


Section A		
Institution: University of St Andrews		
Unit of Assessment: UoA 17 – Business and Management Studies		
Title of case study: Addressing Growth Challenges Confronting SMEs		
Period when the underpinning research was undertaken: 2014 - 31 December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Ross Brown	Role(s) (e.g. job title): Professor	Period(s) employed by submitting HEI: 01 January 2013 – 31 December 2020
Period when the claimed impact occurred: 2014 - 31 December 2020		
Is this case study continued from a case study submitted in 2014? N		
Section B		
1. Summary of the impact (indicative maximum 100 words)		
<p>Small and medium sized enterprises (SMEs) play a vital role in the UK economy, accounting for over 99% of firms and 60% of private sector employment. Brown's research provides insights to the growth challenges SMEs encounter, particularly related to access to finance. Specifically, his research findings suggest that relative to larger firms, SMEs have difficulty in accessing finance, and this varies by age, size, innovativeness and geographic location. These difficulties lead to SMEs using non-traditional forms of financing or being discouraged entirely from applying for external finance and are exacerbated when sudden dramatic and unexpected events (such as Brexit, Covid-19) lead to increased uncertainty. Consequently, public policy interventions are necessary to alleviate financing constraints and financial pressures facing SMEs, and foster an environment conducive to investment, innovation and growth.</p> <p>Insights from Brown's research have influenced policy interventions by Scottish Government and OECD aimed at fostering the development of supportive entrepreneurial ecosystems. For example, in Scotland, the Scottish Government has introduced measures designed to alleviate financial pressures facing SMEs, especially during periods of heightened uncertainty following the UK's decision to leave the European Union (Brexit) and the spread of the Covid-19 virus. Such measures include: the Brexit Support Grant, 2019; Pivotal Enterprise Resilience Fund, 2020 which has supported Scottish SMEs via grants with a value totalling GBP121,792,000; and the 2020 Creative, Tourism & Hospitality Enterprises Hardship Fund totalling GBP20,000,000, for small creative, tourism and hospitality companies not in receipt of Covid-19 business rates relief and related grant support. The insights gleaned from Brown's research for the OECD have also influenced the development of start-up ecosystems to facilitate entrepreneurship and investment in various countries, including Estonia among others.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>SMEs face a variety of challenges related to competition, regulation, taxation, late payment, staff recruitment and access to finance, which affect future growth prospects. The strategic importance of SMEs to the UK economy has necessitated a myriad of government policies to alleviate the financing constraints and pressures facing SMEs, and to build a supportive environment conducive to investment, innovation and growth. The underpinning research examines the financing challenges faced by SMEs, and how these vary by geographic location and during periods of uncertainty (Brexit, Covid-19). Findings from this research (discussed below) suggest that SMEs, especially those that are innovative and growth-orientated or located in peripheral geographic areas, face significant financing obstacles. Moreover, ecosystems conducive to supporting SMEs in accessing appropriate forms of finance are prerequisites for investment, innovation and subsequent growth.</p>		

Access to external finance is of crucial importance to the development and growth of SMEs. However, relative to larger corporates, SMEs are more informationally opaque (do not produce audited financial statements or enjoy a credit rating for publicly issued securities) and more risky. SMEs are less able to convey creditworthiness and growth prospects to potential investors, and a small fixed asset base is insufficient to pledge necessary collateral (to offset inherent informational asymmetries) against prospective loans. Informational opacity and lack of collateral means that SMEs are more likely to face financing constraints, and thus insufficient capital to invest in projects that are likely to lead to future growth **[R1]**. Given limited collateral and unstable cash flows, obtaining access to external finance is extremely challenging for SMEs. Findings of Brown's research using large-scale UK government surveys of SMEs suggest accessing external finance is particularly difficult for innovative SMEs located in geographically peripheral locations. These SMEs suffer a so-called 'liability of distance' and are more likely to have their applications for external finance rejected **[R2]**.

Given the aforementioned difficulties in accessing funding, SMEs (especially at the lower end of the size distribution) may seek alternative sources of finance (such as credit cards) that are often easier to secure in the absence of collateral, but which may represent a more expensive form of funding. Indeed, Brown's research findings suggest that SMEs in peripheral geographical areas use credit card financing more relative to counterparts located in 'core' locations **[R1]**. Expectations regarding the likely success in obtaining external finance can be so acute that some SMEs refrain from applying altogether. These so-called *discouraged borrowers* are SMEs that choose not to apply for external finance because they expect applications to be rejected. Research findings produced by Brown suggest that one in ten SMEs are discouraged borrowers. Borrower discouragement is particularly acute for micro SMEs (1 to 9 employees) and those located in peripheral geographic locations **[R2]**.

In 2016, the vote to leave the EU added to the challenges highlighted above by increasing uncertainty regarding the future trading conditions facing SMEs (especially those which import raw materials or export finished goods and services to the EU). At one level, SMEs are nimble and can adapt to changing circumstances more quickly than larger counterparts. However, due to insufficient financial and human resources, it is often difficult for many SMEs to undertake the types of preparatory or contingency planning to deal with unforeseen events such as Brexit. Brown's research findings suggest that the extent to which SMEs are impacted by Brexit depends on firm size, age, industry, geographic location and business orientation (internationalisation, growth intentions, innovativeness) **[R3]**. Brexit uncertainty has led many SMEs to scale back on plans for capital investment, innovation and exporting. Given the importance of SMEs (especially innovative, growth- and export-oriented SMEs) to government industrial strategy, how these firms deal with the complexities of Brexit has significant implications for future economic growth **[R3]**.

Since early 2020, Covid-19 has spread across the globe, leading to an unprecedented negative impact on the current and future prospects of SMEs. Many SMEs (temporarily or permanently) ceased trading, while others have seen dramatic declines in revenue. Brown's research investigating the impact of Covid-19 on SMEs suggests that a lack of external (venture capital and business angel) funding and precautionary cash reserves has left SMEs vulnerable to bankruptcy and closure **[R4]**.

Given the significant challenges to growth, entrepreneurial ecosystems are crucial to providing an environment where SMEs can access appropriate forms of finance necessary for investment (especially innovatory investments with a significant uncertainty of outcome) and subsequent employment creation and growth. However, policy approaches that merely create a supportive environment conducive to entrepreneurial financing and innovatory activity are not sufficient to ensure SME growth. Insights provided by Brown's commissioned OECD research (with Mason, University of Glasgow) on entrepreneurial ecosystems suggest that a holistic approach and the cultivation of a particular supportive environment is required. Such an environment is characterised by: a core of large established businesses; re-investment to support new entrepreneurial activity; and shared information. Moreover, the extent to which SMEs flourish depends on entrepreneurial culture and the availability of finance (including a critical mass of start-up investors), alongside the presence of large firms, universities and service providers **[R5]**. Brown's research findings also suggest Scottish Government innovation policy measures that do

not recognise systemic characteristics underpinning the local entrepreneurial ecosystem are likely to be ineffective in supporting the formation of new and survival of existing SMEs [R6].

3. References to the research (indicative maximum of six references)

The research listed below represents a broader portfolio of research executed during the current REF census period and published in outlets regarded as internationally excellent or world leading according to various criteria.

R1: Brown, R. & Lee, N. (2018). The Theory and Practice of Financial Instruments for Small and Medium-Sized Enterprise, Final Report to the OECD and the European Commission. https://www.oecd.org/cfe/regional-policy/Brown_When-to-use-financial-instruments.pdf

R2: Brown, R. & Lee, N. (2017). Innovation, SMEs and the liability of distance: the demand and supply of bank funding in UK peripheral regions, *Journal of Economic Geography*, 17, pp. 233–260. DOI: [10.1093/jeg/lbw011](https://doi.org/10.1093/jeg/lbw011).

R3: Brown, R., Liñares-Zegarra, J., & Wilson, J. O.S. (2019). The (potential) impact of Brexit on UK SMEs: regional evidence and public policy implications. *Regional Studies*, 53(5), pp.761-770. DOI: [10.1080/00343404.2019.1597267](https://doi.org/10.1080/00343404.2019.1597267).

R4: Brown, R., Rocha, A., & Cowling, M. (2020). Financing entrepreneurship in times of crisis: Exploring the impact of COVID-19 on the market for entrepreneurial finance in the United Kingdom. *International Small Business Journal*, 38(5), pp.380-390. DOI: [10.1177/0266242620937464](https://doi.org/10.1177/0266242620937464).

R5: Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth oriented entrepreneurship. Final Report to OECD, Paris, 30(1), pp.77-102. <http://www.oecd.org/cfe/lead/entrepreneurial-ecosystems.pdf>.

R6: Brown, R., Gregson, G., & Mason, C. (2016). A Post-Mortem of Regional Innovation Policy Failure: Scotland's Intermediate Technology Initiative (ITI). *Regional Studies*, 50(7), pp.1260-1272. DOI: [10.1080/00343404.2014.985644](https://doi.org/10.1080/00343404.2014.985644).

4. Details of the impact (indicative maximum 750 words).

The insights provided by Brown's research regarding the growth challenges SMEs encounter, especially those related to access to finance have had a wide-ranging influence on policies addressing challenges facing SMEs. Research findings suggesting that SMEs which are innovative and growth orientated or located in peripheral geographic areas face significant financing obstacles have influenced policy interventions to improve access to finance.

At UK level, policies introduced by the Department of Business Innovation Energy and Skills, and the British Business Bank have targeted support (through schemes such as: Northern Powerhouse and Midlands Engine Investment Funds and the Help to Grow programme; and encouraged a greater diversity in provision by supporting new and alternative finance providers) towards reducing SME barriers to finance in geographic areas where access is more challenging and borrow discouragement is higher. In 2020, the Chief Statistician at the Department for Business, Energy & Industrial Strategy reported that Brown's "...work fed into our thinking on discouraged borrowers, and more recently on the specific relationship with innovation will also help us better develop and target our policies" [S1]. Moreover, Brown (and Lee, LSE) were commissioned by the UK Financial Conduct Authority to provide an expert paper regarding Future Issues in Small Business Lending. This report featured in a high-level Future Horizons Conference convened by the FCA in April 2017. This conference brought together leading thinkers, including the then FCA CEO, and now Governor of the Bank of England Andrew Bailey, to examine future financial and societal landscapes in order to draw out the implications, future risks and opportunities for society, financial services and regulation [S2]. A published report following the conference featured Brown's work regarding the future landscape for SME finance.

At European level, mechanisms to improve the competitiveness of SMEs are one of the key objectives for EU Cohesion Policy between 2014 and 2020 (via the development of the European Regional Development Fund with a budget of EUR 65,000,000,000). This has been augmented by increased use of financial instruments that mobilise additional (regional, national, EU) funds and facilitating access to Cohesion Policy Funds for SMEs. In 2020, a senior OECD economist

noted that the findings emanating from Brown's research had "*greatly facilitated the policy dialogue and helped to shape the debate on how to design a more effective EU Cohesion Policy*" [S3].

Brown's research findings that SMEs affected by Brexit are less likely to seek external finance and enact investment and innovation plans would have a detrimental impact on the real economy given that the perceived negative effects of Brexit are more prevalent among innovative and export-oriented SMEs. With this underpinning research listed in 2019 by the Observatory of International Research (<https://oior.org/trend.php?category=geography&year=2019>) as 7th (out of 21,443) most disseminated geography publication, these insights have stimulated evidence gathering and debate among UK policymakers regarding the interventions required to best mitigate any negative impacts of Brexit on SMEs. In April 2018, Brown's co-author (Wilson, along with high profile representatives from the Confederation of British Industry, British Chambers of Commerce, Federation of Small Business among others) provided oral evidence at the televised House of Lords EU Internal Markets Select Committee chaired by Lord Aberdare regarding how Brexit would impact SMEs [S4]. Since 2016, Brown has provided advice regarding interventions required to alleviate pressures facing SMEs post Brexit to the Scottish Parliament Information Centre (SPICe), Scottish Enterprise and the Federation of Small Business, Scotland. Subsequently, Scottish Enterprise administered the Scottish Government's newly introduced Brexit Support Grant which provided GBP2,000,000 in funding for Scottish SMEs [S5].

Insights from Brown's research [R4] (*International Small Business Journal*; 7,786 views and [downloads](#) between July and December 2020) suggesting that Covid-19 is having a detrimental albeit uneven geographic and sectoral impact on SMEs, have informed public policy interventions. For example, between May and June 2020, Brown advised the Scottish Cabinet Secretary for Finance and informed Scottish Government's Advisory Group on Economic Recovery (AGER) deliberations regarding policy responses to the Covid-19 crisis. In order to ensure the medium-term viability of SMEs, policy measures instituted by the Scottish Government and other government agencies tailored support to industries (hospitality, tourism, retail, personal services) and geographic areas (Glasgow and Dundee) most affected by the negative economic consequences of Covid-19. Specific measures introduced include the: Pivotal Enterprise Resilience Fund, which has supported Scottish Enterprises in all of Scotland's Local Authorities through 1,763 grants with a value of GBP121,792,000. Critically, these grants have supported 17 sectors with Tourism and Hospitality, Manufacturing, Construction, Wholesale Retail and Creative Industries sectors, accounting for 61% of the total fund value [S6]; and the GBP20,000,000 Creative, Tourism & Hospitality Enterprises Hardship Fund for small creative, tourism and hospitality companies not in receipt of Covid-19 business rates relief and grant support [S7]. According to the Scottish Cabinet Secretary for Finance, Brown's recent work on the impact of Covid-19 "*...has been of great value and interest to officials working across Government and Parliament*" [S8].

Brown's research findings regarding the failure of the Scottish Government ITI Innovation Programme (arising from SMEs' inability to absorb intellectual property emerging from the initiative) influenced the design of policy in Scotland including the Innovation Centre programme. His insights emphasising the need to shift innovation policy from stimulating and protecting new intellectual property toward achieving a critical mass of innovative SMEs were discussed by MSPs during the Scottish parliamentary debate on the future of innovation centres [S9, p. 40]. Indeed, Brown's findings regarding the failure of the ITI initiative shaped subsequent policy focused on increasing the ability of SMEs to undertake innovative activities and continues to inform the design of innovation policy. According to a senior manager at Innovate UK, "*His work is having an impact in informing and shaping views on Innovation policy and scoping future work in the area*" [S10].

Brown's research findings suggesting the importance of cultivating an environment supportive of SMEs' needs have influenced public policy interventions on entrepreneurial ecosystems. The OECD actively promote this concept in order to improve place-based initiatives that foster entrepreneurship. The Head of Entrepreneurship at the OECD claims that Brown's work on entrepreneurial ecosystems "*...represents a milestone report. It has been used by the OECD to develop an ongoing work programme on local entrepreneurship ecosystems*" [S11]. In particular, Brown's insights on entrepreneurial ecosystems have shaped the OECD's Local Economic and Employment Development Committee and Working Party on SMEs and Entrepreneurship

approaches to policies for reinforcing entrepreneurial ecosystems. According to the Head of Entrepreneurship at the OECD, Brown's work has enabled "...governments to operationalise a previously unclear concept", thereby informing policies that support the development of national and regional entrepreneurial ecosystems in the Netherlands and Estonia [S11]. In the case of Estonia, the governmental initiative Startup Estonia (implemented by the Estonian Ministry of Economic Affairs and Communications in partnership with Enterprise Estonia and KredEx) has been successful in using this place-based approach to entrepreneurial ecosystems to foster and strengthen the development of a start-up ecosystem and facilitate entrepreneurship and investment in Estonia. By mid-2019, an estimated 650 start-ups were in operation, employing 4,848 staff (headcount: 4,848), alongside 1,000 people (entrepreneurs) participating in its training programmes for start-ups by early 2018 [S12]. Further commissioned research by the Centre for Development and Enterprise, South Africa led to an extension of Brown's research to middle-income developing economies, thus demonstrating the growing importance of his insights regarding high growth SMEs and entrepreneurial ecosystems.

Utilising his expertise on entrepreneurial ecosystems, Brown continues to advise the Scottish Cabinet Secretary for Finance on how the Scottish Government can bolster the entrepreneurial ecosystem for high-tech SMEs post-Covid-19. As part of this work, he contributed to the Logan Report on Scotland's high-tech ecosystem. The findings in this report led to the Scottish Government's Programme for Scotland 2020-2021 commitment to establishing a national network of 'Tech Scalers', with between 300 and 500 high-quality new start-ups over five years, and the aim to create a supporting Ecosystem Fund. In August 2020, the Scottish Cabinet Secretary for Finance acknowledged that "we very much value your insights on the promotion of entrepreneurship and business success here in Scotland" [S8], and in September 2020 pledged GBP4,000,000 in funding to establish five technology hubs to invest in critical infrastructure for Scottish start-ups [S13]. Here Brown's research insights on entrepreneurial ecosystems, particularly regarding the location and industry specialisation of SMEs most affected by Covid-19 continue to inform Scottish Government decision-making regarding the location of start-up incubators.

5. Sources to corroborate the impact (indicative maximum of ten references)

- S1. Email from Chief Statistician, UK Department for Business Energy & Industrial Strategy.
- S2. Events announcement UK Financial Conduct Authority – News summary of the Future Horizons Conference and publication of Future Horizons Report, April 2017.
- S3. Email from Senior Economist, Centre for Entrepreneurship, SMEs, Regions and Cities, OECD.
- S4. Recorded televised coverage of the House of Lords EU Internal Market Committee Hearing on Brexit and SMEs. 26th April 2018.
- S5. Scottish Government Press Release on *Funding to Prepare for Brexit*, 13th March 2019 (<https://www.gov.scot/news/funding-to-prepare-for-brexit/>).
- S6. Webpage summarising the grants offered under the Pivotal Enterprise Resilience Fund, 6th August 2020 (<https://www.gov.scot/publications/coronavirus-covid-19-hardship-and-resilience-funds-statistics/pages/pivotal-enterprises-resilience-fund-perf/>).
- S7. Article summarising the scale of Scottish Government Investment and funding opportunities available under the Creative, Tourism & Hospitality Enterprises Hardship Fund, 30th April 2020 (<https://www.visitscotland.org/news/2020/fund-open-for-applications>).
- S8. Letter from MSP Scottish Cabinet Secretary for Finance, Scottish Government.
- S9. Link to proceedings in the Scottish Parliament, 17th November 2016.
- S10. Email from Senior Manager, Innovate UK.
- S11. Email from Head of Entrepreneurship, Centre for Entrepreneurship, SMEs, Regions and Cities at the OECD.
- S12. OECD 2020 *The International Compendium of Entrepreneurship Policies*. Paris: Organisation for Economic Cooperation and Development (DOI: [10.1787/f223976d-en](https://doi.org/10.1787/f223976d-en)).
- S13. Scottish Government Press Release '£4 million for technology sector' 3rd September 2020. (<https://www.gov.scot/news/embargoed-gbp-4-million-for-technology-sector/>).