of investment opportunities, the relationship between angel finance, as an integral part of the development and functioning

a Amount invested



b Percentage analysis

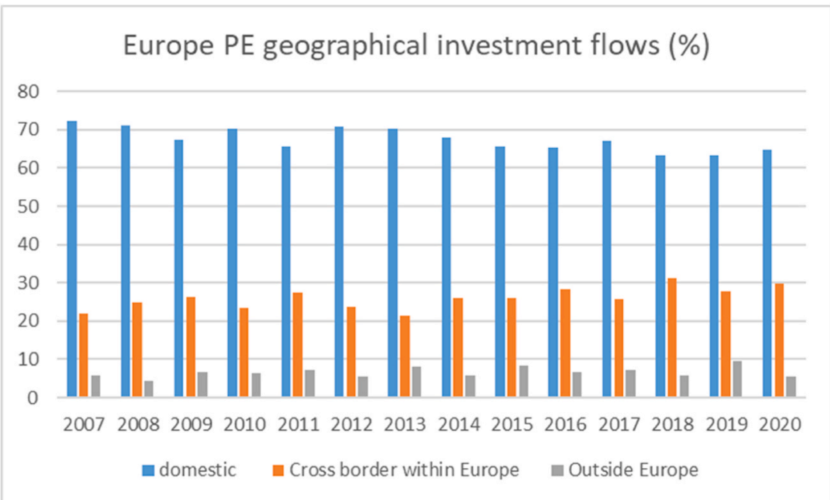


Fig. 2. Geographical analysis of the European private equity industry 2007–2020.
Source Data supplied by Invest Europe

of local/regional entrepreneurial ecosystems (World Economic Forum 2013), and an internationalising venture capital industry points to an emerging tension. Financialisation and the emergence of the finance industry (Karwowski et al., 2020) enables the 'circulation of capital between various "circuits" or economic sectors and is at the origin of the emergence of new sources of profits or "spatio--temporal fixes"' (Corpataux et al., 2017, 69–70) (Fig. 3). At a macro-institutional scale this is reflected in the separation between the collection of money (savings), its investment and the global city, which increasingly has the power to 'selectively connect companies, sectors and regions … beyond national borders' (Corpataux et al., 2017, 70). The resulting processes of spatial concentration and centralisation (Hudson 2011) are reflected, for example, in the collection of savings (eg in pension funds) across the regions within a national state territory (small 'r') which are then invested (by pension fund managers, venture capital and private equity partnerships as part of the financial milieu and markets that comprise the Financial Places of the global city) primarily in core economic Regions (large 'R') across multiple countries and in listed or late stage not emerging entrepreneurial ventures (Martin and Minns 1995). For example, the latest figures for Europe show that for private equity as a whole in 2020, some 64 percent of the funds raised came from pension funds, fund of fund investors, insurance companies, banks and private individuals; the equivalent figure for venture capital was 62 percent (Invest Europe, 2021). This makes access to capital for start-up and early stage firms to finance their growth more

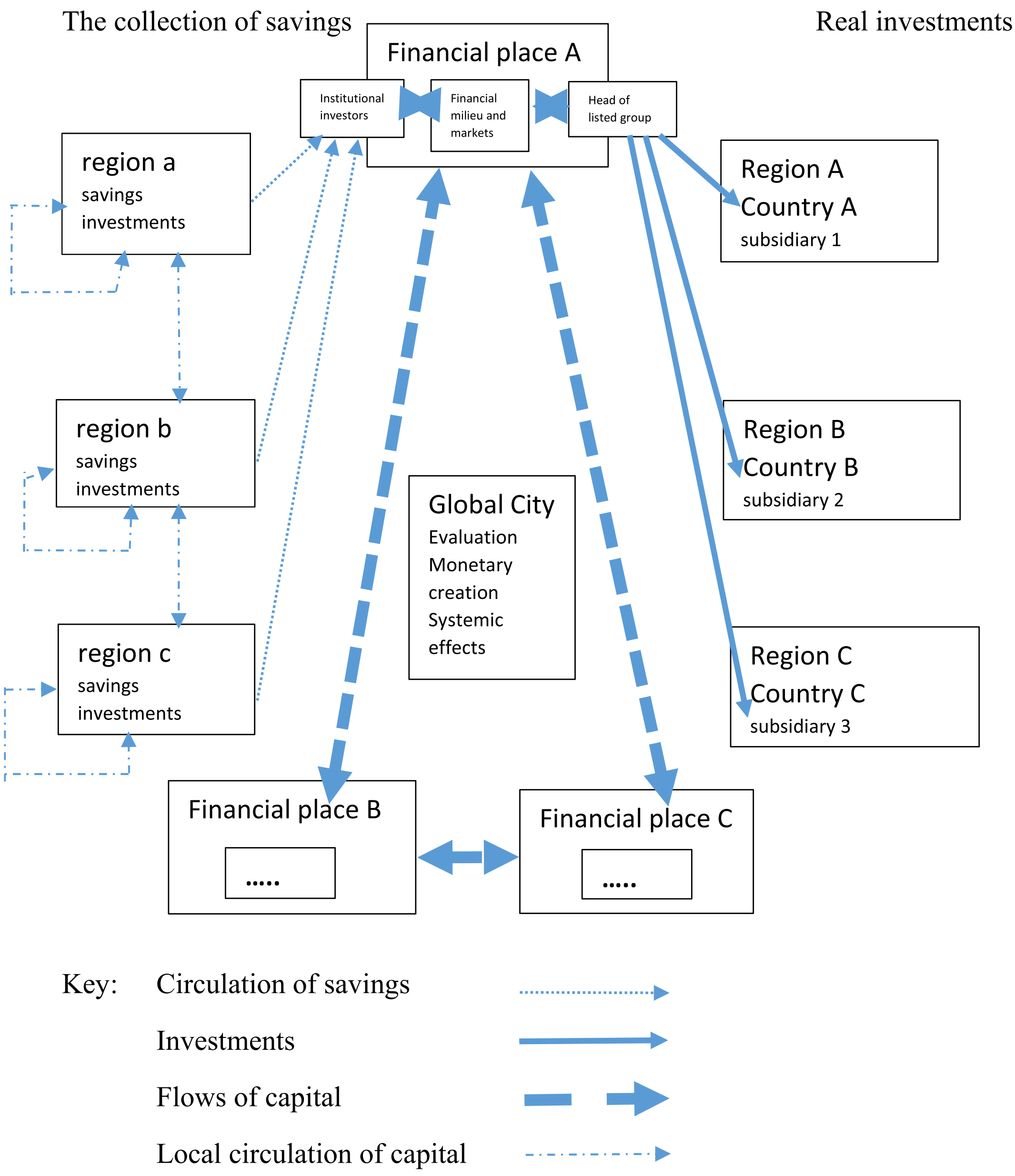


Fig. 3. Circuits of capital and the global city.
Source adapted and developed from Corpataux et al. (2018, 76)

difficult without losing their independence as they are acquired by larger listed groups (Crevoisier 1997; Crevoisier and Quiquerez 2005). On the margins of this financialised system is the local circulation of capital in circuits of value, including angel investment by individuals and angel groups and networks, which are primarily, but not exclusively, intra-regional, and which are almost entirely intra-national.

One consequence of financialisation and the emergence of different and disconnected circuits of capital and circuits of value is that investors and entrepreneurs are becoming increasingly disconnected. Financialisation is intrinsically spatial as a form of producing and exploiting the mobility of capital, and is reflected in spatial, functional and institutional disjunctions between financial markets and the 'real' economy and between different actors in the market (Gray and Zhang, 2017). This shows in the concentration and centralisation of investment decisions in the growth of global cities; the resulting spatial hierarchy is increasingly bifurcated between a network of global cities competing on basis of attracting investment flows, and a mosaic of urban and regional territories competing on basis of innovation and cost reduction, each served by a different class of investor (Corpataux et al., 2017). While the absence of a link between angel finance and venture success has been demonstrated (Cumming et al., 2018), what the entrepreneurial finance literature in general and the specific advocacy of cross-border angel investment as a panacea for solving Europe's scale-up deficit in particular have overlooked is the changing spatialities and temporalities of capital as relative and relational forms of capital create new 'geographies of obligation' (Bryan et al., 2017) and as global cities control and shape the flows of money in specific networks (such as investment banking, securities trading, and VC investment). This results in an inevitable lumpiness in the spaces of money: 'money does not flow equally or equally easily to other nodes on the networks (cities, regions); relational dependencies, hierarchies and asymmetries typify monetary spaces' (Martin and Pollard, 2017, 24).

As Lee (2011) has recently argued, the policy and practice of economic development unfolds in these tensions between the local and the increasingly global spatialities of circuits of capital driven by assessments of financial consequences that are made and play out outside the locality with little or no concern for the local development consequences. Given the significance and geographical indifference of finance capital (including but not restricted to venture capital and private equity), the uneven temporal and spatial dynamics of circuits of capital has a significant influence on the configuration of economic activity (Fagan and Le Heron 1994; Harrison et al., 2020b). Specifically, this has implications for the possibilities of the capture of value through local development, notwithstanding the crucial significance of the embeddedness of networks in the places within which the conditions of their existence are found (Lee, 2011, pp. 200–202). The globalisation of venture capital and its increasing concentration on networks of global cities represents a major disruption to local circuits of value creation and thus to the possibilities of the capture of value as the basis for local economic development or for the expansion of cross-border angel investment capital.

These new geographies of obligation, and the relational dependencies, hierarchies and asymmetries that they embody, transform the geography of entrepreneurship (Plummer and Pe'er 2010) as reflected in the social relations among the various participants in the early stage capital market. As Mandel (1975) has argued, one of the outcomes of the geographical expansion of the sources and applications of capital is the development of alternative spatially bound circuits of value. Given this, the internationalisation of the venture capital industry and development of angel networks as increasingly 'cradle to grave' funders of entrepreneurial ventures represents the manifestation of a fundamental dislocation: on the one hand, we see the emergence of global circuits of capital, represented by the VC and private equity industry, which are increasingly divorced from local circuits of capital; on the other is the emergence of local circuits of value in the form of angel investors and networks.

These different circuits, and the substitutionary rather than complementary nature of angel and VC finance that underlie them, have significant implications for entrepreneurship-based economic development: the 'best' entrepreneurs and ventures (in terms of growth potential and performance) will increasingly seek for and be sought by VC and/or international funding, and may shift location to facilitate this access, while angel investors will be left with entrepreneurs/ventures with more modest growth (and hence funding) aspirations and capabilities. As an analysis of the EIF angel coinvestment scheme suggests, relative to the US scale-up ventures in Europe are more dependent on angel funding in later stage funding rounds and this is a primary constraint on their growth (Table 1, note 3). This structural dislocation in the early stage capital market is a fundamental outcome of the development of capitalist economies and requires the development of alternative types of policy more suitable for the conditions of post-capitalist diverse economies, in which local and regional economic and entrepreneurial development is founded on the practice of alternative economic geographies with circuits of value being driven by locally agreed and practical social relations (Fuller et al., 2010; Lee et al., 2004).

As such, the collapse of the funding escalator and the almost total separation of the angel and venture capital communities is likely to be a permanent rather than a transient feature. Proposals to stimulate and increase cross-border angel investment ignore these structural shifts in the market as a result of financialisation and the playing out of different circuits of capital. They are, in a very real sense, misguided and misdirected, seeking to work against fundamental structural changes in the organisation of local, national and international capital markets. Furthermore, this misallocation of effort in support of a policy goal (increasing the supply of cross-border investment) which is intrinsically set to fail, diverts attention from a much more pressing issue. The development of micro-level initiatives, such as angel groups and networks, and the realisation of autonomy from global circuits of capital may in practice have limited and localised material consequences which have yet to be demonstrated as the market continues to evolve (Amin et al., 2002). Addressing these issues will have greater impact on how we understand the realistic contribution of angel investment in the entrepreneurial venture and economic development process than will chasing a chimera that flies in the face of the evolution, structure and processes of the risk capital market in late capitalism.

6. Conclusion

In this paper we have identified three fundamental but erroneous assumptions upon which policy intervention in the angel investment market is justified – market failure, angel/VC complementarity, and the structural integration of the angel and VC circuits of capital – and have used this to confront recent advocacy of increased cross-border angel investment as a solution to the perceived shortfall of scale-up entrepreneurial companies in Europe compared with the US and, increasingly, China (Mason et al., 2021). Financialisation and the structural evolution of the circuits of capital in post-capitalist economies reinforces the disjoint between VC and angel finance as two very different sets of economic actors serving different populations of businesses and calls into question the assumption of a homogeneous well-connected risk capital market. Angel investors, whether individually or in groups and networks are neither necessary nor sufficient to stimulate an increase in the number and proportion of scale-up ventures in Europe. Rather than incentivising angels to increase their cross-border investment activity, policy should focus instead on ameliorating the harvesting of investment capital in the regions, which contributes to regional deficits in the supply of investment and deficiencies in the effective demand for investment as entrepreneurs adjust their growth expectations downwards to match the investment capital available, and on understanding how the structural evolution of the investment market and the new lumpiness in the geography of finance which results impacts on the processes of local and regional development in a financialised world.

Although the arguments in this paper suggest that cross-border/international angel investment is and will remain a small proportion of overall angel investment, it does nevertheless occur and there are emerging examples of angel groups focused specifically on international investment through coinvestment and syndication (Antretter et al., 2020). Given this, the analysis and conclusions above have significant implications for both theory and practice.

Policy intervention in the angel market has generally been based on incentivising the supply of capital by adjusting the risk-reward relationship and through the amelioration of the information asymmetries and agency costs typically associated with this activity, which increase the possibility of both adverse selection and moral hazard and thereby reduce the potential benefits of angel investing to both the investor and the wider economy as sub-optimal investments are made (Wright and Siegel, 2021; Wirtz 2011; Miller and Sardais 2011). To the extent to which angel investing is an agency theoretic phenomenon (and Landström (1992), for example, has suggested it is a principal-principal rather than principal-agent phenomenon), initiatives such as ESIL (Table 1) which focus on relationship and institution building across borders, and increasing use of coinvestment and syndication strategies by angel investors and groups (Antretter et al., 2020) can be justified.

However, our reservations about policies to support increased cross-jurisdictional angel investing, based on identifying three underlying flawed assumptions, are reinforced by more theoretical concerns. For example, from an institutional theory perspective (Pacheco et al., 2010) angel investors, as with other entrepreneurial finance actors (Cumming and Zhang 2019), are embedded in the different institutional settings in which they invest (Ding et al., 2014; Florin et al., 2013; Harrison et al., 2018), and the extent, frequency and mode of angel involvement with the target venture can be shaped by the institutional environment (Collewaert et al., 2021). Specifically, social trust in particular affects information transmission, collaboration and sanctioning mechanisms and moderates the relationship between angel investment and individual factors (Ding et al., 2015), such that high-trust societies have higher levels of angel investment (cf Harrison and Mason, 1996; Harrison et al., 1997; Bammens and Collewaert 2014). This points to the broader importance of culture more widely defined (Hofstede 2001; Smith 2002; Kirkman et al., 2017), and of cultural distance in particular, on the potential for cross-border angel investing. Based on an established tradition of entrepreneurship research in this vein (Krueger et al., 2013), one of the implications of cultural distance for the internationalisation of angel investment is that cross-border investment will be an inverse function of cultural distance. Aside from the implications of the three assumptions examined in this paper, this suggests a further restriction on the possibility of cross-border angel investment.[2]

In terms of practice, the review in this paper has demonstrated the limitations of linear thinking and non-systemic thinking in policy design, advocacy and implementation in support of the angel investment market in general and of cross-border investment in particular, as represented in calls from EU bodies, trade associations and representative bodies (EBAN, AFME) and industry commentators. A more systems-based perspective is represented by the policy mix construct which represents the interaction and interdependence between different policies as they affect the extent to which intended policy outcomes are achieved (Flanagan et al., 2011). This involves identification of the contribution of different policy elements to the complexity of real world policy making in terms of emergence, interaction, monitoring and adaptive learning (Feldman and Lowe 2018; Rogge and Reichardt, 2016). This policy-mix perspective provides a comprehensive framework for capturing the dynamics between individual policies and the overall goals of policy, and provides a systemic rationale for policy that emphasises both indirect and direct measures and demand and supply side instruments (Flanagan et al., 2011). However, previous studies conducted under this framework have focused mainly on the "what" and "why" of policy mixes for pursuing the overall goals, while relatively neglecting the "how" issue (Kanger et al., 2020). To address this, Kanger et al. (2020) introduce the concept of "policy intervention points", which are positioned as a "mid-step" between overall goals and particular policy instruments for achieving the goals. By identifying the critical issues of the goals and delineating what to target in the first place, policy intervention points could help design more effective policy strategies and targeted instrument mixes (Wang et al., 2022).

In so doing, however, there is a danger of assuming that theory-based rationales are the primary driver of policy development, and that policy proceeds in linear discrete stages with the policy maker as the (relatively) passive recipient of a rationale from outside. In

[2] However, research must take into account criticisms of Hofstede's work as methodologically flawed (McSweeney 2002), characterised by inconsistencies that oversimplify cultural differences (Signorini et al., 2009), static not dynamic (Venaik and Brewer, 2013), and biased to a Western context (Fang 2003; Kwon 2012), an important limitation for applications to angel investing, given the expansion of angel investing in non-Western contexts (Harrison 2017). There is little doubt that Hofstede's 'theoretical constructs need to be thoroughly re-examined within the context of early 21st century cross-cultural attitudes and patterns of behavior' (Orr and Hauser 2008, 16).

identifying the largely atheoretical rationale for current policies to support angel investment in general and cross-border angel investment in particular, and identifying a number of directions for a more theory-informed approach, we nevertheless remain convinced that '[F]undamentally, the specific rationales formulated by policy makers, whether explicit or implicit and in need of unearthing, should be the starting point for any evaluation of the effectiveness of policy action - rather than theoretical rationales retrospectively mapped onto policy actions by scholars' (Flanagan et al., 2011). The basis for policy support of the angel investment market in general is challenged by the flawed interrelated assumptions of market supply deficiency, the complementarity of angel and VC funding and the structural integration of VC and angel circuits of capital. In particular, a more attuned policy that recognises the current state of the market and which acknowledges these flawed assumptions will acknowledge that, contrary to emerging calls for new policy initiatives, a significant increase in cross-border angel investment is unlikely and that at whatever scale it does occur is unlikely to meet the economic goals (improving EU performance in terms of the start-up and scale-up of high growth potential entrepreneurial ventures) ascribed to it. From this perspective, cross-border angel investment is a (epi)phenomenon in search of a policy and a policy based on advocacy rather than argument. The report card for both the policy development and the commentary on it simply reads "could do better".

Credit author statement

Richard T Harrison – Conceptualization; Investigation; Writing – original draft; Writing – review & editing; Project administration.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

Acharya, V.V., Steffen, S., 2020. The risk of being a fallen angel and the corporate dash for cash in the midst of COVID. Rev. Corp. Finan. Stud. 9 (3), 430–471.
Acs, Z.J., Stam, E., Audretsch, D.B., O'Connor, A., 2017. The lineages of the entrepreneurial ecosystem approach. Small Bus. Econ. 49 (1), 1–10.
Aizenman, J., Kendall, J., 2012. The internationalization of venture capital. J. Econ. Stud. 39, 488–511.
Alhorr, H.S., Moore, C.B., Payne, G.T., 2008. The impact of economic integration on cross–border venture capital investments: evidence from the European union. Enterpren. Theor. Pract. 32 (5), 897–917.
Amin, A., Cameron, A., Hudson, R., 2002. Placing the Social Economy. Routledge, London.
Antretter, T., Sirén, C., Grichnik, D., Wincent, J., 2020. Should business angels diversify their investment portfolios to achieve higher performance? The role of knowledge access through co-investment networks. J. Bus. Ventur. 35 (5), 106043.
Bammens, Y., Collewaert, V., 2014. Trust between entrepreneurs and angel investors: exploring positive and negative implications for venture performance assessments. J. Manag. 40 (7), 1980–2008.
Bańkowska, K., Ferrando, A., García, J.A., 2020. The COVID-19 pandemic and access to finance for small and medium-sized enterprises: evidence from survey data. Econ. Bull. Box. 4.
Berglund, H., Dimov, D., Wennberg, K., 2018. Beyond bridging rigor and relevance: the three-body problem in entrepreneurship. J. Bus. Ventur. Insight. 9 (5), 87–91.
Benjamin, G.A., Margulis, J.B., 2000. Angel Financing: How to Find and Invest in Private Equity. Wiley, New York.
Bradley, W., Duruflé, G., Hellmann, T.F., Wilson, K.E., 2019. Cross-border Venture Capital Investments: what Is the Role of Public Policy? *ECGI Finance Working Paper 591/2019*, available at: http://ssrn.com/abstract_id=3318250.
Brenner, N., 1998. Global cities, glocal states: global city formation and state territorial restructuring in contemporary Europe. Rev. Int. Polit. Econ. 5, 1–37.
Breuer, W., Pinkwart, A., 2018. Venture capital and private equity finance as key determinants of economic development. J. Bus. Econ. 88, 319–324.
British Business Bank, 2021. Regions and Nations Tracker: Small Business Finance Markets 2021. British Business Bank, Sheffield.
Brown, R., Rocha, A., 2020. Entrepreneurial uncertainty during the Covid-19 crisis: mapping the temporal dynamics of entrepreneurial finance. J. Bus. Ventur. Insight. 14, e00174.
Brown, R., Rocha, A., Cowling, M., 2020. ? covid19?> Financing entrepreneurship in times of crisis: exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. Int. Small Bus. J. 38 (5), 380–390.
Bryan, D., Rafferty, M., Wigan, D., 2017. The map and the territory: exploring capital's new financialized spatialities. In: Martin, R., Pollard, J. (Eds.), Handbook on the Geographies of Money and Finance. Edward Elgar, pp. 86–104.
Carpentier, C., Suret, J.M., 2007. On the usefulness of tax incentives for informal investors. Ventur. Cap.: Int. J. Entrepreneur. Finan. 9 (1), 1–22.
Carpentier, C., Suret, J.-M., 2016. The effectiveness of tax incentives for business angels. In: Mason, C., Landström, H. (Eds.), Handbook of Research on Venture Capital, vol. 3. Edward Elgar, Cheltenham, pp. 327–354. Business Angels.
Chapple, D., Pollock, N., D'Adderio, L., 2021. From pitching to briefing: extending entrepreneurial storytelling to new audiences. Organ. Stud. DOI: 10 1 1177/017084062 1 1024564.
Chemmanur, T.J., Rajaiya, Xu, J., 2021. Angels and Venture Capitalists: Complementarity versus Substitution, Financing Sequence, and Relative Value Addition to Entrepreneurial Firms available at: https://ssrn.com/abstract=3946772.
Collewaert, V., Filatotchev, I., Khoury, T.A., 2021. The view of angels from above: angel governance and institutional environments. Acad. Manag. Perspect. 35 (1), 9–24.
Colombo, M.G., Cumming, D.J., Vismara, S., 2016. Governmental venture capital for innovative young firms. J. Technol. Tran. 41 (1), 10–24. https://doi.org/10.1007/s10961-014-9380-9.
Corpataux, J., Crevoisier, O., Theurillat, T., 2017. The territorial governance of the financial industry. In: Martin, R., Pollard, J. (Eds.), Handbook on the Geographies of Money and Finance. Edward Elgar, Cheltenham, pp. 69–85.
Crevoisier, O., 1997. Financing regional endogenous development: the role of proximity capital in the age of globalization. Eur. Plann. Stud. 5 (3), 407–415.
Crevoisier, O., Quiquerez, F., 2005. Inter-regional corporate ownership and regional autonomy: the case of Switzerland. Ann. Reg. Sci. 39, 633–689.
Cumming, D., Johan, S., Zhang, Y., 2018. Public policy towards entrepreneurial finance: spillovers and the scale-up gap. Oxf. Rev. Econ. Pol. 34 (4), 652–675.
Cumming, D., Li, D., 2013. Public policy, entrepreneurship, and venture capital in the United States. J. Corp. Finance 23, 345–367.
Cumming, D., Zhang, M., 2019. Angel investors around the world. J. Int. Bus. Stud. 50 (5), 692–719.

Devigne, D., Manigart, S., Vanacker, T., Mulier, K., 2018. Venture capital internationalization: synthesis and future research directions. J. Econ. Surv. 32 (5), 1414–1445.
Dimov, D., 2016. Toward a design science of entrepreneurship. In: Models of Start-Up Thinking and Action: Theoretical, Empirical and Pedagogical Approaches. Emerald Group Publishing Limited.
Ding, Z., Sun, S.L., Au, K., 2014. Angel investors' selection criteria: a comparative institutional perspective. Asia Pac. J. Manag. 31 (3), 705–731.
Ding, Z., Au, K., Chiang, F., 2015. Social trust and angel investors' decisions: a multilevel analysis across nations. J. Bus. Ventur. 30 (2), 307–321.
Doel, M., Hubbard, P., 2007. Taking world cities literally: marketing the city in a global space of flows. City Anal. Urban Trends Cult. Theor. Pol. Action 6, 351–368.
Drover, W., Busenitz, L., Matusik, S., Townsend, D., Anglin, A., Dushnitsky, G., 2017. A review and road map of entrepreneurial equity financing research: venture capital, corporate venture capital, angel investment, crowdfunding, and accelerators. J. Manag. 43 (6), 1820–1853.
Duruflé, G., Hellman, T., Wilson, K., 2018. From start-up to scale-up: policies for the financing of high-growth ventures. In: Mayer, C., Micossi, S., Onado, M., Pagano, M., Polo, A. (Eds.), Finance and Investment: the European Case. Oxford University Press, pp. 179–219.
Edelman, L.F., Manolova, T.S., Brush, C.G., 2017. Angel investing: a literature review. Found. Trend. Entrepreneur. 13, 265–439. https://doi.org/10.1561/0300000051.
Ellul, A., Erel, I., Rajan, U., 2020. The COVID-19 pandemic crisis and corporate finance. Rev. Corp. Finan. Stud. 9 (3), 421–429.
Fagan, R., Le Heron, R., 1994. Reinterpreting the geography of accumulation: the global shift and local restructuring. Environ. Plann. Soc. Space 12, 265–285.
Fang, T., 2003. A critique of Hofstede's fifth national culture dimension. Int. J. Cross Cult. Manag. 3 (3), 347–368.
Feldman, M., Lowe, N., 2018. Policy and collective action in place. Camb. J. Reg. Econ. Soc. 11 (2), 335–351.
Flanagan, K., Uyarra, E., Laranja, M., 2011. Reconceptualising the 'policy mix' for innovation. Res. Pol. 40 (5), 702–713.
Florida, R., 2013. The new global start-up cities. Atlan. Citi. 4 June 2013 http://theatlanticcities.com/jobs-and-economy/2013/06/new-global-start-cities/5144/. (Accessed 13 November 2013).
Florin, J., Dino, R., Huvaj, M.N., 2013. Research on angel investing: a multilevel framework for an emerging domain of inquiry. Ventur. Cap. 15 (1), 1–27.
Fuller, D., Jonas, A., Lee, R. (Eds.), 2010. Interrogating Alterity: Alternative Economic and Political Spaces. Ashgate, Farnborough.
Gray, M., Zhang, B., 2017. Crowdfunding: understanding diversity. In: Martin, R., Pollard, J. (Eds.), Handbook on the Geographies of Money and Finance. Edward Elgar, pp. 580–609.
Gregson, G., Mann, S., Harrison, R., 2013. Business angel syndication and the evolution of risk capital in a small market economy: evidence from Scotland. Manag. Decis. Econ. 34 (2), 95–107.
Grilli, L., 2019. There must be an angel? Local financial markets, business angels and the financing of innovative start-ups. Reg. Stud. 53 (5), 620–629.
Guerini, M., Quas, A., 2016. Governmental venture capital in Europe: screening and certification. J. Bus. Ventur. 31, 175–195.
Harrison, R.T., 2017. The internationalisation of business angel investment activity: a review and research agenda. Ventur. Cap.: Int. J. Entrepreneur. Finan. 19, 119-12.
Harrison, R.T., 2018. Crossing the chasm: the role of co-investment funds in strengthening the regional business angel ecosystem. Small Enterprise Res. 25, 3–22.
Harrison, R.T., Baldock, R., 2015. Financing SME growth in the UK: meeting the challenges after the global financial crisis. Ventur. Cap. *An International Journal of Entrepreneurial Finance*17 (1-2) June.
Harrison, R.T., Dibben, M.R., Mason, C.M., 1997. The role of trust in the informal investor's decision: an exploratory analysis. Enterpren. Theor. Pract. 21 (4), 63–82.
Harrison, R.T., Mason, C.M., Robson, P.J.R., 2010a. Determinants of long-distance investing by business angels. Enterpren. Reg. Dev. 22, 113–137.
Harrison, R.T., Don, G., Glancey-Johnson, Greig, M., 2010b. The early stage risk capital market in Scotland since 2000 – issues of scale, characteristics and market efficiency. Ventur. Cap.: Int. J. Entrepreneur. Finan. 12, 211–239.
Harrison, R.T., Mason, C.M. (Eds.), 1996. Informal Venture Capital: Evaluating the Impact of Business Introduction Services. Prentice Hall/Woodhead Faulkner, Maidenhead.
Harrison, R.T., Mason, C.M., 2000. Venture capital market complementarities: the links between business angels and venture capital funds in the UK. Ventur. Cap.: Int. J. Entrepreneur. Finan. 2 (3), 223–242.
Harrison, R.T., Gregson, G., Bock, A., 2020a. Stairway to heaven? Rethinking angel investment policy and practice. J. Bus. Ventur. Insight. 14.
Harrison, R., Scheela, W., Lai, P.C., Vivekarajah, S., 2018. Beyond institutional voids and the middle-income trap: the emerging business angel market in Malaysia. Asia Pac. J. Manag. 35 (4), 965–991.
Harrison, R.T., Yohanna, B., Pierrakis, Y., 2020b. Internationalisation and localisation: foreign venture capital investments in the United Kingdom. Local Econ. 35, 230–256.
Hellmann, T., Frydrych, D., Hicks, C., Rauch, C., Brahm, F., Loch, C., Kavadias, S., Hiscocks, P., 2016. Financing UK scale-ups: challenges and recommendations. In: Scale-up UK: Growing Businesses, Growing Our Economy. Barclays plc, London, pp. 38–76.
Hellmann, T., Schure, P., Vo, D., 2019. Angels and Venture Capitalists: Complements or Substitutes? Saïd Business School. Oxford University (Research Papers).
Hellmann, T., Thiele, V., 2015. Friends or foes? The interrelationship between angel and venture capital markets. J. Financ. Econ. 115 (3), 639–653.
Hofstede, G., 2001. Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations across Nations. Sage publications.
Hudson, R., 2011. Spatial circuits of capital. In: Pike, A., Rodríguez_Peros, Tomaney, J. (Eds.), Handbook of Local and Regional Development. Routledge, London, pp. 109–118.
Hyytinen, A., 2021. Shared problem solving and design thinking in entrepreneurship research. J. Bus. Ventur. Insight. 16, e00254.
Invest Europe, 2021. Investing in Europe: Private Equity Activity 2020. Invest Europe, Brussels.
Johnson, A., Burke, J., 1936. Pennies from Heaven. Warner Chappell Music.
Johnson, W.C., Sohl, J., 2012a. Angels and venture capitalists in the initial public offering market. Ventur. Cap. 14 (1), 27–42.
Johnson, W.C., Sohl, J., 2012b. Initial public offerings and pre-ipo shareholders: angels versus venture capitalists. J. Dev. Enterpren. 17 https://doi.org/10.1142/S1084946712500227.
Kanger, L., Sovacool, B.K., Noorkõiv, M., 2020. Six policy intervention points for sustainability transitions: a conceptual framework and a systematic literature review. Res. Pol. 49 (7).
Karlson, N., Sandström, C., Wennberg, K., 2021. Bureaucrats or markets in innovation policy?–a critique of the entrepreneurial state. Rev. Austrian Econ. 34 (1), 81–95.
Karwowski, E., Shabani, M., Stockhammer, E., 2020. Dimensions and determinants of financialisation: comparing OECD countries since 1997. New Polit. Econ. 25 (6), 957–977.
Kirkman, B.L., Lowe, K.B., Gibson, C.B., 2017. A retrospective on Culture's Consequences: the 35-year journey. J. Int. Bus. Stud. 48 (1), 12–29.
Krueger, N., Liñán, F., Nabi, G., 2013. Cultural values and entrepreneurship. Enterpren. Reg. Dev. 25 (9–10), 703–707.
Kwon, J.W., 2012. Does China have more than one culture? Asia Pac. J. Manag. 29 (1), 79–102.
Lahti, T., Keinonen, H., 2016. Business angel networks: a review and assessment of their value to entrepreneurship. In: Landström, H., Mason, C. (Eds.), Handbook on Research on Venture Capital, ume 3. Edward Elgar, pp. 354–378. Business angels.
Landström, H., 1992. The relationship between private investors and small firms: an agency theory approach. Enterpren. Reg. Dev. 4 (3), 199–223.
Lee, R., 2011. Within and outwith/material and political? Local economic development and the spatialities of economc geographies. In: Pike, A., Rogriguez-Pos, A., Tomaney, J. (Eds.), Handbook of Local and Regional Development. Routledge, London, pp. 193–212.
Lee, R., Leyshon, A., Aldridge, T., Tooke, J., Williams, C., Thrift, N., 2004. Making geographies and histories? Constructing local circuits of value. Environ. Plann. Soc. Space 22, 595–617.
Lerner, J., 2002. When Bureaucrats Meet Entrepreneurs: The Design of Effective `public Venture capital'programmes. The Economic Journal 112 (477), F73–F84.
Lerner, J., 2009. Boulevard of Broken Dreams: Why Public Efforts to Boost Entrepreneurship and Venture Capital Have Failed-And what to Do about it. Princeton University Press.

Lundström, A., Vikström, P., Fink, M., Meuleman*, M., Głodek, P., Storey, D., Kroksgård, A., 2014. Measuring the costs and coverage of SME and entrepreneurship policy: a pioneering study. Enterpren. Theor. Pract. 38 (4), 941–957.
Mandel, E., 1975. Late Capitalism. Humanities Press, London.
Martin, R., Berndt, C., Klagge, B., Sunley, P., 2005. Spatial proximity effects and regional equity gaps in the venture capital market: evidence from Germany and the United Kingdom. Environ. Plann.: Econ. Sp. 37 (7), 1207–1231.
Martin, R., Minns, R., 1995. Undermining the financial basis of regions: the spatial structure and implications of the UK pension fund system. Reg. Stud. 29, 125–144.
Martin, R., Pollard, J., 2017. The geography of money and finance. In: Martin, R., Pollard, J. (Eds.), Handbook on the Geographies of Money and Finance. Edward Elgar, pp. 1–26.
Mason, C., Botelho, T., 2021. Business angel investing during the covid-19 economic crisis: evidence from Scotland. Ventur. Cap. 1–23.
Mason, C., Botelho, T., Duggett, J., 2021. Promoting crossborder investing by business angels in the European Union. Reg. Stud. https://doi.org/10.1080/00343404.2021.1960961.
Mason, C.M., Harrison, R.T., 2001. Investment readiness: a critique of Government proposals to increase the demand for venture capital. Reg. Stud. 35, 663–668.
Mason, C.M., Harrison, R.T., 2015. Business angel investment activity in the financial crisis: UK evidence and policy implications. Environ. Plann. C Govern. Pol. 33 (1), 43–60.
Mason, C.M., Harrison, R.T., Botelho, T., 2019. The changing nature of angel investing: some research implications. Ventur. Cap.: Int. J. Entrepreneur. Finan. 21, 177–194.
Mason, C., Kwok, J., 2010. Investment readiness programmes and access to finance: a critical review of design issues. Local Econ. 25 (4), 269–292.
Mason, C.M., 2009. Public policy support for the informal venture capital market in Europe: a critical review. Int. Small Bus. J. 27 (5), 536–556.
Mason, C.M., Harrison, R.T., 2004. Improving access to early stage venture capital in regional economies: a new approach to investment readiness. Local Econ. 19, 159–173.
McSweeney, B., 2002. The essentials of scholarship: a reply to Geert Hofstede. Hum. Relat. 55 (11), 1363–1372.
Meuleman, M., De Maeseneire, W., 2012. Do R&D subsidies affect SMEs' access to external financing? Res. Pol. 41 (3), 580–591.
Miller, D., Sardais, C., 2011. Angel agents: agency theory reconsidered. Acad. Manag. Perspect. 25 (2), 6–13.
North, D., Baldock, R., Ullah, F., 2013. Funding the growth of UK technology-based small firms since the financial crash: are there breakages in the finance escalator? Ventur. Cap. 15 (3), 237–260.
OECD, 2011. Financing High-Growth Firms: the Role of Angel Investors. OECD Publishing.
Orr, L.M., Hauser, W.J., 2008. A re-inquiry of Hofstede's cultural dimensions: a call for the 21st century. Market. Manag. J. 18 (2), 1–19.
Pandya, S., Leblang, D., 2011. Deal or No Deal: the Growth of International Venture Capital Investment. *Discussion Paper*. Darden School of Business, University of Virginia.
Pacheco, D.F., York, J.G., Dean, T.J., Sarasvathy, S.D., 2010. The coevolution of institutional entrepreneurship: a tale of two theories. J. Manag. 36 (4), 974–1010.
Patel, S., Mehta, K., 2017. Systems, design, and entrepreneurial thinking: comparative frameworks. Syst. Pract. Action Res. 30 (5), 515–533.
Piaskowska, D., Tippmann, E., Monaghan, S., 2021. Scale-up modes: profiling activity configurations in scaling strategies. Long. Range Plan. 102101.
Plummer, L.A., Pe'er, A., 2010. The geography of entrepreneurship. In: Handbook of Entrepreneurship Research. Springer, New York, NY, pp. 519–556.
Ricciardi, F., Rossignoli, C., Zardini, A., 2021. Grand challenges and entrepreneurship: emerging issues, research streams, and theoretical landscape. Int. Enterpren. Manag. J. 17 (4), 1673–1705.
Rogge, K.S., Reichardt, K., 2016. Policy mixes for sustainability transitions: an extended concept and framework for analysis. Res. Pol. 45 (8), 1620–1635.
Rotger, G.P., Gørtz, M., Storey, D.J., 2012. Assessing the effectiveness of guided preparation for new venture creation and performance: theory and practice. J. Bus. Ventur. 27 (4), 506–521.
Schertler, A., Tykvová, T., 2009. Venture Capital and Internationalization. Zentrum für Europäische, Mannheim. *Discussion Paper 09-055*.
Signorini, P., Wiesemes, R., Murphy, R., 2009. Developing alternative frameworks for exploring intercultural learning: a critique of Hofstede's cultural difference model. Teach. High. Educ. 14 (3), 253–264.
Smith, P.B., 2002. Culture's consequences: something old and something new. Hum. Relat. 55 (1), 119–135.
Teague, B., Gorton, M.D., Liu, Y., 2019. Different pitches for different stages of entrepreneurial development: the practice of pitching to business angels. Enterpren. Reg. Dev. https://doi.org/10.1080/08985626.2019.1641977.
Venaik, S., Brewer, P., 2013. Critical issues in the Hofstede and GLOBE national culture models. Int. Market. Rev. 30 (5), 469–482.
Vogelaar, J.J., Stam, E., 2021. Beyond market failure: rationales for regional governmental venture capital. Ventur. Cap. 1–34.
Wang, H., Zhao, T., Cooper, S.Y., Wang, S., Harrison, R.T., Yang, Z., 2022. Effective Policy Mixes in Entrepreneurial Ecosystems: a Configurational Analysis in an Emerging Economy.
White, B.A., Dumay, J., 2017. Business angels: a research review and new agenda. Ventur. Cap.: Int. J. Entrepreneur. Finan. 19, 183–216.
Wilson, K.E., 2014. New Investment Approaches for Addressing Social and Economic Challenges. *OECD Science, Technology and Industry Policy Papers*, No. 15. OECD Publishing. https://doi.org/10.1787/5jz2bz8g00jj-en.
Wilson, N., Wright, M., Kacer, M., 2018. The equity gap and knowledge-based firms. J. Corp. Finance 50, 626–649.
Wirtz, P., 2011. Beyond agency theory: value creation and the role of cognition in the relationship between entrepreneurs and venture capitalists. In: Advances in Entrepreneurial Finance. Springer, New York, NY, pp. 31–43.
World Economic Forum, 2013. Entrepreneurial Ecosystems Around the Globe and Company Dynamics. World Economic Forum, Geneva.
Wright, M., Pruthi, S., Lockett, A., 2005. International venture capital research: from cross-country comparisons to crossing borders. Int. J. Manag. Rev. 7 (3), 135–165.
Wright, M., Lumpkin, T., Zott, C., Agarwal, R., 2016. The evolving entrepreneurial finance landscape. Strat. Enterpreneur. J. 10 (3), 229–234.
Wright, M., Siegel, D., 2021. Alternative investments, new organizational forms, and corporate governance. Acad. Manag. Perspect. 35 (1), 1–8.
Zimmermann, V., 2020. Innovation and investment finance in comparison. In: Moritz, A., Block, J.H., Golla, S., Werner, A. (Eds.), Contemporary Developments in Entrepreneurial Finance. Springer, Cham, pp. 59–79.