

Institution: University of Exeter
Unit of Assessment: Business and Management Studies
Title of case study: Growth Industry: Linking Academic Research, Practitioner Performance and Policy Formation in the Sphere of Entrepreneurial Finance and Support
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>An enhanced appreciation of entrepreneurship, innovation and new enterprise growth has become crucial to economic policy around the globe. Led by Professor Gordon Murray OBE, research at the University of Exeter continues to play a significant role in broadening understanding of this increasingly important area. Murray's research and expertise have assisted in shaping policy in several countries, including the UK, and have underpinned the formation of an influential international academic policymaker forum. The effective delivery of Murray's research to the world of business and industry has strengthened the vital links with academia, and through consistent engagement with a wider audience in high-profile media appearances, Murray's research continues to influence economic policy.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Understanding the dynamics of entrepreneurship and new enterprise growth has become essential to effective policy formulation. For more than 20 years, Professor Gordon Murray, Professor of Management (Entrepreneurship) at the University of Exeter Business School (UoEBS) since 2003, has researched, lectured and consulted internationally in these related areas. His work has involved a number of key collaborators both within the University of Exeter (Professor Marc Cowlingⁱⁱ, Professor of Entrepreneurship, 2010-present) and externally (Professors Markku Maula^{iii,vi} [Finland], Erkkko Autioⁱⁱⁱ [Finland, UK], Georg Licht [Germany], Regis Coeurderoy^{iv} [France, Belgium] and Paul Nightingale [UK]).</p> <p>Recognising the frequently weak links between research findings and policy actions, Murray created the annual Exeter Entrepreneurship Policy Research Seminar Series (EXPRESS). This international network has involved senior policymakers and academic researchers from some 15 countries, as well as a number of international policy agencies. With initial funding from NORFACE, and subsequent support from the European Commission and six European government hosts, successful seminars were held in London, Helsinki, Berlin, Amsterdam and Stockholm between 2005 and 2009. This network of senior policy makers still operates informally.</p> <p>Empirical research (ii, iv) has been conducted at firm, institutional and programme levels to determine how government agencies, public and private institutions, seek to influence the number, and impact, of high-potential, young businesses in an economy through their engagement with capital markets. Murray's particular research interest has been the means by which early-stage, high-growth, and innovative entrepreneurial firms are financed, and supported, by formal and informal sources of risk capital. Such firms include start-ups and spin-outs operating in novel and immature global markets.</p> <p>Since the early 1990s, Murray's work has given rise to a number of important insights into the subjects of entrepreneurship and new enterprise growth. Key among these are the limited application of prior programme experience in key areas of enterprise policy; the particular limitation of policy learning across country boundaries; an emphasis of the persistent gap in the communication of research findings and research needs between the academic community and industry practitioners; and the state's strengths and weaknesses as a risk capital investor. More specifically, Murray's research has addressed several policy issues related to the risk financing of new and growing enterprises. His firm-focused studies (ii - v) have enhanced understanding of the inter-generational persistence of "equity gaps" for young businesses and the existence of multiple financing gaps in the supply of risk capital. They have also highlighted the importance of demand-side issues such as the (frequently) poor quality of entrepreneurs seeking finance; a market failure issue termed a "thin market" for enterprise finance.</p>

Impact case study (REF3b)

Research involving institutions and venture capital (VC) funds has underscored the importance of minimum investment scale in public VC fund performance and viability. It has also shed fresh light on the economic value of government co-financing via “hybrid” fund structures as a means of attenuating VC performance constraints, as well as the need for sufficient scale to operate multi-stage investment strategies necessary to capture enterprise exit values. Murray’s programme-focused work has emphasised the need for governments to design VC programmes that fit investment cycles rather than political cycles, drawn attention to the conflict between economic and social choices in the scarce allocation of public VC funds and stressed the need to articulate credible investment goals alongside policy ambitions.

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

- i. Murray, GC, Cowling, MC, Liu, W, and Kalinowska-Beszczynska, O (2012): Government Co-Financed ‘Hybrid’ Venture Capital Programmes: Generalising Developed Economy Experience and Its Relevance to Emerging Nations, Kauffman International Research and Policy Roundtable, Liverpool, 11-12 March 2012
- ii. Coeurderoy, R, Cowling, MC, and Murray, GC (2012): ‘Young Firm Internationalization and Survival: Empirical Tests on a Panel of “Adolescent” New Technology-Based Firms in Germany and the UK’, *International Small Business Journal* 30(5) 472-492 (ABS 3 Star rating)
- iii. Maula, MVJ, Autio, E, and Murray, GC (2009): ‘Corporate Venture Capital and the Balance of Risks and Rewards for Portfolio Companies’, *Journal of Business Venturing* 24(3), 274-286 (ABS 4 Star rating)
- iv. Coeurderoy, R, and Murray, GC (2008): ‘Institutional Environments and the Location Decisions of Start-Ups: Evidence from the First International Market Entries of New Technology-Based Firms’, *Journal of International Business Studies*, 39, 18pp (ABS 4 Star rating)
- v. Dimov, D, and Murray, GC (2007): ‘An Examination of the Determinants of the Incidence and Scale of Seed Capital Investment Activity by Venture Capital Firms 1962-2002’, *Small Business Economics*, 30(2), 127-152 (ABS 3 Star rating)
- vi. Jääskeläinen, M, Maula, MVJ, and Murray, GC (2007): Profit Distribution and Compensation Structures in Publicly and Privately Funded Hybrid Venture Capital Funds, *Research Policy* 36(7), 913-929 (ABS 4 Star rating)

Research Grants

NORFACE/EXPRESS, €250,000 (jointly funded between NORFACE, European Investment Fund and governmental funding. 2005 – 2009.

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

Regional and national policies to promote economic growth make extensive reference to entrepreneurship and new enterprise growth. The need to support innovation and encourage it as a vital source of change and renewal is being recognised worldwide. But effective policy must be founded on strong theoretical and empirical evidence. Professor Gordon Murray’s research and published work has helped shape innovation and new enterprise policy in several countries, and through the delivery of this research in extensive engagement as an expert advisor his research has assisted in the formation of governmental policy.

In the UK, he was a founding member of the government’s Access to Finance Expert Group, originally formed in 1997. Since 1995, he has advised the Small Business Service, the Department for Business, Innovation and Skills (BIS), the Department for Business Enterprise and Regulatory Reforms, the Department of Innovation, Universities and Skills, HM Treasury and HM Revenue and Customs on issues related to entrepreneurial policy formulation and assessment. In 2009 the National Audit Office asked him to assist on its evaluation of the UK’s “hybrid” venture capital programmes in which he is extensively cited (5).

From 2003, Murray was a member of the European Commission’s Enterprise Policy Group, which was established to discuss, and assist the EC in the development of, future innovation and

enterprise policy proposals. As the only academic in the 60-strong group he acted as a link between the EC's policy processes and contemporary international academic research findings. In addition, he has advised and evaluated "seed capital" grant programmes and helped shape European policy via membership of two Expert Groups on Venture Capital and High-Growth Young Firms. As noted by the EC Directorate General for Enterprise and Industry '**His research-based contributions to the debates have influenced European policies on small businesses and their financing, and have had a strong influence on the considerable expansion of venture capital funding in the EU programmes for 2014-2020.**'(1).

In 2008 New Zealand's Ministry of Economics and Development invited Murray to give a series of policy presentations and lectures on his entrepreneurial finance research. This series contributed to a review of the government's approach to funding hybrid VC programmes. The following year, as a result of his research exploring the nature of VC economic rational, Australia's Commonwealth Government Department of Industry, Innovation, Science, Research and Tertiary Education invited Murray to carry out a formal evaluation of its Innovation Investment Fund (IIF), which Murray had formally proposed some 14 years earlier to the Commonwealth's R&D Board. His findings, reported in 2010(6), encouraged a change in the IIF programme's structure; the development of a longer term view and a greater focus on attracting professional investors. The subsequent joint review by the Treasury and Department drew on his findings and recommended the Australian Government continue to a third round of venture capital investment(7), '**Professor Murray worked with the Australian Government to review all Australian venture capital programs, and to identify global best practices and how these could be integrated into the Australian programs. The ultimate outcome of this work was a new and significant financial commitment from the Government to innovation and venture capital in Australia**' (2).

In 2009 Murray was a member of the Rowlands Committee on Growth Capital for SMEs, a review commissioned by HM Treasury and BIS, which looked at small and medium-sized enterprise (SME) financing in light of the difficulties experienced in sector. The resulting Growth Capital Review Report was influential in encouraging the government's subsequent support of the market for SME finance (8). In the same year he also co-authored the NESTA "Thin Markets Report" (9) which analysed the impact of UK government-backed VC investment. The report determined that despite positive effects, government-backed schemes are restricted by their structure and size, and called for better infrastructure to support 'more innovative, world-leading, high-growth companies.' In recognition of the understanding of constraints identified in Prof Murray's research, he has participated in the Access to Finance Expert Group, BIS. The group has helped inform the discussions and development of the 'Enterprise Bank', an initiative that has been launched recently, under sponsorship of the Secretary of State, Vince Cable, to provide access to resources for SMEs in the UK to facilitate the growth. Prof Murray continues to attend expert meetings on the development of this initiative with BIS.

Murray was one of six internationally recognised academics asked to lead the Finnish government's Evaluation of the National Innovation Strategy, which reported in October 2009 (10). The largest study in more than a decade, the review reported directly to the country's Cabinet and Research and Innovation Council, with Murray's findings presented personally to the Ministers of Economics and Education. As noted by the leading consultant for the Ministry of Employment and the Economy 'Growth Enterprise Review', '**Prof. Murray proposed a radical overhaul of Finland's public apparatus supporting high-potential young companies. Among his proposals were the creation of a world-class elite enterprise grouping at Aalto University, the economic encouragement of foreign entrepreneurs to Finland, and changes to enterprise tax incentives. While his suggestions were initially considered too radical, they have over time been introduced into the Finnish policy arena. Aalto University's commitment to science based enterprise and its very active student and faculty links to other world-class institutions actively encouraged by government directly illustrate Prof. Murray's initially contentious proposals.....By 2013 Prof. Murray's lasting legacy in Finland is obvious and several major institutional changes have taken place along the line he and the evaluation team at large proposed.**' (3).

In 2008 and 2009 Murray was requested to advise the Finnish government on personal taxation policy's effects on entrepreneurial activity. His contributions helped bring about a renewed focus on entrepreneurship as a key element of Finland's present innovation plan, which was manifested in a number of ways; firstly, a change in tax policy to give greater rewards to risk-taking entrepreneurs, as highlighted by the Industry Councillor for VC in the Finnish Ministry of Trade and Industry: **'[Murray advised that] the Government should give a strong positive sign to the market by giving tax incentive for business angels investing in start-ups. Last year the government finally made this decision'**(4). The second major recommendation noted that government financial support should be focussed on a smaller number of initiatives allow for a greater level of investment; **'as a result, the government financing for a start-up today can go as high as EUR 2 million, half of it in a form of equity and the other half in a form of grant. The CEO of the Finnish firm Supercell, Mr. Paananen, said in an interview [October 2013], after closing an exit of USD 1 billion for his company, non-existent 2 years ago, that his firm would not probably exist without the government start-up financing.'** (4).

Beyond the policymaking community, Murray has been a regular media contributor on enterprise issues. He has been interviewed by Radio 4's Today Programme, the Financial Times, the Wall Street Journal, Australia's Financial Review and Finland's national TV news. In 2012, as a result of pioneering international links between academic research, industry and evidence-based government policy in the related fields of early-stage enterprise and innovation over a period of over twenty years, Prof. Murray was awarded an OBE for "services to business" in The Queen's Jubilee year Birthday Honours list.

5. Sources to corroborate the impact (indicative maximum of 10 references)

1. **Deputy Head of Unit, DG Enterprise and Industry, European Commission** (to 2010). *Statement indicating changes in EC policy resulting from Murray's contributions.*
2. **Commercialisation & Venture Capital Policy Manager, Australian Department of Innovation, Industry, Science, Resources and Tourism** 2007-2013. *Statement corroborating the outcomes for the level of investment of VC agreed by government.*
3. **Research Director and ETLA, The Research Institute of the Finnish Economy**: Leading consultant for the Ministry of Employment and the Economy's 'Growth Enterprise Review'. *Statement corroborating nature and resultant outcomes of the review.*
4. **Industry Councillor for VC, Finnish Ministry of Trade and Industry**. *Statement confirming the implementation of Murray's recommendations by government.*
5. Murray, G.C. and Liu, W. (2009). *Venture capital support to small businesses*. London: National Audit Office http://www.nao.org.uk/publications/0910/venture_capital_support_to_sme.aspx
6. Murray, G., Cowling, M. and Liu, W. (2010). *An Independent Econometric Analysis of the "Innovation Investment Fund" Programme (IIF) of the Australian Commonwealth Government: Findings and Implications*. Canberra: DIISR. <http://www.innovation.gov.au/industry/VentureCapital/Documents/IndependentEconometricAnalysisofIIF.pdf>
7. Australian Treasury and Department for Industry, Innovation, Science, Research and Tertiary Education (2012). *'Review of Venture Capital and Entrepreneurial Skills – Final Report'*. <http://www.avcal.com.au/documents/item/516>
8. Rowlands, C., Murray, GC. et al. (2009). *The Provision of Growth Capital to UK Small and Medium Sized Enterprises*. London: TSO <http://www.bis.gov.uk/files/file53698.pdf>
9. Nightingale, P., Murray G., Cowling, M., Baden-Fuller, C., Mason, C. Siepel, J. Hopkins, M. and Dannreuther, C. (2009). *From funding gaps to thin markets: UK Government support for early-stage venture capital*. London: NESTA. <http://www.bvca.co.uk/ResearchPublications/ResearchReports/FromFundingGapstoThinMarkets.aspx>
10. Murray, G., et al. (2009). Growth Entrepreneurship and Finance. In: *Evaluation of the Finnish National Innovation System – Full Report*. Helsinki: Ministry of Employment and the Economy. [www.tem.fi/files/24929/InnoEvalFi FULL Report 28 Oct 2009.pdf](http://www.tem.fi/files/24929/InnoEvalFi_FULL_Report_28_Oct_2009.pdf)