



Economic Intelligence Wales

Equity clusters in Wales

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Executive Summary

The report examines SME access to equity finance in Wales, and the extent to which Cardiff is a developing equity cluster, in order to potentially develop more clusters across Wales. An equity cluster can be understood as a place that has tangible organisational procedures and structures that brings investors and investees close together and experiences a high concentration of equity deals. The British Business Bank defines equity clusters as regions where various types of equity deals are made, since ‘equity deals tend to be grouped into geographic clusters where innovative companies, skilled labour and equity investors locate close together’.

Equity funding levels are important for Welsh economic development

Firms receiving equity funding are found to demonstrate faster turnover and employment growth, and to have stronger routes to innovation processes. Regions with relatively high numbers of equity investments show more robust economic growth, increasing employment rates and high economic prosperity. However, SME equity supply (and demand) gaps exist in many peripheral UK regions and are associated with geographically-specific social, economic and political contexts.

Equity finance

Equity investments are typically made by venture capital funds, business angels, crowd funders, corporate investors, or Government funds, and take place at different stages of firm development. This includes seed financing, start-up funding, early stage financing, expansion funding, and replacement finance.

The Development Bank of Wales is a major agent in equity finance in Wales

The Development Bank of Wales plays an important brokerage role in bringing together SMEs and other equity investors. By the number of investments, the Development Bank of Wales is among the largest SME equity investors in the UK, after Seedrs, Crowdcube, Scottish Enterprise, and Syndicate Room. The Development Bank of Wales made 62 equity investments in 2017, and 77 in 2018. Between 2002 and 2018 the Development Bank of Wales (and previously Finance Wales) made 628 equity investments, with a total value of £158m. Professional services, manufacturing, and information and communication are the main recipients of Development Bank of Wales’ equity funds.

SMEs located in Cardiff received 27% of the value of the Development Bank of Wales’ equity investments and 30% of the number of investments in the period 2002-2018. This concentration has been reflective of demand but the Development Bank of Wales is a lever for investing more equity across all of Wales.

The concept and development of an equity cluster

Equity clusters are key components of a regional entrepreneurial ecosystem. The report raises some issues in respect of the concept of equity clusters. The term is little recognised in research literature, with more research focused on the concept of financial clusters defined as spatial concentrations of financial firms. Moreover, an equity cluster might be understood in terms of the concentration of equity deals made in an area. However in framing a ‘cluster’ the origin of funds should be considered, as well as the destination territory where the investment is made (where equity recipients are located). These could be some distance apart such that a ‘cluster’ of equity deals could relate to providers far distant from recipients.

Factors affecting the evolution and growth of financial centres are closely related to the factors explaining equity clusters. There is likely to be spatial concentration in equity investments reflecting concentrations of potential investors, and demands from firms. An accumulation of equity investors in one place may reinforce demands for equity in a given location, and firms which are geographically proximate to equity funders are more likely to receive equity investments. Moreover, tacit knowledge and face-to-face contact are important factors for the emergence and growth of equity clusters.

Cardiff is an evolving equity cluster

There are encouraging signs that pieces of the equity ecosystem are already in place and/or evolving in Cardiff. Cardiff has a strong concentration of financial services companies, and a large number of companies that have benefitted from business accelerator programmes. Cardiff is weaker in terms of numbers of university spinouts which are another key element of an equity ecosystem.

Consultations: What are the key issues around the supply of, and demand for, equity finance in Cardiff and Wales?

Consultations identified a paucity of equity deals involving £0.5m or more (although it is noted that the Development Bank of Wales can invest up to £5m in equity deals, but with problems identified in matching these investments with capital from other private sources). Larger deals were more likely to be conducted by large private equity companies located primarily in London. Few Welsh SMEs have the scale, time, resources and high growth prospects to attract this type of finance from equity markets outside Wales.

The supply of equity finance in Wales largely mirrors a demand problem with insufficient numbers of the types of businesses in terms of turnover and profits which are capable or have the desire to raise larger scales of equity funding. The number and value of deals are wholly dependent on the business base of the region, a factor affecting the supply and demand side for equity finance, and prospects for the development of an equity cluster around Cardiff.

SMEs in Wales are more likely to absorb equity funding from investors also located in Wales. Concerns were raised on whether government schemes established to boost the supply of small amounts of risk capital to SMEs were sufficiently utilised.

Consultations revealed difficulties for SMEs in approaching and promoting their plans to potential investors. This was coupled with equity investors being unable to find SMEs with investment plans that satisfy their investment criteria, with this linked to low entrepreneur awareness of equity funding opportunities, government schemes and equity investors in their area.

Consultations: How can the supply of, and demand for, SME equity finance be improved?

Consideration needs to be given to improving the supply of equity funds and venture capital through the use of syndicates which build upon existing angel investor networks. In this respect recent activity by the Development Bank of Wales to launch Angels Invest Wales, the Wales Angel Co-Investment Fund, and work to identify lead angel investors with the potential to form syndicates is very welcome.

More consideration might be given to attracting capital from expatriates from Wales, and demonstrating investment opportunities to this diaspora. Welsh Government initiatives such as the 'Global Welsh' project could be crucial in this.

Equity finance in Wales appears to be targeted on a small number of sectors. Equity investors might be encouraged to explore other sectors of the regional economy, and look more carefully at their funding criteria, and whether this can be finessed to increase the types of SMEs that are eligible for finance.

The regional policy instruments as they apply to equity financing need to be better linked to general economic development policy in Wales, and be better connected to debates around the productivity problem in Wales.

Increasing entrepreneurial awareness of equity funding schemes and especially the benefits of raising equity capital is critical, with a challenge for Welsh SMEs to become more 'investment ready'. Entrepreneurial training in terms of how they may approach investors and efficiently promote financial plans and business ideas is important, as is better understanding the funding criteria used by equity investors.

Recommendations:

The report recommendations relate to both the means through which the supply of, and demand for, equity finance can be improved in Wales. The report argues that the development issue for Wales is not so much around the presence or otherwise of an equity cluster, but rather improving general conditions around equity supply and the identification of demand for equity in different parts of Wales, and in a wide range of sectors. The recommendations are that:

- Care is needed in developing only Cardiff as an equity cluster. Strong recent growth and the sectoral make-up of Cardiff reveals a number of projects available for equity investors, and with elements of the supply side already in place, but with some problems associated with raising capital from private sector funders in the region. More focus is needed on developing demand for equity across Wales in a wider number of sectors.
- More should be done to alert Welsh SMEs to the advantages of equity and sources of equity, and with assistance required to help entrepreneurs in developing their business cases for equity. Creating sufficient regional and local institutional networks to enable learning about equity funding possibilities is a necessity, as is improving knowledge of existing state equity schemes.
- Although Cardiff has three research universities and is therefore uniquely placed to coordinate an effort to increase spinout numbers, the Development Bank of Wales' pan-Wales reach and supply of equity finance should seek to work with universities across Wales to facilitate an increased spinout pipeline.
- The sectoral focus of equity deals in sectors such as manufacturing, business services and ICT is a concern. Equity investors might be encouraged to refine their investment rules and screens to accommodate different sectors.
- More effort is needed to identify potential demand for equity in parts of Wales away from Cardiff, including firms in rural areas. In this respect, alerting equity investors to opportunities across Wales is critical. The Development Bank of Wales is well placed to assess equity demand across the country.
- The claim that equity demands above £0.5m are more difficult to service within Wales needs to be investigated. As the Development Bank of Wales can invest up to £5m in equity deals, this hints at a lack of capital from other private sector sources to be set besides larger equity deals involving the Development Bank of Wales. Alerting external equity investors to potential regional projects outside of South East Wales is a priority.

1. Introduction

This report follows the British Business Bank's 2017 *Small Business Equity Tracker* which noted that 'English regions and devolved administration figures disguise the large variation in equity deal numbers that occurs within areas as equity deals tend to be grouped into geographic clusters where innovative companies, skilled labour and equity investors locate close together'. The 2017 *Small Business Equity Tracker* also identified Cardiff as one of the top 25 Local Authorities for number of equity deals. To further explore this concept, an overview of equity finance in Wales is also required.

The aim of this report is to examine:

- SME access to equity finance in Wales.
- The factors explaining the pattern of SME equity deals across Wales.
- How far regional conditions support the development of an equity cluster in and around Cardiff.

The next section of the report describes the features of equity finance, the importance of geography in framing the demand and supply side of equity finance, and the factors determining the evolution of equity clusters. Section 3 analyses SME access to equity finance in the UK, its geographical distribution and the emergence of equity clusters and ecosystems.

Section 4 of the report examines specific trends in SME equity finance in Wales, explores equity deals across Wales through time, and examines the number, value and stage of equity deals completed by the Development Bank of Wales, before examining the geographical distribution of equity finance in Wales. There is a focus on the spatial concentration of equity activity in Cardiff in terms of both demand for, and supply of, equity.

Section 5 then reviews the findings from a series of consultations that were undertaken to examine factors explaining the demand for, and supply of, equity finance for Welsh SMEs, and that considered what might be done to improve opportunities both for potential equity investors in Welsh SMEs, as well as for entrepreneurs seeking this type of finance, and then what could be done to evolve an equity cluster in the Cardiff area.

The final section of the report includes a series of recommendations in respect of improving the demand and supply side conditions for equity finance in Wales, and the steps which might be taken to better evolve an equity cluster in the Cardiff area.

2. Equity finance and the development of equity clusters

2.1. Equity finance

Equity finance involves raising money by issuing shares of common or preferred stock. Equity can bring a strong return on investment where firms are successful and grow but can be a risky type of finance for investors with no guarantee of regular financial returns. Equity investors therefore typically seek opportunities with high-growth firms with strong and convincing business plans. However, contrary to debt, where the borrower pays interest, an equity investor shares in profits, but also in losses. Inevitably equity investment can involve some dilution of ownership and control for the firm owner.

Equity investment can occur at different stages of firm development and involve seed financing, start-up funding, early stage financing, expansion funding, replacement finance, or so-called “vulture financing”. Equity investments are typically made by venture capital funds, business angels, crowd funders, corporate investors, and Government funds. Equity investors may not just provide funds but managerial inputs as well as a stock of business advice.

The supply of equity funding, in the context of Welsh economic development, is of interest for a number of factors:

- Firms receiving equity funding demonstrate faster turnover and employment growth.¹
- Equity finance is connected to an increase in the efficiency of firm innovation processes.²
- Regions with relatively high numbers of equity investments show more robust economic growth, increasing employment rates and high economic prosperity.

Equity financing has grown strongly in recent years against a background of a changing composition of business investment, often replacing cash flow investment, particularly in businesses with negative cash flows or young and high-tech companies.³ Equity finance is typically discussed in terms of large and publicly traded corporations, rather than micro and small companies, with this partly down to the relatively high cost associated with equity financing for SMEs.

However, the economic environment around equity investments has changed, with falling costs involved in equity funding, improved access conditions for equity investments into SMEs and with fund managers seeking investments beyond large and well-capitalised companies.⁴

Research identifies persistent equity gaps for SMEs with this associated with geographically-specific social, economic and political contexts.⁵ These gaps are defined as ‘an estimated range of equity deal sizes which receive relatively little investment from private investors, often due to structural issues or features of the economy disincentivising investment of these values’.⁶ These funding gaps are not evenly distributed across locations, highlighting the crucial role of geography in equity markets.

¹ Beauhurst (2018) *The Scaleup Index 2018*. Available at: <http://www.scaleupinstitute.org.uk/wp-content/uploads/2018/11/ScaleUp-Index-2018-FINAL.pdf>

² Frontier Economics (2013) *Exploring the impact of private equity on economic growth in Europe*. Available at: <https://www.investeurope.eu/media/12929/Frontier-Economics-Report.pdf>

³ Chen, J. and Quang, T. (2012) *International Financial Integration and Economic Growth: New Evidence on Threshold Effects*. Paris, Paris School of Economics.

⁴ Allayannis, G. and Mozumdar, A. (2004) The impact of negative cash flow and influential observations on investment-cash flow sensitivity estimates. *Journal of Banking and Finance* 28, 901–930

⁵ Klagge, B. and Martin, R. (2005) Decentralized versus centralized financial systems: is there a case for local capital markets? *Journal of Economic Geography* 5, 387-421.

⁶ British Business Bank (2018) *Small business finance markets 2017/18*. Available at: <https://www.british-business-bank.co.uk/wp-content/uploads/2018/02/Small-Business-Finance-Markets-2018-Report-web.pdf>

2.2. Geography matters: equity clusters

Geography matters in equity markets, as regions and cities differ with respect to their financial structure, with this a determinant of the spatial concentration of equity investments. **An equity cluster might be conceptualised as a place which has tangible organisational procedures and structures that bring investors and investees close together and experiences a high concentration of equity deals.** The British Business Bank defines equity clusters as regions where varied equity deals are made, since ‘equity deals tend to be grouped into geographic clusters where innovative companies, skilled labour and equity investors locate close together’.⁷ One aspect of equity clusters might be that a dense network of business angel investors is present.

Three issues need to be raised at the outset in respect of equity clusters.

- The term is little recognised in research literature. Academic papers focus on the concept of financial clusters defined as spatial concentrations of financial firms, with this being the supply side for many types of corporate funding.
- An equity cluster might be understood in terms of the concentration of equity deals made in an area. However, equity deals are distinct from equity flows, with the latter related to the geographical flow of financial capital from one place to another. Then in framing a ‘cluster’ the origin of funds should be considered (where equity providers are based), as well as the destination territory where the investment is made (where equity recipients are located). These could be some distance apart such that a ‘cluster’ of equity deals could relate to providers far distant from recipients. In this report the focus is more on where equity recipients are located. This brings an implicit assumption, that in the case of SMEs, many of the investors are geographically close to the firms such that they gain access to valuable information which is available to local/regional investors rather than more remote investors.⁸ This assumption may be more appropriate in some cases than others.
- Third, while the focus in this report is on equity deals, the consultations undertaken to inform the work indicate that the data available does not identify all equity deals. The British Business Bank suggests that there is no data source that captures all deals, and that this is expected due to the private nature of some equity investments.⁹ Moreover, with a focus on SMEs, equity deals in small firms are less likely to be reported by firms or investors. Crucially, there is no legal duty to publically report equity investments.

2.3. Development of equity clusters

Factors affecting the evolution and growth of financial centres in general are expected to be closely related to the factors explaining equity clusters. Regions and cities differ in financial structure, and the strength of both the demand and supply side for equity finance. This means that there is likely to be spatial concentration in equity investments reflecting concentrations of supply side investors and demands from firms.

⁷ British Business Bank (2017) *Small Business Equity Tracker*. Available at: https://www.british-business-bank.co.uk/wp-content/uploads/2017/07/239-Small-Business-Equity-Tracker-Report_2017WEB.pdf

⁸ Wójcik, D. (2009) Proximity in secondary equity markets. In G.L. Clark, A. Dixon, and A. Monk (eds). *Managing Financial Risks: From Global to Local*, pp. 141–161. Oxford, Oxford University Press.

⁹ British Business Bank (2017) *Small Business Equity Tracker*. See footnote 7.

Furthermore, information cannot always be communicated easily across distance,¹⁰ especially issues around the business context and soft SME features. This means that spatial proximity between investors and investees is important in terms of the quality of information flows and the reduction of information asymmetry. The imperfect information problem might work to encourage clusters of activity where information can also be shared among different types of investors more easily.¹¹ Consequently an accumulation of equity investors in one place reinforces a high level of demand for equity in a given location, and firms which are geographically proximate to equity funders are more likely to receive equity investments.

In common with industry clusters, tacit knowledge and face-to-face contact are important factors for the emergence and growth of equity clusters.¹² Close ties and networks based on information and knowledge sharing are hindered by distance and are better built on face-to-face contacts.¹³ These same factors affect the dynamic evolution of equity clusters. Investors might be attracted to locations where businesses are clustered, but that same clustering of firms might have been associated with the ready availability of equity capital. For example, equity clusters are sometimes associated with well-developed regional high-tech clusters, since venture capital and equity funding target high-technology and high-growth businesses.¹⁴ This clustering further stimulates equity investment as investors create their own networks based on information and knowledge sharing between themselves as a mechanism to generate tacit-knowledge, conduct wider due diligence on investments and generate an indication of expected returns within regional sectors.

Moreover business incubators and accelerators that support businesses to achieve high growth, can also make equity investments in these companies.¹⁵ Consequently equity and high-tech clusters could 'generate ... mutually reinforcing networking synergies between entrepreneurs, intermediaries, and venture capitalists'.¹⁶

Proximity to large urban markets is also significant for equity investment activity. Agglomeration levels affect the number of investors, numbers of high-growth companies, and the equity supply side in terms of talent, skills and human capital.¹⁷ These factors are also self-reinforcing in large agglomerations, and can be set besides wider institutional factors such as political stability, social trust and the wider business environment, which have been shown to be significant factors for equity flows and the emergence of local financial centres.¹⁸

Based on the literature review, a series of factors are important in determining the evolution of equity clusters. These factors are summarised Figure 1.

¹⁰ Martin, R. (ed.) (1999) *Money and the Space Economy*. Chichester, John Wiley & Sons.

¹¹ Martin, Ret al. (2005) Spatial proximity effects and regional equity gaps in the venture capital market: evidence from Germany and the United Kingdom. *Environment and Planning A*, 37, 1207-1231.

¹² Wójcik, D. (2009) see earlier.

¹³ Gertler, M. (2003) Tacit knowledge and the economic geography of context, or the undefinable tacitness of being (there). *Journal of Economic Geography* 3, 75-100.

¹⁴ Norton, R. (2001) *Creating the New Economy: The Entrepreneur and US Resurgence* Cheltenham, Edward Elgar.

¹⁵ Beauhurst (2018) Available at: <https://about.beauhurst.com/accelerating-the-uk-report/>

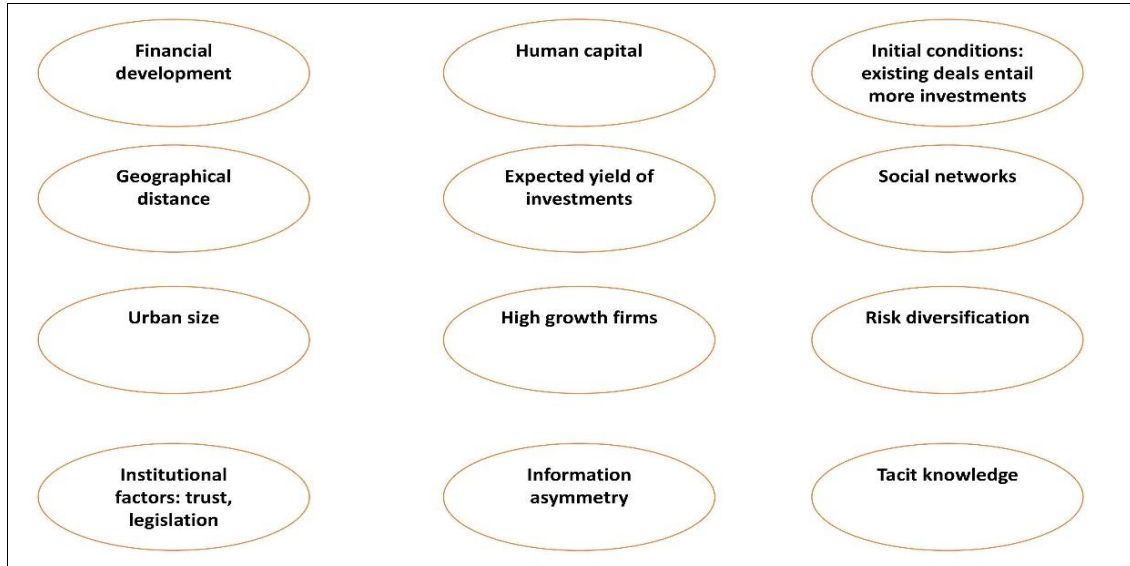
¹⁶ Martin, R., et al. (2005) see earlier.

¹⁷ MacKinnon, A., Cumbers, A. (2019) *Introduction to Economic Geography: Globalization, Uneven Development and Place*. NY Routledge.

¹⁸ Osei-Assibey, E. and Adu, S.O. (2016) Determinants of portfolio equity flows to Sub-Saharan Africa. *African Journal of Economic and Management Studies* 7, 446-461.



Figure 1: Factors in equity cluster evolution



3. Equity financing and SMEs in UK regions

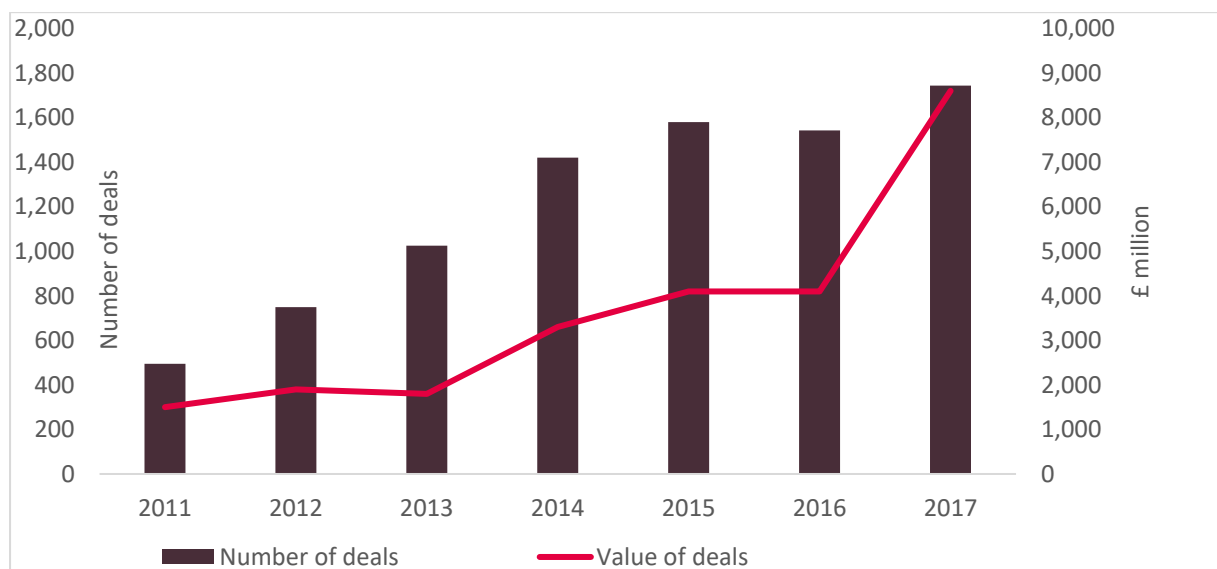
The UK economy conforms to the common case of a strongly centralised geography of equity investors and venture capitalists. The market capitalisation value of companies located in the Greater London area on the London Stock Exchange is typically more than six times the gross domestic product of the region. In addition, around 75% of UK venture capital firms are based in the Greater London area. This centralised financial system impacts the potential for growth of equity clusters in lagging regions of the UK, with implications for equity capital flowing to SMEs in these same regions.¹⁹

SMEs in lagging regions of the UK are expected to have difficulties raising finance from London-based funds due to high transaction costs, information asymmetry and high-risk relative to the return on investment. More peripheral parts of the UK have been shown to face a relative shortage of equity investments.²⁰

3.1. Equity financing of SMEs

The number and size of equity deals in UK SMEs has increased in the period to 2017. Figure 2 illustrates that in 2011, 480 new equity investments were made with a value of £1.25bn, while in 2017, the number of new equity investments reached 1,744 with a total value of £8.6bn. The dominant sectors in terms of UK equity deals are high-technology and business and professional services activities. In relation to the investment stage, the BVCA²¹ suggests that in 2017, 41 companies in Wales received venture capital (£18m investment), 9 growth capital (£21m), and 4 buyout capital (£21m). This compares to 384 companies in the UK receiving venture capital (£463m investment), 259 growth capital (£991m), and 158 buyout investments (£8.26bn). The BVCA figures are for companies of all sizes.

Figure 2: Equity investments in UK SMEs 2011-17²²



¹⁹ Klagge, B. and Martin, R. (2005) see earlier.

²⁰ Martin, R., et al. (2005) see earlier.

²¹ BVCA (2017) BVCA Report on Investment Activity 2017. Available at: <https://www.bvca.co.uk/Portals/0/Documents/Research/Industry%20Activity/BVCA-RIA-2017.pdf?ver=2018-07-05-190000-180×tamp=1530813602675>

²² Data derived from the annual reports of British Business Bank on SME equity finance in the UK *Small business equity tracker*.

According to the *SME Finance Monitor* just 3% of UK SMEs used equity finance in 2018.²³ There is some variation across different employment size bands i.e. 3% for micro, 4% for small, and 8% for medium-sized enterprises.

The British Business Bank (2014) indicated that 9% of UK medium-sized companies made use of equity funding, the majority of which were in manufacturing. The value of finance raised was between £2m and £50m for 29% of medium-sized enterprises who made use of equity financing. One fifth of medium-sized firms raised less than £0.5m equity finance. UK based private equity houses were the dominant investors in these cases. In 9% of the cases where medium-sized firms used equity, the source of the funds were Angel investors and in 10% of cases the sources were venture capitalists. In more than half of the equity-backed surveyed companies, the equity investor was included on the company board.

The British Business Bank (2014) stated that the main reason for medium-sized firms not using equity finance was because sufficient finance was available from other sources. Their research also revealed that equity finance was unpopular because of negative perceptions in respect of equity investors' focus on short-term profits, superficial external understanding of business needs, possible conflict between investors' plans and the business strategy, and concerns over ceding control of the company. As a result, equity finance was well down the list of options for SME funding, after internal finance and bank loans/overdrafts.

3.2. Geographical patterns in equity financing of SMEs

Early research into venture capital investment revealed the presence of SME equity gaps in many peripheral regions, and specific gaps in terms of sectors such as life sciences, information technology, and media activities.²⁴ The centralised geography of the UK financial system does not preclude the existence of regional/local capital markets.

However in the 2011-2016 period, the British Business Bank (2017) reported that the majority of SMEs that were equity backed were located in London and South East. For example, in 2016, 47% of all equity deals for SMEs in the UK were made in London, accounting for 56% of the UK SME equity investment amount, although just 20% of high-growth enterprises were in London. In 2017, 52% of new SME equity investments were located in London. These figures suggest an under-presentation of equity deals in peripheral regions relative to their proportion of high-growth companies.

Another insight is provided by research examining the location of investments made by business angels. IFF Research (2017) indicated that 58% of business angels surveyed invested in businesses located in London, 15% in Scotland, 6% in Northern Ireland and only 5% (8 in absolute numbers) in Wales.²⁵ In Wales, there are 160 angels in the Angels Invest Wales network, with approximately 85% living in Wales, while the remaining 15% live elsewhere in UK/abroad. IFF Research (2017) also found that 57% of business angels surveyed by them were in London and the Southeast of England. Scotland's share of UK business angels was 8%, Midlands 7%, Southwest England 5%, Northern Ireland 4%, and Wales just 2%.

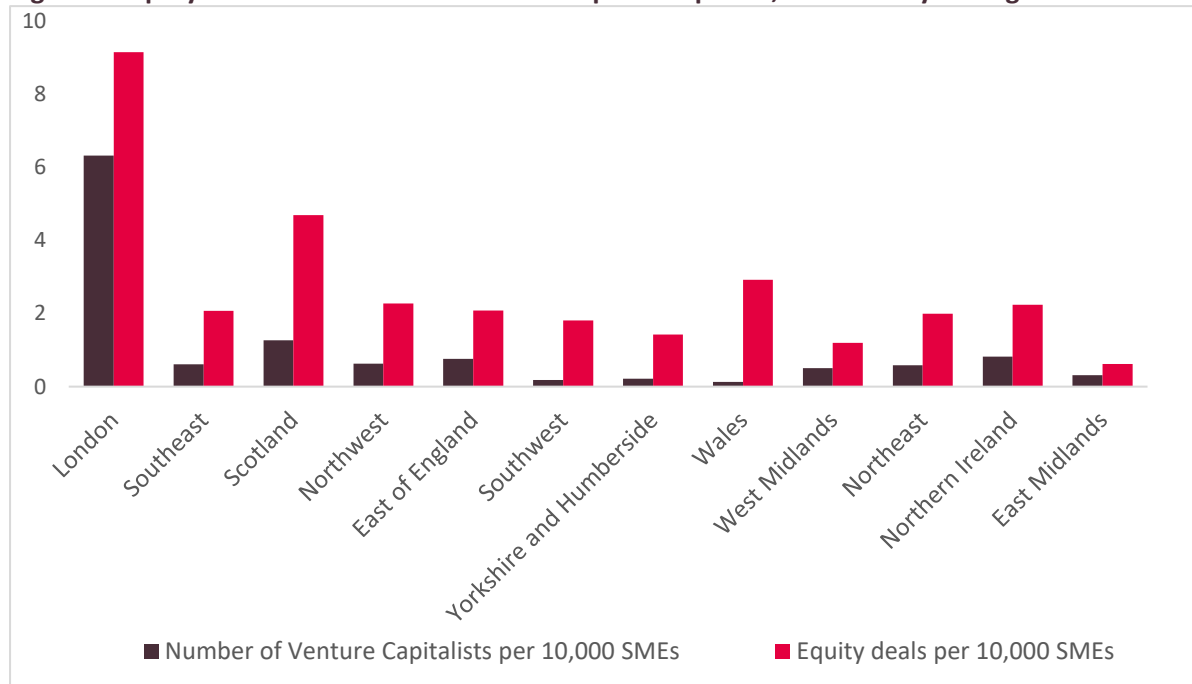
²³ BDRC (2018) *SME Finance Monitor Q4 2018*. Available at: http://www.bva-bdrc.com/wp-content/uploads/2019/03/BVABDRC_SME_Finance_Monitor_Q4_2018_FINAL.pdf

²⁴ Mason, C. and Harrison, R. (2002) The Geography of Venture Capital Investments in the UK. *Transactions of the Institute of British Geographers* 27, 427-451.

²⁵ IFF Research (2017) *Business Angel Spotlight*. Available at: <https://www.british-business-bank.co.uk/wp-content/uploads/2017/12/Business-Angels-2017-Research-Findings-compressed-FINAL.pdf>

Figure 3 shows equity deals per 10,000 SMEs by UK region, and the number of venture capitalists per 10,000 SMEs by UK region, and reveals marked differences. Wales does not perform well in terms of the number of venture capitalists per 10,000 SMEs, but has a stronger performance on number of equity deals per 10,000 SMEs. Wales is the region with the third highest number of equity deals per 10,000 SMEs in the UK. While this does not necessarily mean a large *amount* of equity investment, the large *number* of equity investment recipients could imply lower average investment amounts.

Figure 3: Equity deals and number of venture capitalists per 10,000 SMEs by UK region²⁶

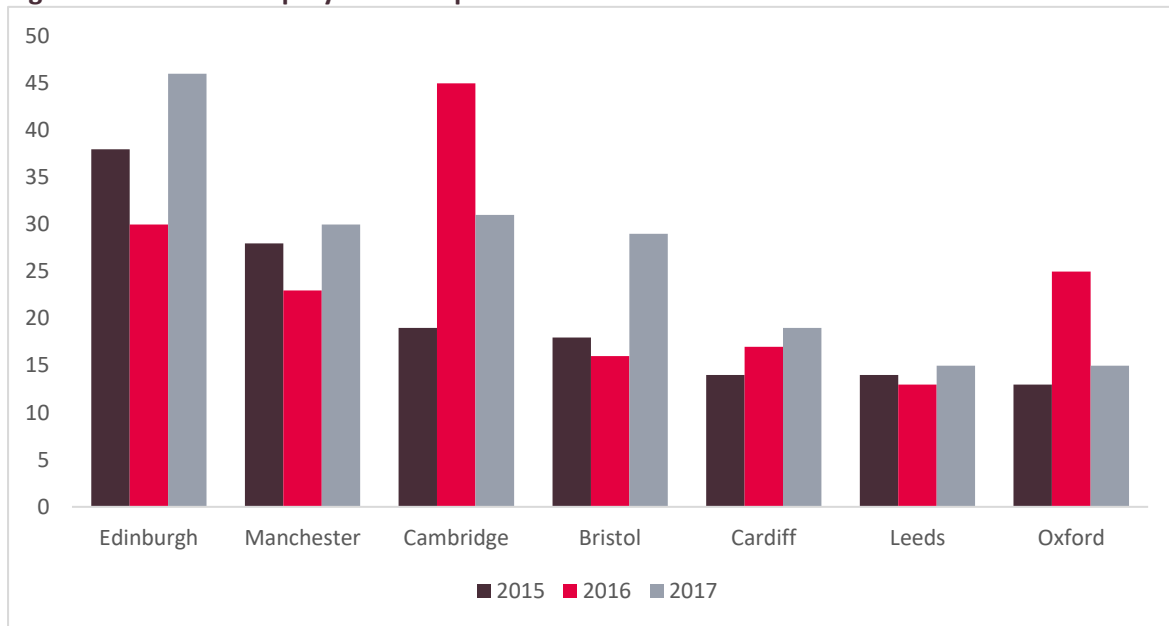


The British Business Bank (2018) *UK Business Angel Market* also provided information on the number of equity deals by regional financial centre (Figure 4). The underlying analysis revealed that:

- **Edinburgh** specialised in high-tech start-ups. Between 2015 and 2017, 114 new equity investments were made mostly related to software and business and professional sectors.
- **Manchester** recorded 81 new equity deals from 2015 to 2017. Major sectors in terms of growth and equity investment included technology (software), business and professional services, and communications.
- **Bristol** specialised in tech companies and the microelectronics industry. From 2015 to 2017, Bristol recorded 63 equity deals, particularly in software.
- **Cardiff** recorded 50 new equity deals between 2015 and 2017. Significant sectors in terms of equity deals involved software, and business and professional services.

²⁶ IFF Research (2017) see above.

Figure 4: Number of equity deals in specific UK cities²⁷



3.3. Equity supply and entrepreneurial ecosystems in the UK

The presence of clusters of business activity, when coupled with a strong equity finance supply are key components of an entrepreneurial ecosystem. Such an ecosystem might be understood as bringing major agents and stakeholders together in order to help an entrepreneurial community to grow, and to support innovation to create economic benefit.

The major components of an entrepreneurial ecosystem involve: the state, research institutions, businesses, and risk finance capital.²⁸ The ecosystem brings the entrepreneurial community close to the three other communities. First, it brings it close to universities in order to access talent. Second, close to capital investors in order to raise funds and transform visions and ideas to products and services. Third, proximity to the government which might bring suitable resources and incentives that accelerate business growth and have dynamic local effects in further increasing the proximity between key stakeholders.

Subsequent and secondary components of an ecosystem include a large specialised labour pool, efficient managers, enterprise zones or co-working hubs, diverse financial services, and second round funding.²⁹ The combination of these aspects create positive externalities, such as innovation and knowledge spillovers and technology transfer.

In the UK, London, Oxford and Cambridge are examples of entrepreneurial ecosystems, according to British Business Bank (2018). Each of these locations are considered below before moving, in the next section of the report, to focus more on equity conditions in Wales.

²⁷ British Business Bank (2018) *The UK business angel market*. Available at: <https://www.british-business-bank.co.uk/wp-content/uploads/2018/06/Business-Angel-Reportweb.pdf>

²⁸ Engel, J. (2014) *Global Clusters of Innovation: Entrepreneurial Engines of Economic Growth around the World*. Northampton, Edward Elgar.

²⁹ British Business Bank (2017) *Small Business Equity Tracker 2017*. See earlier.

London: The City of London affects the Greater London area with the spatial concentration of financial activity having spillover effects in terms of knowledge, technology and human capital. London is one of the most significant technological hubs in the world, and a top five global financial centre. London's research institutions are relatively strong, attracting individuals with high skills, while also hosting a high number of accelerators and incubators, as well as a significant investment in university spinouts.³⁰ On these grounds the London entrepreneurial ecosystem provides a critical mass of financial knowledge and expertise, alongside a large pool of skilled labour, business people and supporting services. London has been called the highest performing ecosystem in Europe, especially in terms of start-ups.³¹

Cambridge and Oxford are cities with a relatively high number of equity deals given their small size. According to British Business Bank (2018), 148 businesses in Cambridge and Oxford received equity investment in 2015-2017. Important elements of the ecosystem here include the presence of significant research institutions, with the universities supporting the ideas of graduates through the University of Cambridge Enterprise and the Oxford University Innovation schemes, both entailing support for many of the high-tech start-ups in the areas. Expertise, knowledge, financial support and infrastructure all co-exist and interact with businesses in the Oxford-Cambridge corridor. Moreover, the proximity of both Oxford and Cambridge to London's financial centre and to UK Government benefits these areas in terms of ecosystem development. Major economic activities that attract equity involve software and life sciences, while most enterprises are knowledge-intensive, with a particular focus on biotechnology.

³⁰ Penningtons Manches (2017) *Academic spinouts a report on the funding of UK spinouts 2016-2017*. Available at: <https://www.penningtons.co.uk/media/1314304/academic-spinouts-a-report-on-the-funding-of-uk-spinouts-2016-2017.pdf>

³¹ Startup Genome (2018) *Global Startup Ecosystem Report 2018 Succeeding in the New Era of Technology*. Available at: <https://startupgenome.com/reports/2018/GSER-2018-v1.1.pdf>

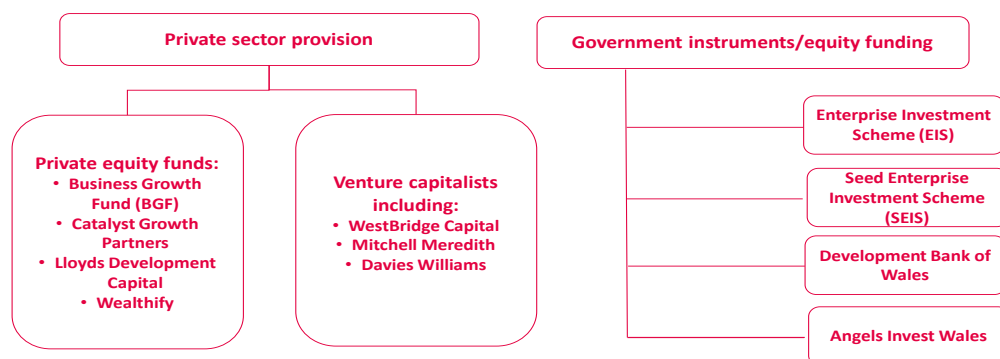
4. SME equity finance and equity clusters in Wales

Key elements of the equity finance supply side in Wales are summarised in Figure 5, separating elements of private provision from elements of state intervention to support equity investment. Inevitably private and public support are intertwined in practice.

In terms of the supply of equity finance in Wales, the Development Bank of Wales is a key agent, and details of their SME equity investment are considered later in this section. Angels Invest Wales is a prominent angel investors' network, and seeks to bring together syndicates and facilitate increased investment across Wales.

The presence of the Development Bank of Wales needs to be understood in terms of changes in the supply for equity finance. During the 1990s, several regional offices of equity investors were located in Cardiff. However, selected offices of investors have now left the area with equity investors focused more on high-growth firms and bigger deals primarily found in areas outside of Wales. Furthermore, the emergence and development of the internet and general ICT improvements allowed equity investors to screen, evaluate and communicate with existing and potential investees in Wales from further afield. For example, the 3i group had many regional offices including Cardiff, but many of these offices were closed in the 2000s due to a shortage of suitable investment opportunities.³² Another example is N M Rothschild & Sons Limited investment bank that used to have a regional office in Cardiff, which also closed in 1995 due to the lack of deal flow.

Figure 5: Elements of the equity supply side in Wales



4.1. Equity deals across Wales over time

Data on equity deals in Wales is of variable quality, with different sources coming to different conclusions on the scale of equity deals and their underlying value.

The British Business Bank *Small Business Equity Tracker* reveals that equity deals in Wales increased from 29 in 2015 to 45 in 2017 (Table 1). The year 2017 was a record year for new equity deals in Wales.

³² See <https://www.thetimes.co.uk/article/3i-office-closures-end-restructuring-8mzvzncg8z>, and <https://www.telegraph.co.uk/finance/4470692/3i-shuts-Wales-office-citing-shortage-of-entrepreneurs.html>

Table 1: Number of new equity deals in Wales³³

Wales	Number of deals	% growth in year	% of UK equity deals	Est. Value of deals £m	% of UK value
2011	19	-	4	15	1.2
2012	21	10.5	4.2	20	1.3
2013	20	-4.8	3.8	10	0.7
2014	27	35	3.3	40	1.7
2015	29	7.4	2.3	50	1.4
2016	34	17.2	3	34	1.0
2017	45	32.4	3	59	1.0

Equity deals completed in Wales represented 3% of the number of UK equity investments in 2017, whereas Scotland recorded 8.1% and Northern Ireland 1.4%. Therefore, Wales' share of equity deals is close to the relative size of its economy compared to the UK.

The value of the new equity deals in Wales in 2017 was £59 million, representing 1% of the total value of UK equity investments. Table 1 reveals that the Welsh share of total UK equity value has been declining since 2014. More recent data is available from Beauhurst (2019) revealing that in 2018, there were 71 equity deals worth £64.6 million made in Wales.³⁴ There is some difference in estimates on the number of equity deals depending on the source. No data source is likely to identify all deals within a given year, evident in Economic Intelligence Wales analysis of Development Bank of Wales' investment data showing its number of investments being higher than that reported in Table 1 and Beauhurst (2019). A key issue here is that some sources only cite completely new deals, and others include second and third rounds of equity funding.

Regarding sectoral distribution, the British Business Bank (2018) suggests that the majority of equity deals in Wales were conducted in business and professional services and software sectors, including ICT and biotechnology.³⁵

Table 2 shows that Wales' share of the number of UK equity deals is also close to its share of high growth firms, with this being just one indicator of the expected demand for equity finance.

Table 2: Regional shares of UK equity deals and high-growth companies³⁶

	2017	
	Equity deals (% of UK)	High-growth firms (% of UK)
Wales	3	4
Scotland	8	7
N. Ireland	1	2
South West	6	9
London	52	20
South East	10	15

³³ Data derived from the annual reports of British Business Bank on SME equity finance in the UK named *Small business equity tracker*.

³⁴ Beauhurst (2019) *The Deal. Equity investment in the UK 2018*. Available at: <https://about.beauhurst.com/research/the-deal/>

³⁵ British Business Bank (2017) *Small business equity tracker 2017*. See earlier.

³⁶ British Business Bank (2018) *Small business equity tracker 2018*. Available at: <https://www.british-business-bank.co.uk/wp-content/uploads/2018/07/Equity-Tracker-Report-2018.pdf>

4.2. Development Bank of Wales equity deals

The Development Bank of Wales is a major player in equity finance in Wales, with the Bank also playing an important information brokerage role in bringing together SMEs and equity investors. The Development Bank of Wales is among the largest SME equity investors in the UK, after Seedrs, Crowdcube, Scottish Enterprise, and Syndicate Room.³⁷

The Development Bank of Wales made 62 equity investments in 2017, at a value of £14m, and 77 in 2018, at a value of £23m. Compared to data in Table 1, this shows that the Development Bank of Wales accounts for a relatively high proportion of the number of investments in Wales but a lower proportion of the total value of these investments. Again, no data source is likely to identify all equity deals in Wales within a given year (see above).

Between 2002 and 2018 the Bank (and previously Finance Wales) made 635 equity investments, with a total value of £158m, with an average equity investment of around £280,000 (Figure 6). It is important to note here that Development Bank of Wales’ information on equity deals includes second and third rounds of investment.

Figure 6: Analysis of Development Bank of Wales’ equity investment activity 2002-18³⁸

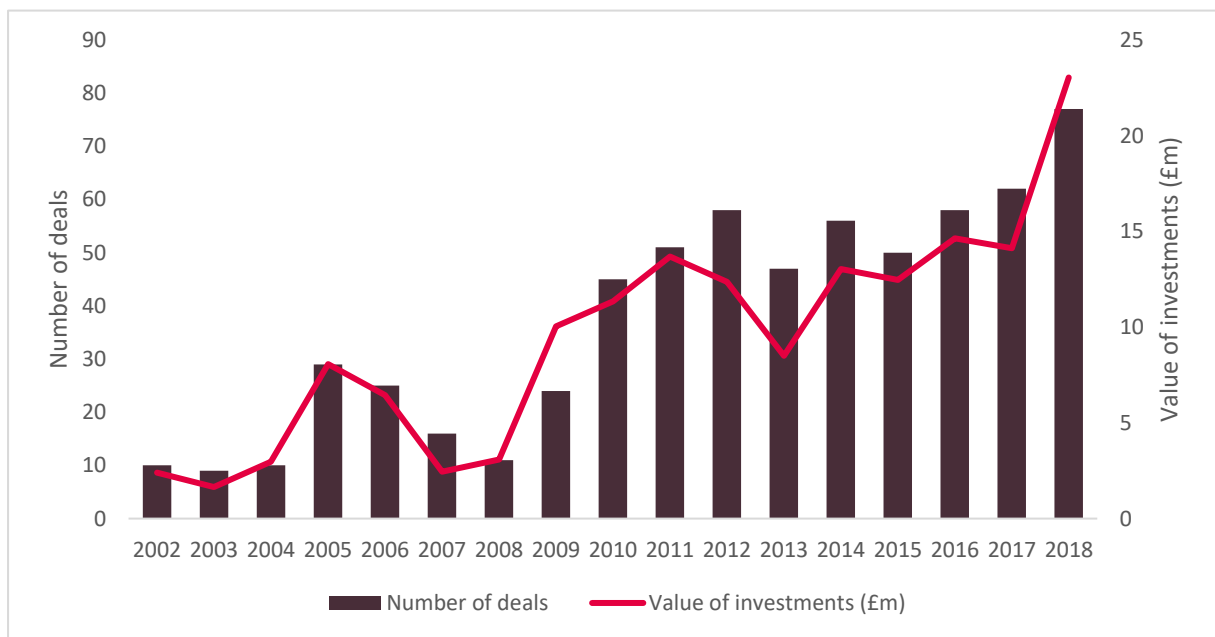
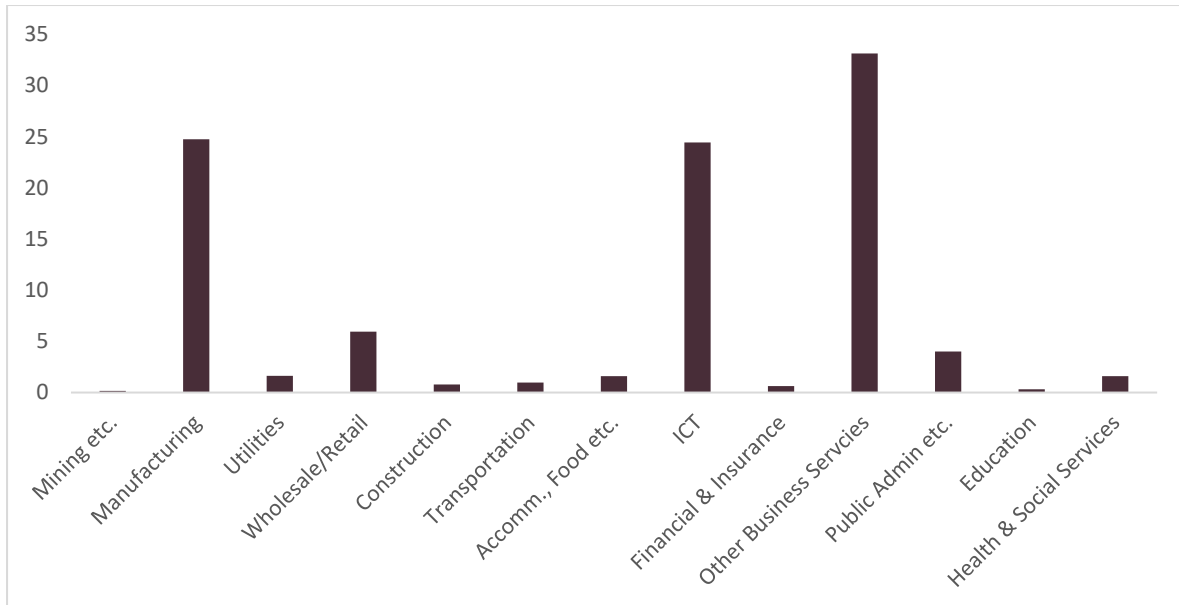


Figure 7 illustrates the sectoral distribution of £158m of Development Bank of Wales’ equity deals. Professional services, manufacturing, and information and communication are the main recipients of equity funds.

³⁷ Beauhurst (2019) *The Deal. Equity investment in the UK 2018*. Available at: <https://about.beauhurst.com/research/the-deal/>

³⁸ Data derived from Development Bank of Wales.

Figure 7: Percentage distribution of Development Bank of Wales' equity deals by sector (2002-2018)³⁹



4.3. Is Cardiff an evolving equity cluster?

In relative terms, much of Welsh employment in financial services and insurance is located in the Cardiff area. For example the location quotient (LQ) identified in Table 3 shows the specialisation that Cardiff has in financial services and insurance. If Cardiff had the same share of employment in financial and insurance services as the GB economy as a whole then the LQ value would be 1.0. Higher values than 1 reveal a relative specialisation in the sector.

Table 3: Level of financial services employment in Cardiff and Wales⁴⁰

	Employment in thousands (2017)		
	Cardiff	Wales	GB
Total finance and insurance	13.0	29.5	1,040.5
Total employment	214.0	1,268.0	30,950.0
LQ Cardiff to GB	1.8		
LQ Wales to GB	0.7		

Table 4 shows data from the British Business Bank reviewed earlier in this section. Here the information is used to show the proportion of Welsh SME equity deals in Cardiff. In 2015, 14 out of the 29 new SME equity deals in Wales were made in Cardiff, in 2016, 17 of the 34, and in 2017, 19 of the 45. In this short period the number of new equity deals in Cardiff has gradually increased.

³⁹ Data derived from Development Bank of Wales.

⁴⁰ Source: Data derived from NOMISWEB and BRES, ONS.

Table 4: Number of new equity deals in Wales

	Number of deals in Wales	Number of deals in Cardiff	Number of deals in Cardiff (% of Wales)
2015	29	14	48
2016	34	17	50
2017	45	19	42

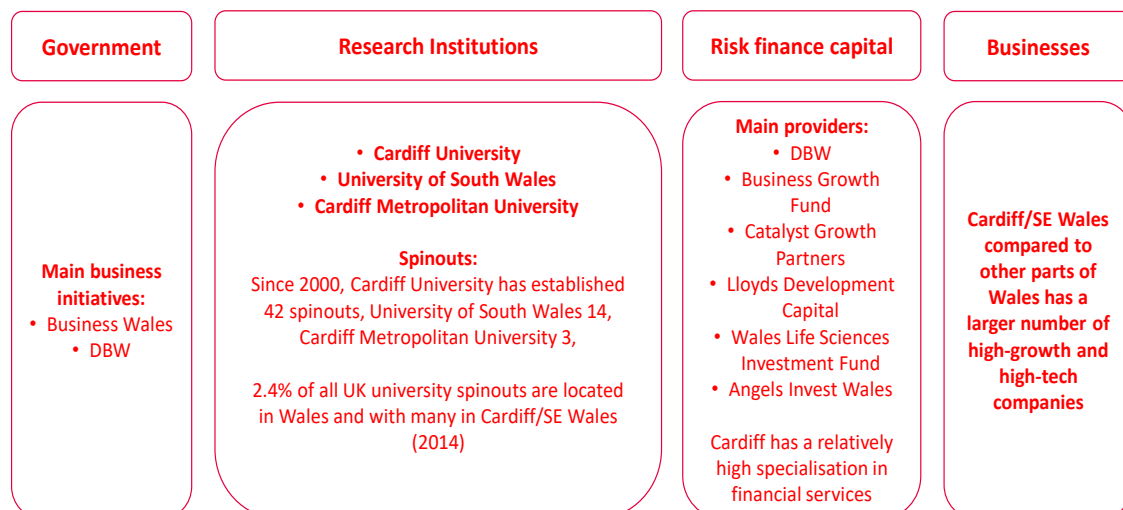
The British Business Bank (2018) shows that in common with equity deals through Wales as a whole, business and professional services saw the majority of deals in Cardiff, with software, particularly ICT and biotechnology also large recipients of equity finance.

Of SME equity investments made by the Development Bank of Wales in the longer period 2002-18, (see Appendix A) around 70% have been made to SMEs in South East Wales. SMEs located in Cardiff received 27% of the value of the Development Bank of Wales' equity investments. However, Cardiff alone in the period received 187 investments, with a total value of over £42m. This concentration has been reflective of demand, but the Development Bank of Wales is a lever for investing more equity across all of Wales.

More rural areas have tended to receive a much lower share of equity investments in value terms. Of some note here is that local authority areas of Wrexham, Flintshire, Neath Port Talbot, Merthyr Tydfil, Anglesey, Carmarthen, and Ceredigion received in total just 13% of the value of Development Bank of Wales' equity investments in the period 2002-18.

How far does Cardiff have the characteristics of an evolving equity cluster? Figure 8 follows from the earlier review material in this report, and summarises the components of a successful equity ecosystem, highlighting roles for government, research institutions, capital providers and businesses.

Figure 8: Equity ecosystem components



In Cardiff there are encouraging signs that pieces of equity ecosystem are already in place and/or evolving. For example, the city has a strong concentration of financial services providers. Cardiff also has a large number of companies that have benefitted from business accelerator programmes (152 in 2017).⁴¹ Accelerators in Cardiff include IndyCube, Accelerate: Clinical Innovation Accelerator, NatWest Entrepreneur Accelerator Hub, Accelerator Wales, and Innovation Point. The accelerator role in equity clusters is important. Apart from direct funding, accelerator programs, alongside incubators and co-working spaces, enable knowledge accumulation and technology spillovers. Beauhurst (2018) found that the size of the equity investment is significantly higher for firms that have been part of accelerator programmes.⁴²

Cardiff also has ecosystem elements in terms of incubator spaces. Business incubators in Cardiff (and surrounding local authorities) include IndyCube, Welsh ICE, Barclays Eagle Labs, Cardiff Medicentre, Tec Marina, and Space2b. Business incubators.⁴³

Cardiff and Wales are weaker in terms of numbers of University spin-outs. University spinouts can contribute to the growth of an equity cluster. It was estimated that in 2014, just 2.4% of all UK university spinouts were located in Wales, compared to 4.5% in Northern Ireland, 20.3% in Scotland, and 72.8% in England.⁴⁴ In the 2016-17 financial year, Wales witnessed a £2m capital investment in university spinouts, with Northern Ireland recording the same amount. Scotland saw £30m capital investment in university spinouts, London £103m, and Southeast England £306m.⁴⁵ The Development Bank of Wales was the main funder in Wales and the 14th most important UK investor in university spinouts.⁴⁶

In summary, on some indicators Wales (and indeed Cardiff) has witnessed a smaller number and value of equity deals than would be expected given the size of the economy. However, this needs to be balanced against the number of high growth firms in the region which would benefit from equity financing and that would be of interest to equity investors seeking a commercial return on investment. Undoubtedly Cardiff has a series of factors shown in Figure 1 and Figure 8 to be ingredients of an equity cluster. The underlying quality of these ingredients in terms of government, research institutions, risk capital and business projects was investigated through a series of consultations.

⁴¹ Beauhurst (2018) Available at: <https://about.beauhurst.com/accelerating-the-uk-report/>

⁴² Beauhurst (2018) Available at: <https://about.beauhurst.com/accelerating-the-uk-report/>

⁴³ Bone, J. et al (2017) *Business incubators and accelerators: the national picture*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/608409/business-incubators-accelerators-uk-report.pdf

⁴⁴ Hewitt-Dundas, N. (2015) Profiling UK university spin-outs. Available at: <https://www.enterpriseresearch.ac.uk/wp-content/uploads/2015/07/ERC-ResPap35-M.-Hewitt-Dundas.pdf>

⁴⁵ Penningtons Manches (2017) *Academic spinouts a report on the funding of UK spinouts 2016-2017*. Available at: <https://www.penningtons.co.uk/media/1314304/academic-spinouts-a-report-on-the-funding-of-uk-spinouts-2016-2017.pdf>

⁴⁶ Penningtons Manches (2017) *Academic spinouts a report on the funding of UK spinouts 2016-2017*. Available at: <https://www.penningtons.co.uk/media/1314304/academic-spinouts-a-report-on-the-funding-of-uk-spinouts-2016-2017.pdf>

5. Findings from consultations

Consultations were undertaken with organisations including: the Development Bank of Wales; Catalyst Growth Partners⁴⁷; Gambit Corporate Finance⁴⁸; British Business Bank; Business Growth Fund⁴⁹; Wealthify⁵⁰; and Alacrity⁵¹.

The consultations sought to explore issues related to the current state of SME equity finance in Wales, the state of supply and demand for equity finance, and geographical patterns, and with elements of these identifying how far Cardiff in particular might be viewed as an emerging equity cluster. The consultations revealed a number of strengths, weaknesses, opportunities and threats for the growth of SME equity finance in Wales which are summarised in the closing part of this section.

5.1. Supply and demand for equity in Wales

Key issues from the consultations were as follows:

- The supply of seed investment (ranging from £15,000 to £500,000) in Wales for early stage businesses was viewed as sufficient, with these deals mainly involving angel investors. There was perceived to be more of a problem with deals above £0.5m where equity finance supply was insufficient. For these large amounts above £0.5m SMEs will need to typically seek equity funding outside Wales, focusing on London. However, relatively few companies with the necessary scale, time, resources and high growth prospect have the ability to raise this type of finance from the equity market outside Wales.
- The Development Bank of Wales is able to offer equity funding packages in excess of £0.5m but can be restricted in its activity by the lack of regional private sector leverage to accompany its investments, and with the scale of its equity investment activities constrained by state aid rules.
- The supply of equity finance in Wales largely mirrors a demand problem with insufficient numbers of the types of businesses in terms of turnover and profits which are capable or have the desire to raise larger values of equity funding. Wales also features lower numbers of high-technology and high-growth businesses with equity investors often attracted by such enterprises given their need to generate commercial returns from their investments.
- While there was a recognition that regionally focused equity funds can contribute to regional economic growth, the number and value of deals is wholly dependent on the business base of the region, a factor affecting the supply and demand side for equity finance, and prospects for the development of an equity cluster around Cardiff.
- SMEs in Wales were more likely to attract equity funding from investors also located in Wales, with this reinforcing the importance of spatial proximity between investors and investees in overcoming information asymmetry issues and facilitating tacit knowledge and face-to-face contacts.

⁴⁷ A Wales-based investment fund started in 2014 and with a portfolio of investment in Cardiff, Newport and Swansea.

⁴⁸ An independent corporate finance advisory company that provides services to private and public companies.

⁴⁹ An investment fund that has an office in Cardiff.

⁵⁰ A Wales-based private equity fund.

⁵¹ An educational charity, seeking to mentor and train graduates to create the next generation of hi-tech companies based in Wales.

- The geographical distance from London and the South East of England might pose particular problems for firms seeking finance in areas outside of South East Wales. Firms seeking equity finance in parts of North Wales are likely to be better served from Northern Powerhouse urban centres.
- The consultations raised concerns on whether government schemes established to boost the supply of small amounts of risk capital to SMEs were sufficiently utilised. This is clearly a factor in the development of equity clusters. In this respect it is interesting that the proportion of Welsh enterprises between 2014-15 to 2016-17 that used either the Enterprise Investment Scheme or the Seed Enterprise Investment Scheme was 1.9% on average, while, for example, the South East of England figure is 16% and Scotland a little over 4%.⁵²
- Consultations identified difficulties for SMEs in approaching and promoting their plans to potential investors. This was coupled with equity investors being unable to find SMEs with investment plans that satisfy their investment criteria, with this linked to low entrepreneur awareness of equity funding opportunities, government schemes and equity investors in their area. This seemed to reinforce recent survey findings with, for example, 66% of SME owners in the *SME Finance Monitor* survey of Q4 2018 knowing little about equity finance.⁵³

5.2. Improving supply and demand conditions of SME equity financing in Wales

While consultees recognised that there would be some limits to demand for equity finance because of the regional business base, there were suggestions on how conditions around equity funding could be improved. Key issues raised are summarised below:

- The consultations revealed that consideration needed to be given to improving the supply of equity funds and venture capital through the use of formalised syndicates which built upon existing angel investor networks. A syndicate is a temporary alliance developed by a group of investors to make a large financing deal. Such syndicates would be led by experienced technology investors and allow individuals to share risks and pool their resources, knowledge and skills. While such syndicates were in existence, further development here would enable individuals with ideas to communicate them, and with these syndicates expected to be an important part of an equity ecosystem. In this context the launch of the Angels Invest Wales network and the Wales Angel Co-investment Fund by the Development Bank of Wales are important developments as these initiatives will work to identify lead angel investors and encourage syndicate development.
- The future development of Angels Invest Wales could benefit from continued learning of best practice from other regions, such as the Archangels Network in Scotland. This is a formalised angel syndicate, with around 100 individual investors, and argued to be an important element of the evolution of an equity cluster in Edinburgh. In 2017, the network had made 27% of all Scottish deals and 24% of all UK angel investors' deals. Angels Invest Wales, was established in May 2018 and is the biggest formalised angel network in Wales. Its continued development and use of co-investment funds is welcomed as a platform for growing angel investments in Wales as the Archangels Network has done in Scotland.

⁵² HMRC (2018) *Enterprise Investment Scheme Seed Enterprise Investment Scheme and Social Investment Tax Relief*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/710986/May_2018_Commentary_EIS_SEIS_SITR_National_Statistics.pdf. British Business Bank (2017) *The benefits of diverse smaller business finance markets*. Available at: <https://british-business-bank.co.uk/wp-content/uploads/2017/09/291-Diversity-Report-2017-LR.pdf>

⁵³ BDRC (2018) *SME Finance Monitor Q4 2018*. Available at: http://www.bva-bdrc.com/wp-content/uploads/2019/03/BVABDRC_SME_Finance_Monitor_Q4_2018_FINAL.pdf

- The potential to attract capital from expatriates from Wales. There was a view that not enough had been done to demonstrate investment opportunities to this diaspora. Welsh Government initiatives, such as the 'GlobalWelsh' project, could be crucial in this direction.
- Concerns were raised about the fact that equity finance in Wales appears to be targeted on a small number of sectors, and with this a result of equity investors seeking high growth opportunities in order to gain suitable returns. Equity investors might be encouraged to explore a wider number of sectors of the regional and Cardiff economy with growth potential, with Development Bank of Wales Funds being largely sector agnostic. There is also a more general challenge for equity investors to look more carefully at their funding criteria, and whether this can be finessed to increase the types of SMEs that are eligible for finance. In an evolving equity cluster equity finance should be available to a wide range of sectors.
- The regional policy instruments as they apply to equity financing needed to be better linked to general economic development policy in Wales, and be better connected to debates around the productivity problem in Wales.
- From the demand side the consultations revealed that increasing entrepreneurial awareness of equity funding schemes and especially the benefits of raising equity capital was critical, with a challenge for Welsh SMEs to become more 'investment ready'. This involved entrepreneurial training in terms of how they may approach potential investors and efficiently promote their business plans and ideas. This also embraced SMEs better understanding the funding criteria used by equity investors. In this respect, seminars through which SMEs can share experiences and reviews assessing the entrepreneur readiness for investment and investment networking could be valuable.
- There is potential for stronger collaborations between Cardiff and Bristol in terms of the development of an equity ecosystem with this larger area, containing more potential SME opportunities, and a larger number of equity investors, and financial services companies. There were some concerns over whether Cardiff was large enough to efficiently support an evolving ecosystem.

5.3. SWOT analysis of SME equity supply and demand

Table 5 below summarises key issues on the supply and demand side around SME equity finance that arose through the consultation process. These are presented in terms of a SWOT analysis.

Table 5: SWOT analysis

Strengths	Weaknesses
Evolving equity cluster in Cardiff area.	Uneven access to equity finance across Wales.
Relative specialisation of Cardiff area in financial services.	Small relative numbers of high growth small businesses.
Pro-active accelerator programmes in Cardiff / South east Wales area.	Perceived supply side issue in terms of equity gaps in deals above £0.5m.
Angel investors' network.	Low number of co-working spaces and university spinouts.
Geographical proximity allows London-based investors to monitor <u>existing</u> equity backed companies located in Cardiff and SE Wales.	SME readiness to promote case to equity investors.

Presence of Development Bank of Wales with significant funds, regional expertise and brokerage role.	SME low use of existing state interventions to assist with equity financing.
Angels Invest Wales a basis of syndicates that could improve equity fund supply.	Equity investors being unable to find SMEs with investment plans that satisfy investment criteria.
	Sectoral bias in equity investments.
	Quality of financial services employment in Cardiff and skills supply side.
Opportunities	Threats
Gradual increase of new SME equity investments.	Uneven geographical access to equity restricts SME growth prospects in some parts of Wales.
Entrepreneurial learning on seeking equity investment.	High SME dependence on local equity investors.
Large number of companies benefitting from business accelerator programmes could improve their access to equity finance.	High concentration of equity deals in specific industries.
Potential to attract capital from expatriates from Wales.	London/SE based equity investors having limited knowledge of opportunities outside of SE Wales.
Diversification of sectors in which equity deals occur in future.	Persistent difficulties for SMEs in approaching and promoting their plans to potential investors affects Welsh productivity growth.
Potential for stronger collaboration between Cardiff and Bristol in terms of the development of an equity ecosystem.	Low entrepreneur awareness of equity funding opportunities, government schemes and equity investors in their area.

6. Recommendations

The recommendations that follow relate to both the means through which the demand and supply side for equity finance can be improved in Wales, and to how far Cardiff can be developed as an equity cluster. The following contextual issues frame the recommendations of this report:

- The supply of equity finance in Wales is tied to demands, with the report revealing that demands for equity finance might be perceived as low by equity investors. There appears to be some acceptance that Wales, in common with other peripheral parts of the UK, has a lower number of fast growth SMEs than regions closer to London.
- Information on equity deals taking place, and the supply side for equity is likely incomplete in Wales, with the available data unlikely to be providing a comprehensive view of the scale and location of equity deals.
- The development issue for Wales is arguably not around the presence or otherwise of an equity cluster, but rather improving general conditions around equity supply and the identification of demand for equity in different parts of Wales, and in a wide range of sectors.
- Findings in respect of the supply of equity in Wales suggest that there is a role for intervention, and that the Development Bank of Wales is an important agent in terms of the identification of demands, as well as being a supplier of equity financing.

Some of the recommendations below relate to factors that might be considered as improving the demand and supply side of equity finance, but with some consideration needed on which institutions are best placed to action these points, and the comparative roles of private and public sectors. In this context, the recommendations are that:

- Care should be taken in seeking to explicitly develop Cardiff as an equity cluster. Undoubtedly the strong recent growth and sectoral make-up of Cardiff means that there might be a larger number of projects available for equity investors, and the report shows that elements of the supply side are already in place, but with particular problems around sufficient private sector investment to be leveraged alongside Development Bank of Wales' equity investments. However, there needs to be more focus on developing demands for equity across the regional economy, and in a wider number of sectors. The available data on equity deals across Welsh local authority areas reveals variations independent of the size of the local authority economies.
- More can be done to alert small firms and new starters in Wales to the advantages of equity and the supply of equity. There also seems to be a need for assisting entrepreneurs in developing their business cases for equity. Surveys of small firms in Wales continue to reveal that equity financing is low down the priority list in terms of demand for different types of finance. While there may be good reasons for this, it is also likely that this represents a case of information asymmetry. Creating sufficient regional and local institutional networks to enable the necessary learning about equity funding possibilities is a necessity, as is improving knowledge of existing state equity schemes.
- Linked to the above recommendation is the need to further develop a pipeline of spinouts from the universities in Wales. Although Cardiff has three research institutions and is therefore uniquely placed to coordinate an effort to increase spinout numbers, the Development Bank of Wales' pan-Wales reach and supply of equity finance should work with universities across Wales to facilitate an increased spinout pipeline.

- The sectoral focus of equity deals (i.e. a relatively large number of Welsh deals, in terms of numbers and value, in sectors such as manufacturing, business services and ICT) is a concern. This may reflect sectoral expertise of equity investors, and/or a Cardiff/South East Wales centric approach to Welsh equity financing. Equity investors might be encouraged to refine their investment rules and screens to accommodate different sectors (and in different parts of Wales – see below).
- It is difficult to escape the fact that access to equity finance (and other types of finance) is geographically uneven, with this also linked to the sectoral focus of existing equity deals. Greater effort needs to be made in identifying potential demands for equity in parts of Wales away from the capital, and including firms in rural areas. In this respect alerting equity investors to opportunities across Wales is critical. The Development Bank of Wales is well placed to assess equity demands across the country.
- The claim that equity demands above £0.5m are more difficult to service within Wales needs to be investigated given the scope of the Development Bank of Wales to offer larger amounts of equity funding. The issue that entrepreneurs seek larger values of equity financing outside of the regional economy is not necessarily a problem. It is more of an issue if SMEs are deterred from seeking larger amounts of equity because larger equity investors are further afield. Alerting external equity investors to potential regional projects outside of South East Wales is a priority.

Appendices

Appendix A: Location of companies receiving Development Bank of Wales equity investments 2002-2018

Unitary Authority	No. of investments	% investments	Total value of investments (£m)	Value of investments per 1,000 firms (£)	% of total Welsh value	Average value (£)
Cardiff	187	30%	42,641,632	1,278,610	27%	228,030
Swansea	59	9%	12,796,922	709,954	8%	216,897
Torfaen	43	7%	8,166,607	1,503,979	5%	189,921
Denbighshire	43	7%	9,546,258	985,675	6%	222,006
Bridgend	41	7%	13,310,108	1,481,370	8%	324,637
Caerphilly	36	6%	6,347,715	637,321	4%	176,325
Monmouthshire	32	5%	10,420,003	866,889	7%	325,625
Newport	27	4%	6,961,157	606,637	4%	257,821
Blaenau Gwent	20	3%	3,065,333	763,470	2%	153,267
Gwynedd	19	3%	3,702,427	245,194	2%	194,865
Pembrokeshire	16	3%	8,957,806	654,810	6%	559,863
Rhondda Cynon Taff	22	4%	4,670,644	314,840	3%	212,302
Conwy	13	2%	1,699,971	166,501	1%	130,767
Vale of Glamorgan	12	2%	4,570,200	405,160	3%	380,850
Powys	11	2%	1,195,000	60,384	1%	108,636
Wrexham	10	2%	1,105,996	99,684	1%	110,600
Flintshire	11	2%	5,150,000	431,143	3%	468,182
Neath Port Talbot	8	1%	9,738,499	1,269,687	6%	1,217,312
Ceredigion	6	1%	1,375,000	166,264	1%	229,167
Carmarthen	5	1%	1,643,571	85,580	1%	328,714
Anglesey	4	1%	465,000	75,733	0%	116,250
Merthyr Tydfil	3	0%	533,000	167,874	0%	177,667
Total	628	100%	158,062,848	12,976,756	100%	287,714

Appendix B: The recent history of equity investments in Wales

1998-2000	Number of deals	15
	% of the UK	1.65
	£ million	14
	% of the UK	0.9
2001-2003	Number of deals	57
	% of the UK	4.62
	£ million	31
	% of the UK	3.4
2005-2007	Number of deals	50
	% of the UK	3.35
	£ million	29
	% of the UK	1.65
2008	Number of deals	13
	% of the UK	7.25
	£ million	2
	% of the UK	0.6

Source: Mason, C. and Pierrakis, Y. (2013) Venture Capital, the Regions and Public Policy: The United Kingdom since the Post-2000 Technology Crash. *Regional Studies* 47, 1156-1171

Appendix C: Examples of organisations active in SME equity deals in Wales

Business Growth Fund (BGF): UK wide-Fund that has office in Cardiff. One investment per year, on average. In 2017, equity investment in DEVOPS with £3 million. This company is in the 50 fastest growth UK companies.⁵⁴

Catalyst Growth Partners: Wales-based investing fund. Established in 2014 in Newport. Its current portfolio includes 12 businesses located in Wales (Cardiff, Swansea, and Newport).

Development Bank of Wales: the dominant player in Wales, its activity is analysed in this report.

Lloyds Development Capital: The private equity house that is a subsidiary of Lloyds Banking Group and opened a regional office in Cardiff in 2016. Since then, it has made four equity investments in Wales.

Wales Life Sciences Investment Fund: It was established in 2012, with £100 million funds available to support the growth rate, employment and access to equity finance for life sciences businesses in Wales.

Wealthify: A Wales-based private equity fund, in Cardiff.

⁵⁴ <http://www.fastgrowth50.com/2018/devops-group-cardiff>