

# Encouraging innovation: a changing framework for the financing of small-to-medium enterprises

**Small-to-medium enterprises (SMEs) are often considered major drivers of innovation and competition, and high rates of market entry by new entrepreneurial enterprises are often associated in policy-makers' minds with positive economic outcomes. Research at Sussex's Science Policy Research Unit (SPRU) has made significant contributions to re-evaluating the role of new and small firms in innovation and growth in the UK and EU, helping to change conceptual frameworks used by government policy for supporting and financing innovation in the marketplace.**

## Overview

SMEs (up to 250 employees) make up approximately 99 per cent of all firms in European economies. While SMEs are often thought to be important drivers of innovation and growth, it is widely acknowledged that they find it more difficult to raise money for growth than large companies, which has made them an area of policy concern in the UK since the 1930s.

The standard economic model informing public policy assumes that entrepreneurs are constrained by a variety of market failures from entering the market, which reduces the number of start-ups and economic growth. This is considered to be a particular problem for innovative, research-intensive SMEs, as they lack collateral for debt financing and are harder for funders to evaluate. To foster more innovation, a range of government policies has been introduced to

support these firms. Research led by Paul Nightingale, Professor of Strategy at SPRU, has involved working with policy-makers to evaluate the most effective schemes to provide finance and other support for SMEs.

Starting within the ESRC-funded Complex Product Systems (CoPS) Innovation Centre (1997 to 2007) and continuing through EPSRC- and ESRC-funded projects within SPRU, the team explored the technologies used in financial institutions to evaluate risks and inform investment, highlighting the technical sophistication of financial services, despite their seemingly 'low-tech' status. Innovations in risk management and credit scoring have allowed lenders to know more about firms and improve provision of financing for firms with good credit ratings (more than 95% of such firms seeking loans now get them). In traditional economic models it is assumed that entrepreneurs know more about the firm than the lender, thereby creating the potential for moral hazard. SPRU's research questioned this assumption and highlighted the technical sophistication of the models that banks use, which are more realistic than entrepreneurs, who tend to be overly optimistic about the potential of their start-ups.

Working with large UK financial institutions, this work has explored the behaviour of the long tail of small firms in the UK that is often missed in traditional economic datasets. The research has highlighted the extent of unproductive economic churn in the economy, where large numbers of new firms enter and quickly exit the market each year. It suggests that the real policy problem is not increasing



market entry, which is already extremely high and possibly excessive, but supporting economic growth for the small percentage of high-potential firms.

Evaluations of a range of EU/UK policy interventions showed that firms funded with government support do not necessarily outperform unfunded controls unless certain conditions are in place. Many early schemes supporting venture capital (VC), for example, failed to consider the high fixed costs involved in providing equity, the capabilities investors need to

manage the firms they invest in or the institutional structures needed for an effective funding escalator to emerge. As a result, the EU has struggled to generate a VC sector on the scale needed for effective investment that delivers sustainable commercial returns. SPRU's 8-S framework highlighted that a successful VC industry is: small as a percentage of all equity investment, skewed in its performance, skilled, specialised in the sectors it supports, scale intensive, systemic in its links with the rest of the economy and economically significant. It also highlighted that many current policies are very effective, driven by aligning policies with economic incentives. Importantly, this research highlights the large indirect benefits of government support, through things like increases in taxation, compared with the direct returns from investment.

Finally, the team highlighted that firms need to align their strategies with their funding environments. Large firms can adapt their funding to their needs, but innovative small firms lack the scale to make this viable and often need to adapt their business models to their financial environment. Differences in VC provision and capital markets mean that high-tech UK firms will have different strategies from their US counterparts. For example, UK biotech tends to focus on generating technology or developing drugs on behalf of large pharmaceutical companies or on selling themselves in trade sales, rather than focusing on growing their own enterprise.

## Achieving impact

The team's impact involved repeated engagement with policy debates to focus on strategies to increase UK tax return by £1 billion through encouraging enterprise and removing £1 billion's worth of ineffective policy. Through engagement with policy-makers they have helped reduce, reform and prevent poor performing policy, replacing it with better alternatives. They have co-authored reports and academic papers, co-organised seminars with the Department for Business, Innovation & Skills (BIS), provided research support for Government Select Committees, spoken at party conferences and provided direct policy advice on innovation policy issues. Professor Nightingale acted as expert adviser

to the House of Lords Science and Technology Select Committee for its inquiry into the innovative potential of procurement policy.

In doing so, the team has had influence in three key areas: post-economic crisis banking reform; SME equity provision; and developing the conceptual framework used by policy-makers to support innovative SMEs.

Their submission to the Vickers inquiry was cited in the final report that fed into subsequent banking reforms, new funding mechanisms and policies being developed to support the securitisation of SME loan portfolios. Research fed into the development of a publicly supported business bank that focuses on areas underserved by traditional banks, with £300 million of funding recently announced. These changes have the potential to significantly benefit innovative SMEs.

SPRU's work in hybrid equity schemes (co-funded by government) has highlighted the need for larger-scale funds and contracts that align the distribution of risk and reward with economic incentives. This work was disseminated in a public policy report for NESTA (the National Endowment for Science Technology and the Arts) and the British Venture Capital Association (BVCA) and through presentations to the Access to Finance group at BIS. This research has also informed EU policy through the European Research Area Board whose outputs draw on the 8-S model.

As a result, there is now increased recognition that viable hybrid funds need to be larger and much more professional, which requires co-funding mechanisms to be aligned with the commercial imperatives of private-sector investors.

The team's research on innovative SMEs has helped move policy thinking away from a market failure framework so that it is more realistic about the often limited economic impact of SMEs and entrepreneurship. This, in turn, is informing policy thinking about how best to commercialise university research. By engaging directly with UK policy debates, they have helped the Civil Service take a more research-informed view of the potential of entrepreneurial new firms to develop technology and move away from thinking the only constraints they face are financial ones.



**Professor Nightingale's team has had influence in several key areas including post-economic crisis banking reform.**

## Future impact

More recent work has explored the relationship between constraints on firm growth, patterns of growth and innovation. While policy-makers now recognise that the performance of firms is highly skewed, with a small percentage generating the majority of economic impact, SPRU has highlighted that this involves a different set of firms in each time period. While innovative firms grow more than non-innovative firms, research shows that growth patterns are not persistent, suggesting that innovation has a more indirect relationship to company and economic growth than has traditionally been supposed. The team is working to develop policies that improve how firms capture value rather than just having policies to support firms creating value.

## Funding and partnership

The research was initially supported by funding from the ESRC and EPSRC, a large ESRC-BIS-TSB-NESTA-funded project on financing firms, and by smaller research contracts from the BVCA, NESTA and the EU.

## Working with us

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