High Growth Firms in Northern Ireland: A Strategic Appraisal and Policy Assessment

Final Report for Department for the Economy, Northern Ireland,

January 2017

Dr Ross Brown, Centre for Responsible Banking & Finance, School of Management, University of St Andrews

Ross.Brown@st-andrews.ac.uk

Dr Suzanne Mawson, Stirling Management School, University of Stirling

suzanne.mawson@stir.ac.uk

Dr Neil Lee, Department of Geography, London School of Economics

N.D.Lee@lse.ac.uk

Contents

Acknowledgements

The authors wish to thank the Department for the Economy (DfE) in Northern Ireland for funding the research outlined in this report. In particular, they wish to thank Thomas Byrne from DfE Economic Research for his excellent collaboration and project management throughout this research exercise. They also wish to thank members of the project's Steering Group for their input into the research, especially Alan McClelland from DFE Statistics, Information and Analysis and Martin Robinson from Invest Northern Ireland. The authors would also like to thank all the companies and policy makers in Northern Ireland who participated in the interviews during this project. Finally we wish to acknowledge the input and insights gained from several leading academic experts, particularly Bob Hamilton and Erkko Autio, during the work. The usual disclaimer applies.

Executive Summary

Introduction

- High Growth Firmss (henceforth HGFs) are enterprises with average annualised growth (in number of employees or turnover) greater than 20% per annum, over a three year period, with a minimum of 10 employees at the beginning of the growth period.
- These enterprises are recognised as key job creators and contributors to economic development and have become a major focus for governments and policy makers.
- This report focuses on HGFs in Northern Ireland (NI) and the implications for economic policy of targeting and supporting HGFs.
- The report draws on a comprehensive literature review; analysis of the UK's Longitudinal Small Business Survey; in-depth interviews with HGFs in NI and an assessment of bespoke support interventions and policy approaches in other advanced economies.

Current Evidence Base

- The academic evidence base on HGFs has grown rapidly in recent years and strongly suggests that HGFs play a vital role in job creation, accounting for as much as 50% of all new aggregate job creation.
- There are also thought to be wider positive spillover benefits from these firms in terms of innovation, productivity and human capital development.
- More recent academic evidence is beginning to suggest that the impact of these firms is spatially uneven (i.e. less in peripheral regions).

Characteristics

- A core feature of the literature examining HGFs is their strong heterogeneity in terms of age, size, sector, geographic location and longer term growth ambition.
- Broadly speaking, at around 7% percent of firms the population of HGFs in NI seems comparable with the volumes of HGFs in other parts of the UK.
- In one important respect Northern Ireland HGFs seems to differ from the rest of the UK: this concerns the number of HGFs that are in *high-tech* sectors which is the lowest level of all UK regions.
- The single largest contributor to the cohort of NI HGFs is service-sector firms.
- Analysis of the Longitudinal Small Business Survey reveals that NI SMEs are slightly more growth-oriented than SMEs across the UK as a whole.
- This analysis also highlighted that access to finance is a significantly larger growth obstacle for NI SMEs than those across the UK as a whole.

Growth Metrics

- Turnover and employment remain the two growth measures most commonly used metrics for identifying HGFs by researchers and by policy makers.
- In terms of identifying HGFs, there may be merit in using a turnover-based metric. Turnover growth is often what entrepreneurs themselves most identify with, as opposed to employment, which is often seen as a consequence of growth.

- An employment threshold of a minimum of 10 employees is often adopted when assessing HGFs. By eliminating micro-firms it reduces the number of start-ups who appear to grow rapidly but remain incredibly small nonetheless.

Rationale for Targeting

- A number of recent empirical studies examining HGFs found that sustained growth in these firms is extremely rare.
- Rapid firm growth may also destabilise some firms increasing their likelihood of failure.
- Indeed, most of the recent evidence on firm growth suggests that policy makers may wish to turn their attention towards the promotion of more stable, incremental growth within firms.
- In terms of detecting HGFs, there may be merit in using a turnover-based metric for identifying potential growth firms. The use of "real-time" metrics might be needed to help target firms with strong future "growth potential". Generally, softer metrics might be better for identifying firms' and entrepreneurs' capacity and appetite for long-term growth.
- For policy targeting purposes, segmentation of firms with growth potential could adopt a process of segmentation across the firm base. One such approach would be to segment firms into various size and growth categories *1) start-ups 2) pre-scaling 3) scaling and 4) companies of scale*.

Appraisal of Public Policies Designed to Support HGFs

- The assessment of existing programmes and policy approaches in Finland and New Zealand found that age and sector were the two most common forms of targeting towards HGFs, both of which are contrary to the evidence base on the origins and antecedents of HGFs.
- From the analysis of support approaches elsewhere, traditional forms of transactional forms of grant-based support seem inappropriate for these firms with many preferring (and benefitting from) more relationally (often peer-based) and informational based forms of assistance.

Policy Recommendations

- Given the evidence presented, promoting sustainable growth in firms may prove a more effective policy objective than promoting rapid growth *per se.*
- With respect to age, we would caution policy makers in Northern Ireland against excessively focusing their efforts towards young firms, particularly start-ups.
- Similarly, policy makers should also avoid excessive sectoral prioritisation in support and guard against implicitly favouring high-tech firms through R&D based eligibility criteria within support initiatives.
- In terms of future targeting there seems merit in targeting firms with a discernible growth "track record" rather than purely focusing on firms who are small, young or high-tech. In other words, rather than attempting to "pick winners" policy makers should "back winners" by assisting firms with demonstrable growth capabilities.
- Signposting firms to appropriate sources of finance and greater levels of support for internationalisation seem suitable types of support for nascent HGFs.

1. Introduction, Objectives and Research Method

High growth firms (henceforth HGFs) are recognised as key job creators and contributors to economic development and have become a major focus for governments and policy makers[1]. This is particularly the case in the UK and other OECD countries, with an increased number of policy interventions designed to foster and support HGFs.[2]

During the last decade, there has been a considerable growth in the body of academic research examining these firms. While much of the early research on HGFs examined their geographic and sectoral make-up[3] and job-generating qualities[4], the literature is increasingly looking at the characteristics and behaviours of HGFs, as well as the management decisions they make. This new focus is helping to provide a better understanding of HGF development and, relatedly, their unique support needs.

It is now recognised that this is a difficult cohort of firms to identify, target and engage with before, during and after their growth episodes, particularly given the retrospective growth measures commonly in use (see section 2.3 for more detailed discussion). Coad et al. (2014, p. 91) state bluntly that *"[high-growth firms] are unlikely to be useful vehicles for policy given the difficulties in predicting which firms will grow*". Despite these challenges, there is recognition of the value of supporting HGFs, although the mechanisms through which this is to be accomplished are still subject to debate.[5] Given our increasing knowledge of HGFs, there is general agreement that current policy interventions could be further developed to better support HGFs, as well as firms with high growth ambitions and growth potential.[6]

This report focuses on HGFs in Northern Ireland (NI) and the implications for economic policy of targeting and supporting HGFs. A key aim of the work is to feed into the development of the Economic Strategy for NI, which is currently being refreshed. It will

[1] Mason, C., & Brown, R. (2013). Creating good public policy to support high-growth firms. *Small Business Economics*, *40*(2), 211-225.
[2] Brown, R., Mason, C. and Mawson, S. (2014) Increasing 'the Vital 6 Percent': Designing effective public policy to support high growth firms, Nesta, London.
[3] E.g. Stam, E (2005) The geography of gazelles in the Netherlands, *Tijdschrift voor Economische en Sociale Geografie*, 96(1), pp. 121-127; Mason, C. and Brown, R. C. (2010) High growth firms in Scotland. Glasgow: Scottish Enterprise.
[4] NESTA (2009) The vital 6 per cent. Available at: http://www.nesta.org.uk/library/documents/Vital-six-per-cent-Nov2010-v3.pdf
[5] Terjesesn, S., Bosma, N. and Stam, E. (2016) Advancing Public Policy for High-Growth, Female, and Social Entrepreneurs, *Public Administration Review*, 76(2), pp. 230-239.
[6] Marchese, M. (2016) High-Growth Firms: Why They Matter and What Public Policy Can Do, *Public Administration Review*, 76(2), pp. 239-240.

provide a coherent evidence base on HGFs, drawing on the recent empirical analysis conducted within NI, other relevant studies from the wider HGF literature and new qualitative data collected from NI HGFs and policy makers for the purposes of this report. In addition to assessing the empirical evidence base, this report will outline the policy implications for supporting HGFs in NI and put forward specific recommendations for developing support programmes and interventions that best meet the needs of both HGFs and policy makers within NI.

This report draws on a number of sources of evidence. As requested in the brief, a core aim was to draw on existing sources of evidence rather than the creation of new data per se. First, the research involved a comprehensive analysis of the burgeoning HGF literature, including the most up-to-date evidence on the growth characteristics of HGFs. Second, analysis was undertaken on the Longitudinal Small Business Survey undertaken by the Department for Business Innovation & Skills. The purpose of this was to cross-check these aggregate findings with the qualitative data generated. Lastly, the research involved a series of interviews with HGFs and policy makers in NI. These were specifically focused on better understanding both the support needs of firms and initiatives currently in operation in NI. Finally, the report undertook some in-depth analysis of support interventions across other advanced economies to help inform the policy recommendations.

2. Current evidence base on HGFs

2.1. Importance of HGFs for economic policy

As noted, for the past decade there has been an ongoing fascination with companies that successfully achieve rapid growth, as well as those with the potential to achieve such growth. The explosion of high growth firm listings, such as the UK's FastTrack100, have brought this phenomenon into the mainstream and further cemented a widely held belief that rapid growth is not only aspirational but should be a strategic priority for all ambitious firms. This public perception largely mirrors that of the public policy environ, where HGFs have become something of the "holy grail" within enterprise policy in the UK and other advanced industrialised countries, in many cases drawing focus away from the new venture start policy landscape of the 80s and 90s. These HGFs are largely perceived by policy makers to be critical for economic development in terms of job creation and wider economic spillovers such as wealth creation and productivity, becoming firmly embedded in enterprise and entrepreneurship policy frameworks in recent years.

Stemming from (and in turn influencing) policy, much of the empirical research to date on HGFs has focused on job creation, with HGFs largely perceived to be critical job creators. In the UK, for example, early research on HGFs found that these firms generate over half of all net new jobs despite representing a mere 6% of the business base.[7] These findings replicated those from other OECD countries, where similar levels of employment creation were found in the US[8] and in other European economies like Germany and Finland.[9] A similar situation has been seen in Northern Ireland as well, although the overall contribution of HGFs to employment levels has been declining.[10] Whilst job creation from HGFs is generally considered to be a consistently significant finding across studies[11], and remains a hallmark of the HGF population, recent evidence suggest that this relationship may be more complex than previously assumed.

For example, with an increasing number of SMEs choosing to grow inorganically by undertaking (often international) acquisitions, domestic job creation is not necessarily an output from all HGFs. These firms may in fact simply transplant jobs from one region to another[12] or one firm to another, thus resulting in a negligible or zero net employment gain[13] to their domestic economy. There is also recognition that job creation may not always be a strategic priority for firms, with many firms seeking to maintain stable employment

[7] NESTA (2009) op. cit.

[8] Decker, R. A., J. Haltiwanger, R. S. Jarmin and J. Miranda. 2015. *Where has all the skewness gone? The decline in high-growth (young) firms in the US* (No. w21776). National Bureau of Economic Research.

[9] Brüderl, J. and P. Preisendörfer, P. 2000. “Fast-growing businesses: empirical evidence from a German study”. *International Journal of Sociology*, 30(3): 45-70; Deschryvere, M. 2008. *High growth firms and job creation in Finland* (No. 1144). ETLA discussion paper. Helsinki: The Research Institute of the Finnish Economy (ETLA). [https://www.etla.fi/wp-content/uploads/2012/09/dp1144.pdf]

[10] DETI (2015a) Measuring Northern Ireland’s High Growth Firms: 1998-2013, Department of Enterprise, Trade and Investment (DETI), Belfast.

[11] Henrekson, M. and D. Johansson. 2010. “Gazelles as job creators: a survey and interpretation of the evidence”, *Small Business Economics* 35(2): 227-244.

[12] Brown, R. and S. Mawson. 2016. “The Geography of Job Creation in High Growth Firms: The Implications of ‘Growing Abroad’”, *Environment and Planning C: Government and Policy*, 34(3): 207-227.

[13] McKelvie, A. and Wiklund, J. 2010. “Advancing Firm Growth Research: A Focus on Growth Mode Instead of Growth Rate”, *Entrepreneurship Theory and Practice* 34: 261-288.

levels and focusing on other forms of growth such as profit and turnover.[14] The issue of direct versus indirect employment benefits also needs to be considered, as well as the sustainability of jobs created. Unfortunately, the empirical literature has so far not empirically explored the longer-term sustainability of HGFs or their created jobs[15], despite recognition that high growth itself is seldom sustained in the longer term.[16]

In line with the issue of sustainability, it is important to consider how HGFs affect regional economies in the short, medium and longer term. As one might expect, the aggregate research on HGFs has noted clustering in key urban areas and entrepreneurial ecosystems[17], although it is important to emphasise that HGFs can be found in all geographic areas, even in the most rural and isolated areas as evidenced in NI[18], Scotland[19] and the wider UK. Whilst all regions have been assumed to benefit equally from the presence of HGFs, this assumption is under question. Empirical work has identified that the nature of local business and entrepreneurial ecosystems has a significant effect on HGFs, not only in terms of their access to resources and support, but also to their integration or 'embeddedness' within their 'home' region. This may have an impact on a firm's longevity within – and contribution to – their home economy longer-term, and may also explain why some regions have higher levels of HGF exit (often from acquisition) than others.[20]

Given the growing empirical evidence base on HGFs, an increasing number of questions are being raised about the nature of these firms and their impact, as well as how – and if – policy makers should be supporting them. Whilst studies have been helpful in determining characteristics of HGFs (see section 2.2), scholars have noted that these are not all discrete between HGFs and non-HGFs and that there is little empirical support for trying to 'pick

[14] Wiklund, J., Davidsson, P. and Delmar, F. (2003) What Do They Think and Feel about Growth? An Expectancy-Value Approach to Small Business Managers' Attitudes Toward Growth, *Entrepreneurship Theory & Practice*, 27(3), pp. 247-270.

[15] Brännback, M., A. L. Carsrud and N. Kiviluoto. 2013. *Understanding the Myth of High Growth Firms: The Theory of the Greater Fool*. Springer Science & Business Media.

[16] Coad, A., J. Frankish, R. G. Roberts and D. J. Storey. 2013. "Growth paths and survival chances: An application of Gambler's Ruin theory." *Journal of Business Venturing* 28(5): 615-632; Daunfeldt, S-O. and D. Halvarsson. 2015. "Are high-growth firms one-hit wonders? Evidence from Sweden". *Small Business Economics* 44: 361-383.

[17] Mason, C. and Brown, R. (2014) Entrepreneurial ecosystems and growth oriented entrepreneurship. Paris: OECD LEED Programme.

[18] DETI (2015a) Measuring Northern Ireland's High Growth Firms: 1998-2013, Department of Enterprise, Trade and Investment (DETI), Belfast.

[19] Mason, C. and Brown, R. C. (2010) op. cit.

[20] Mason, C., Brown, R., Hart, M. and Anyadike-Danes, M. (2015) High growth firms, jobs and peripheral regions: the case of Scotland, *Cambridge J Regions Econ Soc,* 8(2), pp. 343-358.

winners', particularly amongst priority sectors.[21] Others query how effective policies to support HGFs are, given the difficulty associated with identifying this cohort and the fact that growth is unlikely to persist over time.[22] Yet others observe that whist picking winners may not work, HGF policy has a role to play in 'retaining winners'[23] and supporting those firms with a proven track record. These issues will be discussed further in section 3.0.

2.2. Characteristics of HGFs

There is now a large evidence base on the characteristics, composition and geography of high growth firms. In this section we review this literature first in terms of how it relates to HGFs in general, before reviewing the evidence that refers to Northern Ireland specifically. We consider the population size of HGFs, their sectoral composition, age, size, geography and growth ambitions.

2.2.1. General HGF characteristics

Population size

The share of HGFs in the business stock varies year-on-year, but estimates for the UK suggest that in most years between 6 and 8 percent of all firms achieve high growth. This figure peaked in the late 1990s (1999-2002), before falling to just under 7.5% through most of the 2000s. The latest estimate available, for the period 2012-2015, shows around 7.5% of firms were in this category[24], amounting to around 7,500 firms across the UK.

While there is some stability in the share of all firms who are HGFs at the level of the national economy, at the firm level there is significant diversity in growth paths. As noted, for most firms the high growth experience is only transitory and can often presage a period of significant decline. Growth creates problems – it can increase the complexity of the organisation, strain the ability of the leadership team, create issues with suppliers or

[21] Daunfeldt, S-O., Halvarsson, D. and Mihaescu, O. (2015) High-growth firms: Not so vital after all? Ratio Working Paper No. 263. Stockholm: Ratio Institute.
[22] Terjesen et al. (2016) op. cit.
[23] Autio, E. and Rannikko, H. (2016) Retaining winners: Can policy boost high-growth entrepreneurship? *Research Policy,* 45(1), pp. 42-55.
[24] Anyadike-Danes, M. and Hart, M. (2016) Spatial incidence of high-growth firms, Enterprise Research Centre Insight.

problems with cash flow – and these problems make it very hard to sustain. Moreover, an initial competitive advantage can rapidly be matched by rivals. Because of this, firms often have significant problems achieving high growth. After their HGF spell, around 40% of firms shrink, while 6% drop out of the market all together (although we cannot be sure how many of these are acquired). 37% of firms continue to grow in the period after high growth, although rarely as rapidly, and 17% simply remain at their new, larger size.[25] The faster firms grow in the high growth period, the harder it is - almost by definition - to sustain that high growth. Econometric estimates show the magnitude of this effect: increasing growth in the period of high growth by 100% reduces growth by 3% in the period after the high growth spell. A wider literature shows that firms rarely achieve high growth more than once.[26]

Sectoral composition

HGFs can be found across all sectors of the economy – even those that are experiencing decline.[27] Almost by definition, however, they tend to be over-represented in sectors that are experiencing growth. Perhaps because of this, most recent sectoral analyses of HGFs have tended to demonstrate a slight over-representation of knowledge-intensive service activities. The sectors in which HGFs were mostly likely across the 2000s were: Posts and telecommunications; Computer and related activities; Insurance and pension funding; Research and development; Sewage and refuse disposal; Activities auxiliary to financial intermediation; Financial intermediation; Other business activities; Renting of machinery and equipment and household goods, and; 'Other service activities'.[28] These sectors show some dominance of the knowledge-intensive service industries, which were growing relatively rapidly in the period. It is important to note that this time period was dominated by growth in the early 2000s, when there was a larger share of HGFs than in the later end of the period. What is clear is that HGFs are not exclusively in a single sector and, in contrast to often preconceived ideas of policymakers, do not tend to be limited to high-technology industries.[29]

[25] Lee, N., Brown, R. and Schueslter (2016) Modes of Firm growth, ERC Research Paper 46, http://www.enterpriseresearch.ac.uk/wp-content/uploads/2016/05/ERC-ResPap46-LeeBrownSchlueter-RBNL_acks.pdf
[26] Daundfeldt, S-O. and Halvarsson ,D. (2015) Op. cit.
[27] Mason and Brown (2010) Op. Cit.
[28] Anyadike-Danes M and Hart M (2014)"Moving on from the vital 6%", Enterprise Research Centre (ERC) Insight Bulletin, February
[29] Mason and Brown (2010) Op. Cit.

Age

One finding which has been relatively robust in the empirical literature is that HGFs tend, on average, to be younger than other firms.[30] Young firms are less likely to survive but, if they do, are particularly likely to achieve high growth and so contribute to employment growth. Due to the age structure of firms, most HGFs are relatively older. For example, NESTA report that 70% of high growth firms they study are more than 5 years old.[31] The implication of this is that relatively few start-ups actually achieve rapid growth, so strategies also need to consider established firms.

Size

Given the definition of high growth, it is in one sense easier for smaller firms to be HGFs. If a sole trader employs someone else, the company has doubled in size; for a 200 person company to double in size requires far larger absolute growth. Thus most HGFs tend to be small. A UK study shows that while small firms (employing 10-19 at the start of their high-growth period) consist of more than 50% of high growth firms, the proportion of firms in each different size category that achieve high growth is relatively similar. Because they employ so many more people, large firms (employing 250 or more) account for more than half of all jobs in high growth firms.[32]

Geography

In recent years, scholars have paid more attention to the localised environmental context mediating the entrepreneurial process.[33] As noted, although HGFs are found in all regions and in all types of geographical environments (large cities, small towns, rural areas), there are geographical clusters that account for a disproportionate number of these firms.[34] For example, a study of Dutch HGFs found they were disproportionately located in highly urban and accessible rural areas.[35] As there seems a strong spatial logic to the geography of HGFs,

[30] Moreno, F. and Coad, A. (2015) High-growth firms: Stylised facts and conflicting results. *SPRU Working Paper*, 2015-05.
[31] NESTA (2009) Op. cit.
[32] Anyadike-Danes, M., Bonner, K., Hart, M. and Mason, C. (2009) *Measuring Business Growth: High-growth firms and their contribution to employment in the UK*, London: NESTA.
[33] Welter, F. (2011) Contextualizing entrepreneurship—conceptual challenges and ways forward, *Entrepreneurship Theory and Practice*, 35: 165-184.
[34] See Rice, M. D., Lyons, D. I. and O'Hagan , S. B. (2015) Fast-growing firms as elements of change in Canada's headquarters city system, *Urban Geography*, *36*(6): 844-863.
[35] Stam (2005) Op. Cit.

further understanding the local factors associated with the emergence and impacts of these firms is important for stimulating regional development.

As there is an assumption within UK policy circles that HGFs have the same impact on job creation and wider economic development regardless of their regional location[36], there appears to be a universal approach towards HGFs, treating them the same irrespective of their physical location.[37] This is reflected in similar policy approaches to support HGFs across most advanced economies, despite the fact that the support needs of a firm in rural Iowa will be different to one in downtown Manhattan.

One aspect that does seem to vary spatially is the economic impact of HGFs, as noted in section 2.1. Whilst further research is needed to fully explore the regional impacts of HGFs in a wider range of spatial contexts, the available evidence suggests that there might be marked regional variations in their economic impact. If, for example, a region has a strong manufacturing sector dominated by export-oriented manufacturing firms, local firms have the possibility to grow through exporting. In turn this will maintain their local employment base. A service sector firm, in contrast, may have no choice but to grow where their customers are located. One of the factors obstructing greater awareness of these types of regional variations is a lack of qualitative research. Policy makers therefore need to be cognizant of such variations, in order to ensure that interventions best address regional needs and guard against 'policy universalism'.[38]

Growth ambitions and barriers to growth

Relatively few studies have looked at the growth-mindset of entrepreneurs for HGFs specifically, although there is wider literature on this topic. This is, however, an area of some policy interest and recent work has begun to investigate the links. BIS[39] developed a typology of ambition amongst firms, which they define as (a) *Substantive ambition* – where entrepreneurs have significant intent to grow, (b) *Moderate ambition* – where there is ambition, but entrepreneurs are not acting on that and trying to achieve growth, and (c)

[36] Brown, R. and Mason, C. (2012) Raising the batting average: Re-orientating regional industrial policy to generate more high growth firms, *Local Economy*, *27*(1): 33-49.
[37] OECD (2013) *An international benchmarking analysis of public programmes for high-growth firms*. Paris: OECD LEED programme.
[38] Mason et al. (2015) Op. cit.
[39] BIS (2015) *Business Growth Ambitions amongst SMEs - changes over time and links to growth*, BIS Research Paper No 215.

Low ambition – with entrepreneurs explicitly avoiding growth. The research initially investigated how many firms were in each category, finding that 20% had 'substantive ambition'. In 2014, they re-surveyed the respondents to investigate whether this was linked to growth. But actually firm growth rates had only limited links with growth rates: 41% of firms in category (a) experienced employment growth, 38% of (b) and only 32% of (c). Ambition seems to be one factor in achieving high growth, but it is certainly not enough in itself.

In terms of barriers to growth, some studies have considered this potential. High growth firms seem to face particular challenges in six areas: cash flow, management skills, finding suitable premises, recruitment, skill shortages and obtaining finance. Instead, potential high growth firms perceive obtaining finance, cash flow and management skills to be particular barriers, along with the general state of the economy.[40] However, other research using both interviews with policymakers and statistical analysis to assess the success of applications for finance for actual high growth firms, finds that access to finance does not seem to be a particular problem for these firms – although they do not consider "potential" HGFs.[41]

2.2.2. HGF characteristics in Northern Ireland

The Department of Enterprise, Trade and Investment have published a series of studies that use quantitative data to investigate the share of high growth firms (HGFs) in Northern Ireland, their composition, contribution to the NI economy, and how these have changed over time.[42] These use the Inter-Departmental Business Register, the most robust time-series dataset for the identification of HGFs, which is standard for research in this area. They begin with the OECD definition of high growth: average annual turnover or employment growth of 20% per annum for three consecutive years, with 10 or more employees at the start of the period. However, because of the relatively small number of HGFs in the NI

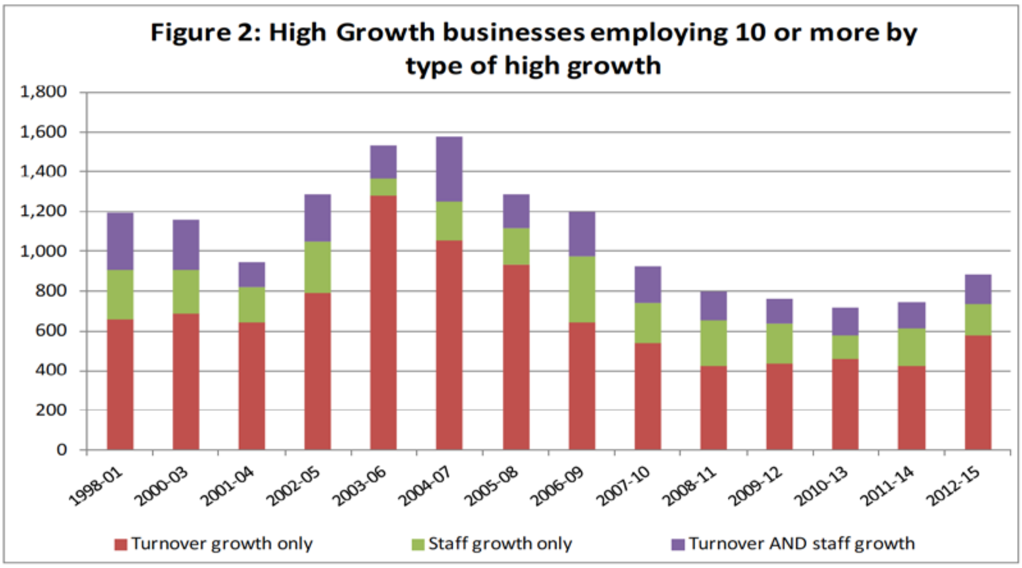
[40] Lee, N. (2014) What holds back high-growth firms? Evidence from UK SMEs, *Small Business Economics* 43: 183-195.
[41] Brown, R. and Lee, N. (2014) Fun*ding issues concerning high growth SMEs in the UK.* Available from: https://www.icas.com/technical-resources/publication-funding-issues-confronting-high-growth-smes-in-the-uk
[42] DETI (2015a) op. cit.

economy they also investigate firms with fewer employees. Data analysis starts in 1998 (giving a firm growth period of 1998-2001), with the latest update for 2012-2015.

Population size

The DETI evidence shows a historic pattern of an increasing share of HGFs from 1998 - 2007, with a peak during the financial crisis, followed by decline and steady low-numbers since (see figure 1).

Figure 1. Change in number of HGFs in Northern Ireland, 1998 – 2015[43]



The share of HGFs in the NI economy is around 10% (2010/3), compared to 23% in 2004/7 and 21% in 1998/01. In absolute numbers, in 2010/2013 there were 720 high growth businesses in NI, down 40% on the total from 1998/2001 (1,195) and more than 50% on that in the peak, 2004/7 (1,580). Since then, there has been a small uptick in the share of HGFs in the NI economy, although this is only an initial surge. Figures for micro HGFs show much less decline - it is the share of high growth firms employing 10 + which has accounted for the slowdown.

This means that HGFs have, since the global financial crisis, been less important to growth in the NI economy. The share of HGFs to total turnover fell between 2001 and 2013, both in

[43] DETI (2015a) op. cit. pp. 2.

absolute and percentage terms. Instead, growing businesses (rather than high growth businesses) have been particularly important. In short, business growth has been increasingly spread around the business stock - rather than being dominated by a few high growth businesses. This ‘spreading out’ seems to be the main explanation given in existing work, but an alternative interpretation is that there are simply fewer high growth businesses, so others will inevitably take a more prominent *relative* role.

An important policy question is whether the characteristics of High Growth Firms in NI are different from that in the UK as a whole. This might help guide the policy response to focus on the specific characteristics of NI firms, rather than the national averages. However, the patterns in Northern Ireland are similar to patterns in the UK as a whole. Anyadike-Danes et al[44] present evidence on the share of HGFs in the UK economy, with HGFs defined as those with ten or more employees in the base year. The share of HGFs was just over 7% between 2002/5 and 2007/10, before falling in the recessionary period to only 6%. It then increased in the period since to around 7% in the latest year (2011/14).

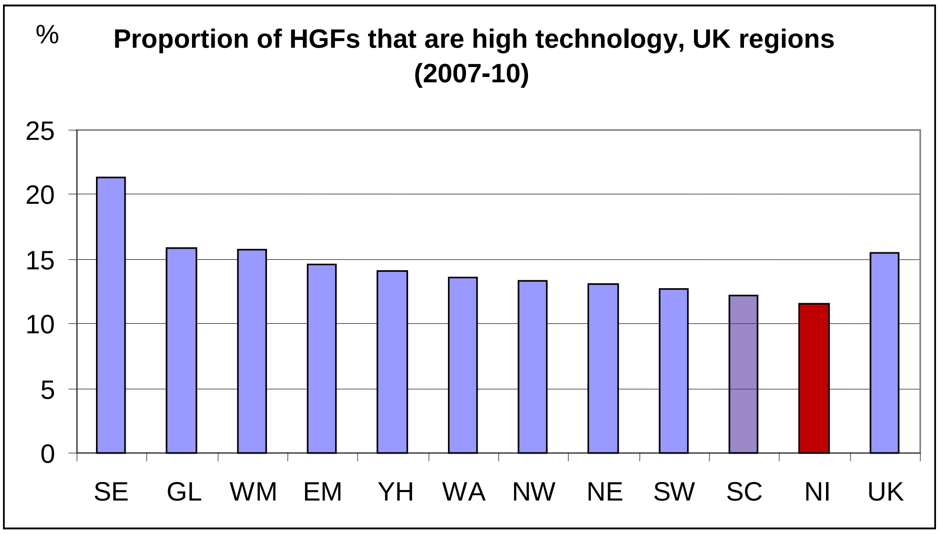
However, in one important respect Northern Ireland HGFs seems to differ from the rest of the UK: this concerns the number of HGFs that are in *high-tech* sectors. Recent analysis drawing on the ONS business structures database shows that Northern Ireland has the lowest proportion of HGFs that are high-tech of all UK regions[45]. This shows that only around 12% of NI HGFs emanated from these sectors between 2007-2010 (see Figure 2 below). This is below the UK average of 16% and half the sum found in the South-east of England. The incidence of high-tech HGFs in NI is however broadly similar with Scotland and the North-East which have broadly similar economies and firm demographic structures. This suggests that high-tech sectors do not typically constitute a strong supply of HGFs across most of the UK and especially in the UK’s more peripheral economies. The reasons behind this are likely to be somewhat path dependent and linked the region’s traditional

[44] Anyadike-Danes, M. (2015) Contribution to Job Creation by High Growth SMEs. Available from: http://www.enterpriseresearch.ac.uk/wp-content/uploads/2015/07/ERC-HGF-Pre-Budget-Insight-Final.pdf

[45] Brown, R., & Mason, C. (2014). Inside the high-tech black box: a critique of technology entrepreneurship policy. *Technovation*, *34*(12), 773-784.

economic structure. In the vast majority of regional economies within the UK the main source of these firms is service-based.

Figure 2: Proportion of high growth firms that are in high technology sectors, by UK region



Source: ONS Business Structure Database

These trends over time are related to the business cycle, but not wholly determined by it. The number of HGFs in the UK as a whole was highest in the early 2000s, but declined since – with a dip in the period during the recession, but not one commensurate with such a major economic shock. Related to this, HGFs often exist in declining sectors as they can use the weakness of incumbents or lack of new entrants to gain increased market share.[46] It is perhaps helpful to think of longer-term structural change in the economy, which will alter the number of HGFs, operating alongside short-term cyclical changes in the national economy, such as those driven by the crisis of 2008/9. It seems that the structural changes are more important in determining the number of HGFs, unfortunately the evidence base on what exactly the structural changes in the economy are which determine the share of HGFs is relatively weak.

Sectoral composition

[46] Brown, R. and Mason, C. (2010) *High Growth Firms in Scotland*. Glasgow: Scottish Enterprise.

The incidence of high growth seems to roughly reflect the sectoral composition of the Northern Irish economy, reflecting the wider evidence base on this point. However, in some sectors - Wholesale & Retail, Construction Manufacturing, Human Health and Social Work – numbers of firms achieving high growth seems to vary more according to the business cycle.

Age

In terms of age of HGFs, DETI also publish information on the relationship between age and experiences of high growth.[47] Information here is only available from 2006, but it shows that HGFs in Northern Ireland tend to be significantly younger than non-HGFs. As might be expected, older firms tend to be larger and so are more likely to be employing ten or more people. Because of this, most HGFs tend to be in the older age categories (in 2011-2014, 32% were aged 20+, 28% were 10-19, 15% 5 - 9, 11% were 2 - 4, while 13% were <2 years). As a share of business in each age category, younger firms were more likely to be high growth. The high growth rate, defined as the share of firms achieving high growth, was 28% for businesses aged < 2, 19% for those 2 -4, 12% for 5-9, 11% for those aged 10-19 and 8% for those aged 20+. This will in part reflect the limitations of the commonly used definition of HGFs, which makes it easier to grow rapidly from a smaller size and so biases definitions: a firm employing 10 staff which then adds 10 new staff over three years is a HGF, but will have made less of a contribution to the NI economy than a non-HGF which initially employs 100 staff but adds 50. Again, these patterns are relatively similar to those for the UK as a whole: most HGFs are older firms, but this result is partly skewed by the distribution of firms.[48]

Size

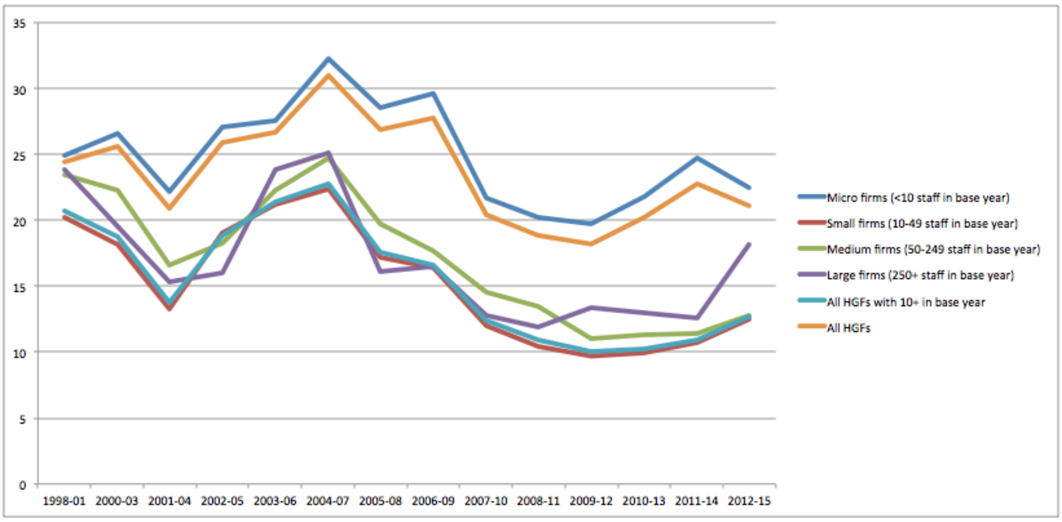
There are similar complications when looking at the size of HGFs, as statistically a smaller number of new employees are required to achieve high growth from a smaller initial size. Figure 2 below shows the high growth rate for firms in NI by firm size. Given the size issues above, it is perhaps unsurprising that micro firms have the highest probability of being HG. However, since the crisis, larger firms have been particularly likely to achieve high growth -

[47] DETI (2015b) Does Age Matter? The Relationship between Age and High Growth Businesses. Department of Enterprise, Trade and Investment (DETI), Belfast.

[48] NESTA (2011) *Vital Growth*. London: NESTA.

rates for Medium and Small firms (which make up the bulk of firms with 10 + employees) have been consistently lower since 2007-10. This hints at issues faced by Small and Medium Sized Enterprises (SMEs) in Northern Ireland.

Figure 3. HGFs in Northern Ireland by initial size[49]



Geography

In terms of geographical distribution within Northern Ireland, HGFs are located in all regions. There are five NUTS sub-divisions in NI: Belfast, Outer Belfast, the East of Northern Ireland, the North of Northern Ireland, and the West and South of Northern Ireland. Since data on geography became available in 2006, and considering only HGFs with 10 + employees, most HGFs are located in West and South of NI and, to a lesser extent, Belfast. In 2012-2015 47% of HGFs in NI were located in these regions, compared to 46% in 2006-2009. For those with fewer than 10 employees, the pattern of concentration is also very similar: 47% of these firms were located in these regions in both 2012-2015 and 2006-2009.

Growth ambitions and barriers to growth

To give a big-picture overview of specific barriers to growth, we use the first wave of the Longitudinal Small Business Survey (LSBS) for 2015. This is a large-scale survey conducted by IFF, a survey house, for what was then the Department for Business, Innovation and Skills.

[49] DETI (2015a) op. cit. Adapted from Table 6: All high Growth businesses as a percentage of all in scope firms by employment size in base year.

The survey included a quota for NI firms. It is useful both to focus on the barriers faced by HGFs, as well as those with the potential to achieve high growth. Identifying these high growth firms is not easy, so in this study we focus on firms that say they aim to grow (growth ambitions). Next, we consider only firms that have employees, because results for non-employers can be erratic. The result is a sample of 11,147 firms, of whom 387 are in Northern Ireland.

We then divide the sample into four categories, based on whether they aim to grow and their location is in Northern Ireland. Northern Irish firms are slightly more likely to aim to grow than those elsewhere – 82% compared to 77% elsewhere (a statistically significant difference). Table 1 below gives the sample breakdown – there are 319 firms in the Northern Irish sample who aim to grow.

Table 1. Sample of firms in LSBS

	Obs.	% of sample (Weighted)
Aims to grow / Northern Ireland	319	1.9
Aims to grow / Elsewhere	8,243	67.4
Does not aim to grow / Northern Ireland	68	0.7
Does not aim to grow / Elsewhere	2,517	30.0

We then consider the obstacles these firms argue they face. The survey asks for a series of different obstacles, with four focused on the recruitment of staff (see Table 2 below). The statistical significance for each category, relative to non-NI firms that do not aim to grow, is indicated in italics and bold. From these, we can be confident that the results are not down to chance. Four obstacles are only asked of those who report staff recruitment as a problem, so the figures are artificially high for these.

In terms of absolute figures, the biggest concerns for NI firms that aim to grow are (1) Competition in the market (2) Taxation, VAT, PAYE, NI, (3) Regulations / red tape, (3) Late Payment, and (5) Obtaining finance. In terms of whether there are NI specific problems, the results suggest that firms with growth ambitions in NI are particularly likely to perceive (1) obtaining finance, (2) taxation, (3) workplace pensions, and (4) late payment as significant obstacles to their growth. In all cases, NI firms that aim to grow are more likely to perceive these obstacles to growth than firms which aim to grow elsewhere in the United Kingdom.

Table 2. Obstacles to firm growth by growth ambition, SME employers in NI / UK

	Obtaining finance	Taxation, VAT, PAYE, NI	Staff recruitment and skills	Regulations / red tape	Availability / cost of suitable premises	Competition in the market	Workplace pensions	Late payment	Of those suggesting recruitment is a problem:	- Recruiting staff*	Shortage of managerial skills / expertise*	Shortage of skills within the external labour market*	Shortage of skills within the existing workplace*
Aims to grow / Northern Ireland	***41%***	***55%***	***35%***	51%	19%	63%	***30%***	***42%***		68%	24%	73%	48%
Aims to grow / Elsewhere	***25%***	***44%***	***36%***	***48%***	***24%***	52%	22%	**36%**		75%	30%	72%	45%
Does not aim to grow / Northern Ireland	16%	39%	29%	48%	14%	57%	30%	15%		44%	40%	71%	48%
Does not aim to grow / Elsewhere	15%	41%	23%	51%	14%	42%	23%	29%		71%	25%	68%	43%

*Source: Longitudinal Small Business Survey. Sample: 11,147 including 387 in NI. Weights applied. Bold/italics indicates statistically significant differences from firms that do not aim to grow and are not located in NI. Note that obstacles marked with a * are only asked of firms who report that staff recruitment and skills are significant obstacles.*

2.3. HGF growth metrics

There is a longstanding debate over how to measure rapid firm growth and, relatedly, what measures and metrics should be used to identify HGFs. At present there is no consensus amongst academics which is the most suitable measurement criteria for identifying HGFs[50]. A host of measures have been suggested, ranging from turnover to employment, profit, assets, capital, ROI and others. Despite some researchers calling for a more nuanced and firm-derived view of growth[51], turnover and employment remain the two growth measures most commonly used in both high growth research and by policy makers.

As may be expected, these two measures have their pros and cons. Employment is often seen as a less volatile measure than turnover[52], and therefore preferable for understanding firm growth over different time periods. Turnover, on the other hand, is recognised to be the measure that entrepreneurs and managers themselves seek.[53] As such, it may be a strategic priority for firms in a way that employment may not. Many studies have been undertaken to determine whether a positive correlation exits between increases in turnover and increased in employment, but the evidence is missed. Whilst some studies have shown a correlation[54], others have not[55], with authors remarking that different measures will yield different cohorts of firms due to the fact that variables affecting sales growth differ from those affecting turnover growth.[56]

Given the continuing dominance of employment and turnover as two separate indicators of firm growth, the OECD's HGF metric allows for both. Based on the concept of average annualised growth, it has been increasingly adopted by policy makers and academic alike,

---

[50] Daunfeldt, S. O., D. Johansson and D. Halvarsson. 2015a. "Using the Eurostat-OECD definition of high-growth firms: a cautionary note." *Journal of Entrepreneurship and Public Policy* 4(1): 50-56. Anyadike-Danes, M., Hart, M., & Du, J. (2015). Firm dynamics and job creation in the United Kingdom: 1998–2013. *International small business journal*, *33*(1), 12-27.

[51] Wiklund et al. (2003) op. cit.

[52] Delmar, F. (1997) Measuring growth: methodological considerations and empirical results. In R. Donckels & A. Miettinen (Eds.), *Entrepreneurship and SME Research: On its Way to the Next Millennium*, Aldershot: Ashgate.

[53] Janssen, F. (2009) The Conceptualisation of Growth: Are Employment and Turnover Interchangeable Criteria?, *Journal of Entrepreneurship*, 18(1), pp. 21-45.

[54] E.g. Coad, A. (2007) A Closer Look at Serial Growth Rate Correlation, *Review of Industrial Organization*, 31(1), pp. 69-82; Coad, A., Cowling, M. & Siepel, J. (2012) *Growth Processes of High-Growth Firms in the UK*, NESTA Working Paper 12/10, London, National Endowment for Science, Technology and the Arts (NESTA).

[55] Daunfeldt, S-O., Elert, N. and Johansson, D. (2014) The Economic Contribution of High-Growth Firms: Do Policy Implications Depend on the Choice of Growth Indicator, *Journal of Industry, Competition and Trade*, 14(3), pp. 337-365.

[56] Janssen (2009) op. cit.

which allows for greater comparability across studies and regions such as between NI, Scotland and the wider UK. As such a firm is deemed high growth if it is:

> *[A]n enterprise with average annualised growth (in number of employees or turnover) greater than 20% per annum, over a three year period, with a minimum of 10 employees at the beginning of the growth period.*[57]

The employment threshold of 10 employees is worth noting. Whilst intended to limit the HGF population to those firms falling within the definition of SMEs (10-249 employees) in an attempt to limit bias towards smaller enterprises, it results in the omission of microenterprises. This is of significance for regions like NI, where these form a significant part of the business base.

Within the NI context, exploratory studies have been undertaken on HGFs in NI by DETI. These exploratory studies were designed to help build the evidence base on HGFs rather than assert any particular policy angle towards these firms. This analysis identified both HGFs (over 10 employee threshold) and microHGFs (under 10 employees). Both groups have been found to play an important and relatively consistent role in employment growth, but microHGFs are noted to have a more stable contribution to total turnover than their HGF counterparts.[58] This may be due in part to the bias inherent within the HGF measure, whereby it is easier to grow rapidly from a smaller size, although the absolute contribution may be less than that made by another firm growing at a relatively slower rate. By focusing on microHGFs, there is also the potential to capture different cohorts of companies which are likely to differ in terms of their developmental and support needs e.g. new starts versus established organisations.

Clearly, the choice of measurement metrics to be used by policy makers to identify and monitor HGFs needs careful consideration. Two key issues seem worthy of consideration for future analytical purposes.

---

[57] Eurostat-OECD. (2008) Eurostat-OECD Manual on Business Demography Statistics, Paris: OECD.
[58] DETI (2015a) op. cit.

First, in terms of identifying HGFs, there may be merit in using a turnover-based metric. Turnover growth is often what entrepreneurs themselves most identify with, as opposed to employment, which is often seen as a consequence of growth.[59] Plus, employment is often a "lagging" indicator, owing to the fact it often comes after a period of turnover growth. This is one of the main factors behind why some other UK agencies, such as Scottish Enterprise, adopted the turnover measurement criteria when examining HGFs.[60] While turnover criteria may be a useful metric for statistically identifying HGFs, we discuss in section 3.1 why other softer metrics might be more meaningful for targeting companies to assist.

In terms of the employment threshold metric for measuring HGFs, there seems less of a clear cut solution. While the inclusion of micro-HGFs may seem logical from the perspective of the NI economy's structure, it may distort the picture in terms of the anticipated impact of these firms. Many micro-enterprises can achieve quite rapid growth, but few go on to become larger corporate entities. Plus the mathematics of percentages means that the measure is biased towards smaller – and hence newer – businesses (for example, a sole trader taking on a single employee would be counted as having doubled in size, although the absolute increase is minimal).[61]

Furthermore, by focusing on these micro-HGFs, it may give undue attention within policy frameworks to start-ups. As many scholars have noted, however, the problem within most economies is not the volume of, or indeed lack of, new entrepreneurial entrants.[62] Instead, the problem for most economies with more limited entrepreneurial ecosystems is a lack of growth by small firms who then transform themselves into scale-ups who continue to grow and employ substantial numbers of employees.

2.4. Rationale for Targeting HGFs

---

[59] Achtenhagen, L., L Naldi and L. Melin. 2010. "Business Growth – Do Practitioners and Scholars Really Talk About the Same Thing?" *Entrepreneurship Theory & Practice* 34(2): 289-316.
[60] Mason et al. (2015) Op. cit.
[61] Lee et al. (2016) Op. cit.
[62] See, e.g. Colombelli, A., Krafft, J., and Vivarelli, M. (2016). To be born is not enough: the key role of innovative start-ups. *Small Business Economics*, 1-15; Mason and Brown (2014) Op. cit.

We now wish to examine the issue of optimum prioritisation of HGFs within the NI economy. This issue is very difficult to address, but recent research has yielded considerable light on the longer-term impact of high growth within firms. While in recent years there has been a very strong focus on prioritising support to promote HGFs, there is now an emerging empirical evidence base that has examined the issue of longevity or the sustainability of these firms. This new evidence partially calls into question some of the arguments for promoting very rapid firm growth as indicated by the OECD metric. Indeed, most of the recent evidence on firm growth suggests that policy makers may wish to turn their attention towards the promotion of more stable, incremental growth within firms.

During the last five years, a number of empirical studies have been conducted on the longevity of rapid firm growth. In nearly all of the empirical studies conducted it has been found that firms for the most part are either unable to sustain periods of rapid growth and, in many cases, suffer from these episodes of high growth. A study examining HGFs in Austria found that very few of these firms were able to sustain this strong level of growth.[63] Another study conducted in New Zealand found that HGFs have a death rate up to four times higher than non-HGFs[64]. The ones who do survive, however, continue to retain their employment levels and contribute disproportionately to the economy. Similar work undertaken in Sweden over a longer-term time frame found that HGFs had a very low probability of repeating periods of high growth – leading the authors to label these firms "one-hit-wonders"[65].

Further work conducted by some of the current authors for the UK's Department for Business Innovation & Skills also examined this issue, the first such study to do so in the UK context[66]. This work is slightly more nuanced than some of the other studies reported above, as it looks at the growth rates of HGFs prior to their high growth periods. These growth antecedents are important because it informs policy makers about the prior growth "track record" of HGFs and where they arise from. This data analysis shows that 41% of HGFs were already growing in the period before their high growth spell. In contrast, 25% of

[63] Hölzl, W. (2014) Persistence, survival, and growth: a closer look at 20 years of fast-growing firms in Austria, *Industrial and Corporate Change* 23: 199-231.
[64] Satterthwaite, S. and Hamilton, R. T. (2016). High-growth firms in New Zealand: Superstars or shooting stars?. *International Small Business Journal*, 0266242616659913.
[65] Daunfeldt, S. O. and Halvarsson, D. (2015) Op. cit.
[66] Lee et al. (2016) Op. cit.

HGFs achieved high growth from a standing start – without having experienced employment growth in the period before. Plus, only a very small minority of firms (14%) had been shrinking in the period before high growth. Interestingly, only 20% of HGFs were start-ups, newly founded firms that entered the market one or two years before the start of the high growth period.

Almost half of HGFs decline or cease to exist after their rapid expansion, with 40% experiencing shrinkage and 6% dropping out of the market. On account of the transient nature of growth, these firms have been labelled 'Icarus firms' as they experience rapid growth but then fall down very quickly. It was noted that certain sectors, such as hotel and catering and financial intermediaries, have above average levels of shrinkage post-rapid growth. In this UK cohort of firms, only 17% of firms managed to sustain their size after rapid employment growth, while 37% continued on their growth trajectory. Clearly, it is very difficult to sustain high growth.

These findings therefore beg the question – is high growth a good thing? – and raise issues about the potential importance of sustainability alongside a growth focus. The following sections begin to unpack how policy makers can help firms to grow. When working with growing firms, there are a number of key issues which need to be considered in terms of targeting, selection and firm support needs. Following an examination of these issues we shall briefly delineate how these issues dovetail with current support arrangements in NI.

3. Policy implications for supporting HGFs

3.1. Targeting and selection

More strategic approaches are increasingly being used to target certain firms to help maximise the level of economic impact as policy makers increasingly acknowledge that not all firms "contribute equally to the economy".[67] This process of prioritising support has often led to targeting firms by age (i.e. start-ups), innovative intensity (e.g. R&D) and sector (i.e. high-tech). It is also more cost effective. The recent evidence review produced by the What Works Centre for Local Economic Growth covered 23 rigorous econometric

[67] Autio and Rannikko (2016) Op. cit.

evaluations of business support programmes.[68] While the review found a generally positive impact, hands-on programmes using the 'managed brokerage' approach did better than less intensive, light-touch programmes. In business support, relationship building and intensive support seems to be the best approach rather than limited assistance to a wider group of firms.[69]

In recent years, however, policy makers across the OECD have increasingly adopted growth levels as a metric for selecting firms to work with.[70] It is now a common approach for policy makers to use growth rates - predominantly, but not exclusively, employment or turnover - as a mechanism for identifying rapidly growing firms and informing their approach towards targeting. For nearly a decade, this approach has become strongly embedded in policy frameworks across the whole of the UK[71], including Northern Ireland.

Based on the review of the evidence contained in section 2, there are some considerations for policy makers when looking to assist HGFs. The three key messages concern: 1) prioritisation; 2) identification; and 3) segmentation.

First, given the evidence reviewed in section 2.4, the rationale for promoting very high periods of growth in firms is certainly questionable. While HGFs have become a central focus within many policy frameworks, the full impact of extreme growth levels is proving to be a mixed blessing for many firms. The main lessons from these studies would seem to suggest that slightly lower levels of growth, perhaps in the order of magnitude between 10-15% per annum, may be easier for firms to manage and absorb. In other words, lower growth may prove to be more sustainable and long-lasting. This certainly calls into question the emphasis placed on the OECD metric for measuring HGFs and/or for company targeting purposes.

Second, for the reasons outlined in section 2.3, in terms of detecting HGFs there may be merit in using a turnover-based metric for identifying potential growth firms. This does not mean, however, that agencies should religiously adhere to quantitative growth metrics

[68] What Works Centre for Local Economic Growth (2016) Evidence review: Business Advice. Available from: http://www.whatworksgrowth.org/public/files/Policy_Reviews/16-06-15_Business_Advice_Updated.pdf
[69] Mole, K. F., Hart, M., Roper, S., & Saal, D. S. (2011). Broader or deeper? Exploring the most effective intervention profile for public small business support. *Environment and Planning A*, *43*(1), 87-105.
[70] OECD (2010) *High-growth enterprises: What governments can do to make a difference*. OECD studies on SMEs and entrepreneurship. Paris: OECD.
[71] Brown and Mason (2012) Op. cit.

when identifying firms to support – there will (and should) always be a degree of flexibility. The use of "real-time" metrics might be needed to help target firms with strong future "growth potential". For example, sometimes a better gauge of future growth is the relative size of a firm's order book rather than historical turnover growth. Another indicator found to strongly correlate to actual growth is the entrepreneurs' forecasted growth for the firm.[72] Again a degree of cross-checking (e.g. with order books or sales pipeline) might be necessary here, as many financial forecasts can be overly ambitious and unrealistic, particularly in newer firms. Generally, softer metrics might be better for identifying firms for economic development agencies like Invest NI to support; this kind of qualitative approach also allows some kind of assessment of the entrepreneur's capacity and appetite for long-term growth.

Third, while the overarching strategic focus on HGFs has become a common theme, the methods adopted by different government bodies and economic development agencies to undertake this prioritisation process varies markedly across regions and across different public support programmes.[73] At present, targeting and selection within Invest NI seem quite loose. Whilst not necessarily a bad thing in theory, in practice it means that interventions are dealing with a number of different types of companies, all with their own specific needs and wants, nominally falling under the broader HGF label. For example, the microHGFs identified by DETI[74] will be badged as "HGFs", yet given their significantly smaller employment base are likely to be facing different challenges (e.g. entrepreneurial decision making rather than management issues) and to have different support needs than firms with a larger employment base. To group these firms together potentially weakens the power of the HGF cohort to self-support one another in more relational interactions.

From the literature reviewed and policy approaches adopted elsewhere, it would appear that a more systematic and rigorous prioritisation process would be beneficial in NI. The benefit of this type of industrial segmentation is it allows the main challenges facing policy makers when adopting a high growth policy framework. It also allows policy to dovetail with the support needs in different sizes of firms. This kind of industrial segmentation may also be useful to help inform concrete policy interventions by informing their eligibility criteria.

[72] Lee (2014) Op. cit.
[73] OECD (2013) Op. cit.
[74] DETI (2015a) Op. cit.

For policy targeting purposes, segmentation of firms with growth potential could adopt a process of segmentation across the firm base. One such approach would be to segment firms into various size and growth categories such as ***1) start-ups 2) pre-scaling 3) scaling and 4) companies of scale.*** These are based on both turnover and employment criteria (turnover as a key measure for growth, and employment levels as a key measure for segmentation). Whilst this pipeline approach appears to be in place within Invest NI (from high potential starts through to pre-scaling and then to scaling), the lack of a minimum employment threshold and flexibility in terms of turnover for these different groups limits the effectiveness of such an approach. We would propose further tweaking in the following ways, with company size a key determinant. Ideally, this pipeline would see clients work through each phase, in addition to serving companies that enter the process at different touch points.

First, ***start-ups*** currently dominate much of the policy landscape and are often synonymous with HGFs, despite strong evidence to the contrary.[75] Given difficulties identifying start-ups with strong growth, however, providing high levels of assistance to this cohort runs the risk of considerable "deadweight".[76] As the current authors have argued elsewhere, there seems more merit in targeting firms with a discernible growth "track record" with growth potential when trying to help firms grow.[77] Given a lack of track record, coupled with their high attrition levels, we suggest that these firms are not best placed to be recipients of high growth support. Instead, ventures under 5 years of age and employing fewer than 10 employees, regardless of turnover levels, should be given more minimal support coupled with lots of signposting to other relevant agencies and networks. This should allow for natural attrition to occur, differentiating those with growth potential (e.g. the ability to generate sales and increase employment to meet growing sales volumes) from those that are unlikely to survive or thrive. It is unlikely that an intensive high growth start up programme will be able to successfully "pick winners" and, given their early stage of development, it is too early to know which firms will ultimately be able to survive and grow.

Second, the ***pre-scaling group*** of firms are small and medium-sized firms (10 - 49 employees) with variable growth potential (perhaps looking below high growth levels to

[75] Lee et al. (2016) Op. cit.
[76] Freel, M. (1998) Policy, prediction and growth: Picking start-up winners? *Journal of Small Business and Enterprise Development* 5: 19-32.
[77] Brown et al. (2014) Op. cit.

sustained growth rates of 10-15% over a time period). Typically, these firms would see turnover of > £2million. Often firms in this kind of size range have quite common support requirements, but levels of ambition across them will vary markedly. Again, great care is needed to prioritise support on the ones with longer-term growth ambitions (and potential e.g. sales pipelines and order books). Often these firms receive the lion's share of thematic or transactional levels of support (e.g. employment grants, innovation support, training, market development etc.) irrespective of longer-term growth potential. This is certainly the case in various peripheral parts of the UK, such as Scotland and Northern Ireland, who traditionally have quite a limited pool of firms with genuine scaling potential. Therefore, identifying ***pre-scaling*** firms with strong growth potential should be a priority for policy makers.

Third, firms who are ***scaling*** are medium-sized firms (50 - 100 employees) often with a turnover of £2-10million. Scaling firms have already demonstrated a growth track record, so are generally easier to assess in terms of their ability to undertake further growth. This group is most likely to produce HGFs. These larger organisations will have more disparate support needs and will generally require more management development support rather than thematic or transactional types of support (e.g. export assistance, training, R&D support etc.). Some scaling firms will have the desire to become larger companies of scale or some will be seeking "entrepreneurial exits", which often come in the shape of a trade sale. Policy makers need to be careful to detect the scaling firms with longer-term growth aspirations.

Finally, ***Companies of scale*** are larger firms with a turnover of £10 million plus[78] and over 100 employees. These are sizeable firms who have the potential to become large scale corporate players. Typically, the public sector can do little to support these larger firms and there will be relatively few in Northern Ireland. Forms of transactional support are unlikely to be very effective as a lack of resources are not major growth impediment. In the main programmes to assist these firms are relational peer-to-peer forms of assistance where managers share experiences.

[78] See OECD (2013) Op. cit.

This segmentation approach is not prescriptive, but is meant as an example to help inform further more nuanced exercises in the context of the NI economy.

3.2. Growth barriers and support needs

Having highlighted some of the issues concerning targeting and selection, we shall now begin to assess the perceived barriers to growth within HGFs coupled with the thematic nature of support. First we shall begin with a discussion about perceived barriers to growth. This is based on the survey analysis undertaken in section 2.2.2. Importantly, however, it is also based on the company interviews conducted with HGFs in NI.[79] This enabled some of the issues highlighted in the survey to be verified from the respondents interviewed.

The survey evidence suggests that the largest concerns for NI firms that aim to grow are (1) shortage of skills within the external labour market, (2) recruitment, (3) competition in the market, (4) taxation, and (5) regulations. In other words, labour market issues appear to be a disproportionate concern for firms in NI. However, as we specifically examined rapidly growing firms this picture altered. In terms of whether there are NI specific problems, the results suggest that firms with growth ambitions in NI are particularly likely to perceive (1) obtaining finance, (2) taxation, (3) workplace pensions, and (4) late payment as significant obstacles to their growth. Broadly speaking, matters relating to funding seem to become more pressing for NI HGFs. It is worth noting that HGFs typically do not find it harder to access finance than non-HGFs, although finance may still be a significant problem for firms with growth potential.[80]

Through our interviews, we were able to probe for growth constraints in greater depth. It appears that recruitment and funding were quite key obstacles to growth. Recruitment in particular was raised by a large number of firms. As firms expand rapidly, taking on more staff becomes critical to enable growth and this seemed to be a key concern for the majority of HGFs interviewed. The literature on HGFs is beginning to take the issue of recruitment more seriously, specifically the issue of how “bad hires” can negatively affect fast growth

[79] The interviewees were guaranteed anonymity within the report, so the names of individuals and organisations are omitted.
[80] Brown and Lee (2014) Op. cit.

businesses.[81] Problems with recruitment were noted at different ends of the employment spectrum, from entry-level jobs to more senior international sales positions. While identified as a problem, the need for support was not specifically mentioned by the firms.

Funding was mentioned, but was considered more of an issue for firms when they first established rather than in their present situation. Interestingly, none of the firms interviewed raised the issue of taxation and regulations, nor was competition mentioned. Firms noted how important it was for them to think internationally (limited domestic economy) and how it was a challenge to make and develop international connections (a key thing on their "policy wishlist" was more support to develop international connections, not just being referred on to UKTI). Companies also wanted help with sales and marketing, with many focused on digital provision.

Many also noted that a lot of what they needed in terms of recruitment was sales and marketing assistance to help in their internationalisation: one firm talked specifically about recruiting internationally – which obviously throws up some dilemmas over support creating jobs abroad. Indeed, research conducted on Scottish HGFs found the high propensity of HGFs to expand their employment footprint outwith Scotland.[82] At the same time, however, expanding firms located in economies such as NI will depend on internationalisation for their growth to continue.

This relates to an additional factor which is strongly supported by the academic evidence: the importance of leadership and management training for firm growth.[83] These are important both in starting the growth process, as well as in terms of sustaining it. From an economic perspective, focusing on management and leadership skills also helps to avoid some of the problems associated with erratic firm growth. An entrepreneur who receives leadership training, but whose first venture fails regardless, will still be retain the benefits of

[81] Coad, A., Frankish, J. S., Roberts, R. G. and Storey, D. J. (forthcoming) Too fast to live? Effects of growth on survival across the growth distribution, Unpublished Working Paper, SPRU.
[82] Brown and Mawson (2016) Op. cit.

[83] Bloom, N. and Van Reenen, J. (2007) Measuring and explaining management practices across firms and countries. *Quarterly Journal of Economics*, November.

any training and use them in subsequent companies. Because of this, providing training of this sort can have long-term benefits.

Whilst the issues noted above were articulated by some of the businesses, a common issue in nearly all of the firms was a lack of clarity about what support would be most beneficial. While there is no single issue or policy panacea that public policy can offer firms to help them grow, this evidence suggests that it may be preferable to differentiate HGFs support from mainstream business development activities.

3.3. Existing enterprise initiatives

We conducted 5 interviews with policy makers in Invest NI, so have a better understanding of the nature of interventions and initiatives on offer. We recognise, however, that this is only a fraction of the initiatives on offer within NI from other agencies and providers.

Generally, the support available seems appropriate and largely mirrors the enterprise support available in other regions, utilising a mixture of transactional grant-based approaches and other more tailored support. Given the small population of firms within NI, collaboration with other UK actors and nearby enterprise agencies (such as Enterprise Ireland) can potentially confer additional benefits on supported firms such as wider networking opportunities. Companies themselves recognised the importance of international networking, so further collaborative enterprise initiatives with external partners could prove beneficial.

There is still a strong focus on small scale firms, perhaps due in part to few minimum employment thresholds, but well developed scaling programmes are in place. These are largely focused on leadership and management development, which we know to be key issues for HGFs. However, given looser selection criteria, it is possible that a number of firm cohorts are being recruited on such programmes, which may mean that the existing service provision is more relevant for some firms and less so for others depending on their current development. The latter may get caught up in key interventions that client managers want delivered for the whole cohort, but which have less personal relevance.

Overall, support appears to be more transactional than relational, a common modus operandi for enterprise policy. It was noted by respondents that NI companies do not immediately see the value of relational support, and therefore gravitate to transactional mechanisms such as the very popular employment grants. It is possible that this reflects ongoing attitudes to public sector assistance in NI – that the public sector is there primarily to provide financial support. It is also possible that transactional approaches to support have suffered from the small business population in NI, where firms are less likely to meet and interact with truly matched "peers".

As one might expect, process issues related to programme applications, paperwork and invoices were also raised by interviewees, with many noting that these were time consuming and not necessarily in line with their firms' own development timelines. It is always possible to improve processing times and to reduce reporting paperwork, but a balance needs to be struck here to ensure that enough reporting occurs to be able to track interventions and their impact on recipient firms.

3.4. Appraisal of Public Policies Designed to Support HGFs

In order to help inform policy makers in Northern Ireland to shape their future interventions, the researchers undertook some detailed analysis of policy frameworks and programme interventions designed to support HGFs in a range of different geographical contexts. The focus of this review extends to firm-specific interventions rather than overall business regulatory issues, but we acknowledge that these also play a powerful role in shaping firm growth. Therefore, our intention is to draw attention to the types of initiatives elsewhere so that we can critique their merits and drawbacks with a view to obtaining lessons for Northern Ireland.

To assess different support mechanisms, two main activities were undertaken. *First*, the researchers examined published material that has examined the effectiveness of high growth policy approaches. This involved assessing OECD and national governmental documentation in relation to these types of programme activities. These tend to be quite descriptive documents, which highlight the main features of the overall policy frameworks in different countries.[84] It also included specific assessments that have been undertaken examining the economic effectiveness of particular programmes.[85]

Second, the researchers examined various initiatives in depth to gain some insights into the nature of these programmes. The programmes selected for in-depth analysis included: Danish Growth Houses, Scotland's Companies of Scale programme, Future Fifty programme, and Growth Accelerator Programme. Details of these programmes have been included in Appendix 1. Additionally, the team examined the nature of the overall policy frameworks in two specific geographical contexts: Finland and New Zealand. These economies were specifically chosen owing to their similarities with Northern Ireland in terms of their overall peripheral location and broadly similar economic structures, such as a high reliance on traditional sectors, relatively small high-tech sector and modest cohort of medium-sized enterprises (i.e. the so-called Mittelstand).

This analysis discovered a number of important lessons which may be worth considering when policy makers attempt to construct future methods of business support targeting growth-oriented firms within Northern Ireland. The key issues fall under the headings of targeting, thematic nature of support, delivery arrangements and effectiveness. These issues are now considered in turn.

3.4.1 *Targeting*

Despite considerable evidence to the contrary, most policy makers adhere to certain myths about the source and overall nature of HGFs.[86] Two main factors seem to shape preconceptions, relating to the age of these firms and their sectoral composition.

[84] OECD (2013) Op. cit.
[85] Autio and Rannikko (2016) Op. cit.
[86] Brown et al. (2014) Op. cit.

In terms of **age**, many policy makers hold the assumption that future HGFs are fairly nascent ventures. As a result, most programmes targeting HGFs tend to be aimed at start-ups.[87] The New Zealand Ministry of Business, Innovation and Employment stated in a recent report on HGFs that these firms "are often small or young businesses".[88] Indeed, some of the programmes examined during this work noted that being less than five years of age was an required acceptance criterion (e.g. Danish Growth Houses and the Tekes run NIY programme).

It has become increasingly apparent, however, that this assumption about age does not always hold true. A review of HGF studies notes that, in contrast to popular belief, these firms are not all young and that a significant minority emerge from existing firms which are undertaking a period of organisational change such as a management buy-out (MBO), management buy-in (MBI), and inter-generational change in family businesses.[89] Recent evidence further indicates that the majority of HGFs are in fact older and larger than previously believed. Research in the US found that HGFs are on average 25 years old and that even smaller HGFs (employing between 1-19 employees) exhibited a more advanced average age of 17 years.[90] In the UK, it has been found that 70% of HGFs are at least five years old, while survey-based research in Scotland has identified some HGFs that are over 25 years old. These older firms are by no means less prolific job creators: they have been identified to grow faster in terms of their number of employees than their younger counterparts and are thus considered to have a more significant effect on regional employment generation.

This evidence calls into question a key assumption of policy-makers that a firm needs to be young or small to achieve significant growth and, in turn, raises important questions about how policy-makers can best identify, target and support older and more established HGFs. Much of the support which falls under the heading of support for high growth entrepreneurship typically targets very young, early stage enterprises, reflected in a range of publicly-funded business incubators and growth accelerators evident in most OECD

[87] Brown and Mawson (2016) Targeted support for high growth firms: Theoretical constraints, unintended consequences and future policy challenges", *Environment and Planning C,* 34(5): 816-836.
[88] Ministry of Business, Innovation & Employment, (2013) High-growth businesses in New Zealand, p. 6
[89] Henrekson, and Johansson (2010) Op. cit.
[90] Acs, Z. J., W. Parsons and S. Tracy. (2008) *High-Impact Firms: Gazelles Revisited*. Washington DC: Office of Advocacy of the US Small Business Administration (SBA).

economies.[91] Given that many HGFs emerge out of well-established firms, much of the future HGF base falls outside the remit of business incubators, business planning and start-up services and small-scale (or seed) start up financing. This creates a mismatch between the support systems in place and the target market of a vast number of potential HGFs.

In terms of **sectoral** origin, many older programmes we analysed had some kind of implicit or explicit sectoral bias towards high-tech sectors. In Finland, the flagship programme designed to support HGFs is the NIY (translated as Young Innovative Growth Companies) programme operated by Tekes. This programme targets young (i.e. less than six years old) high-tech firms who have recorded at least 15% R&D expenditure during the previous three-years.

In other words, the NIY programmes targets high-tech R&D intensive firms which form the minority of HGFs. Yet the earlier evidence presented suggests that HGFs emanate from a wide variety of sectors with no particular bias towards high-tech sectors.[92] Despite significant academic and policy interest in technology-based or 'high tech' firms, it is important to emphasise that HGFs are not synonymous with high tech. In the UK, only around 16% of HGFs are operating in high tech sectors as shown earlier in Figure 2: this figure is slightly higher for the South East of England at over 20%, but for most other regions the prevalence of high tech HGFs is between 12-16%.[93] Similar work in Belgium found that 80% of HGFs were represented in industries generally considered "low-tech".[94]

Given this, it is important to emphasize the sectoral heterogeneity of HGFs. Many of these firms can be found in traditional industries, such as construction and manufacturing, as well as business and personal services. A number of studies have identified that HGFs are more likely to be operating in services than in other sectors. The wide distribution of HGFs across different sectors, and the lack of a link between HGFs and high-tech sectors, holds for most countries.

[91] OECD (2013) Op. cit.; Smallbone, D., Baldock, R., & Burgess, S. (2002). Targeted support for high-growth start-ups: some policy issues. *Environment and Planning C: Government and Policy*, *20*(2), 195-209.
[92] Daunfeldt, S. O., Elert, N., and Johansson, D. (2016). Are high-growth firms overrepresented in high-tech industries?. *Industrial and Corporate Change*, 25 (1): 1-21.
[93] Brown and Mason (2014) Op. cit.
[94] Vanacker, T. R. and Manigart, S. (2010) Pecking order and debt capacity considerations for high-growth companies seeking financing, *Small Business Economics,* 35(1): 53-69.

3.4.2 *Thematic Nature of Support*

Turning to the thematic nature of support, a number of commonalities emerged from the programmes examined that we will now examine in turn. Interestingly, previous reviews of high growth policies have identified various features of these policies. An important feature is that many are generic rather than specifically focused on HGFs. One academic observer noted that "dedicated initiatives with an explicit focus on high growth entrepreneurship remain surprisingly rare"[95], while other scholars have noted that many existing programmes are "tweaked" and that dedicated programmes are uncommon.[96] This is the case in Denmark. Whilst the Growth Houses programme is labelled a programme for HGFs, the reality is that it targets and works with early stage businesses generally (based on traditional start-up support), only a fraction of which may go on to achieve significant growth.

Our review revealed that, overall, the types of approaches adopted across OECD countries is standardised. Common policies include: R&D grants, assistance with funding (especially public co-investment schemes), incubator initiatives, HE commercialisation, business internationalisation, specialist account management services and management development. Overall, the two most common aspects of high growth initiatives is a focus on innovation and funding. For the most part, the bulk of these policies are transactional forms of support in the form of grant assistance rather than relational support such as management development or peer-based activities.

A very significant finding from our analysis is the very strong focus on **R&D programmes** within government policy frameworks aimed towards producing potential HGFs. This is evident across the whole of the OECD and the two countries we analysed: Finland and New Zealand. In New Zealand, for example, some analysis shows that the single largest expenditure area of high growth policy is business R&D grants.[97] This accounts for around 40% of overall expenditure aimed at fostering HGFs. If anything, the importance attached to innovation is even stronger in Finland. Yet, it is widely acknowledged that the bulk of

---

[95] Autio, E., Kronlund, M. and Kovalainen, A. (2007) High Growth SME Policies in Nine Countries, Report for the Finnish Ministry of Trade and Industry. http://www3.imperial.ac.uk/pls/portallive/docs/1/52835696.PDF (p. 74)
[96] Mason and Brown (2013) Op. cit.
[97] Ministry of Business, Innovation and Employment, (2013) Op. cit.

R&D support goes to high-tech firms.[98] Despite the fact that policy makers acknowledge HGFs occur in all sectors of the economy, R&D support is the central plank within their support offering to HGFs.

Financial instruments are another strong feature of many HGF support initiatives. While the nature of this funding support varies on a country-by-country basis, most of these activities involve co-investment schemes to help leverage risk finance (i.e. venture capital and business angels) into new start-ups. In New Zealand, the Ministry of Business, Innovation and Employment operate the Seed Co-Investment Fund and the Venture Investment Fund. In Scotland, co-investment programmes have been identified as a key aspect of helping to promote more high growth entrepreneurship. In Denmark, firms are referred to the Vækstfonden, a state investment fund that provides venture capital, loans and guaranties in collaboration with private partners and Danish financial institutions to start-ups and SMEs. Plus, programmes such as the NIY high growth programme in Finland try to facilitate links between firms and domestic and international venture capitalists.

This strong focus on the provision of risk finance is inextricably linked to the belief, discussed earlier, that HGFs are concentrated in high tech sectors. Although venture capital is undeniably an important part of the funding ecosystem for many firms with high growth ambitions[99], the evidence indicates that only a tiny fraction of HGFs are backed by venture capital. Indeed, as little as 1-2% of UK SMEs seek venture capital or other forms of equity finance and less than five percent of UK high growth SMEs have been found to utilise risk finance such as venture capital or business angel funding[100].

Another core aspect of firm-level support to foster rapid growth is support for **business internationalisation**. While many governments undertake these activities, most of them are geared to SMEs as whole, rather than being targeted towards potential HGFs. Support for business internationalisation takes many forms such as support for market analysis,

---

[98] Brown, R. and C. Mason. (2014) Inside the high-tech black box: A critique of technology entrepreneurship policy, *Technovation* 34: 773-784.

[99] 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*. National Endowment for Science, Technology and the Arts.

[100] Brown, R. and Lee, N. (2014) *An Examination of Funding Issues Confronting High Growth SMEs in the UK*. Edinburgh: Institute for Chartered Accountants in Scotland (ICAS).

support for attendance at trade fairs/conferences, export guarantee schemes, in-market assistance with networking and foreign language support etc. Support for these activities is typically very strong in smaller more peripheral economies such as New Zealand, Scandinavia and Scotland. Indeed, in New Zealand support for international business growth is the second largest expenditure item in terms of their support for HGFs. In Scotland, support is provided generally through UK Trade and Investment, but the Companies of Scale programme also seeks to make external connections for programme participants to foster international network building.

Other types of activities are more piecemeal and much less frequently used within policy frameworks. Broadly speaking, we label these "relational" (rather than transactional) forms of support discussed above. These take many forms and include management development, strategic awareness, peer-based activities and mentoring. Our analysis of the policy landscape reveals that these forms of support are beginning to become more prevalent in certain policy frameworks. This is evident in both new dedicated programmes but also adjustments to existing policies. This is particularly notable in terms of peer-to-peer support. Indeed, the UK's Growth Accelerator programme, Scotland's Companies of Scale programme and the Finnish NIY programme all have strong peer networking activities. Previous assessments of these types of peer-to-peer programmes tends to find very high approval ratings from the participating companies[101], especially in contrast to programmes which just involve transactional assistance from the public sector or consultancy-types support.

Help to improve **strategic planning** and strategic awareness in rapidly growing firms is another increasingly important type of relational support. Research consistently shows that having a clearly defined strategy plays a central role in driving high growth.[102] This type of assistance is often focused on helping managers and entrepreneurs to take a more strategic approach towards their future growth. Often this involves getting managers to focus on longer-term strategic issues (organic versus acquisitions, future export markets to target, methods of recruitment) rather than focusing on traditional day-to-day matters of running a

---

[101] Fischer, E., and Reuber, A. R. (2003). Support for rapid-growth firms: a comparison of the views of founders, government policymakers, and private sector resource providers. *Journal of small business management*, *41*(4), 346-365.

[102] Demir, R., Wennberg, K. abd McKelvie, A. (2016) The Strategic Management of High-Growth Firms: A Review and Theoretical Conceptualization. *Long Range Planning*. Available online 22 September 2016 http://dx.doi.org/10.1016/j.lrp.2016.09.004

business (cash-flow, invoicing, IT etc). Fostering more strategic planning in firms is now a core part of most of the programmes examined, such as the Danish Growth Houses, Companies of Scale and the UK's Growth Accelerator programmes. Most of these programmes have elements of strategy development, rather than being entirely focused on this one aspect. A common approach in some countries is to engage academics to assist firms with this kind of strategy development but in others this is provided by specialist consultants.

For example, under the UK's Growth Accelerator programme assisted companies received £2000 of matched funding for leadership and management training for senior managers. This coaching was split into three main strategic strands: access finance, growth through innovation and business development. Interviews with recipients of this support found this to be extremely valued.[103]

A final common approach to help assist firms undergoing rapid growth is mentoring from experienced entrepreneurs. Successful mentorship programmes are those where mentees create structured goal-driven relationships which aim to help drive the personal growth of entrepreneurs and their businesses.[104] This is a key element underpinning the Companies of Scale programme in Scotland. Mentoring from business leaders can have a major beneficial impact on companies seeking to scale-up. Recent research has found that companies being mentored produced 23% more employment growth than other similar companies.[105] While mentoring is often offered to firms who are backed by business angels and venture capitalists, most firms do not receive formal mentoring.

While there are numerous mentorship programmes aimed at start-ups, this form of support is often absent within support for HGFs. A key requirement for this kind of support is the need for high quality mentors - experienced business people who have successfully grown firms. Similar to strategy development, mentoring is often an aspect of programmes rather than its entire focus. For example, in the NIY programme in Finland, mentoring takes place

[103] Lee et al. (2016) Op. cit.
[104] Entrepreneurship Forum (2014) Entrepreneurship in Ireland: Strenghtening the Start-Up Community, Department of Jobs, Enterprise and Innovation, Dublin.
[105] Coutu (2014) The Scale-Up Report on UK Economic Growth, www,scaleupreport.org.

informally between venture capitalists who help select the firms who apply to join the programme and the assisted firms.

3.4.3 *Key Lessons*

Despite the large volume of policy initiatives and programme activity, the evidence base on the overall effectiveness of high growth programmes is sparse. Therefore, great care should be taken when looking at lessons from different approaches. While useful learning can be gained from looking at alternative approaches, our belief is that directly applying policies and programmes from other contexts is a fundamentally flawed approach to policy making. This mimetic approach to policy making is often extremely expensive with detrimental consequences in terms of its impact.[106] We now make some general assertions in relation to our overall assessment of the policy landscape.

Our assessment noted that age and sector were the two most common forms of targeting towards HGFs, both of which are contrary to the evidence base on the origins and antecedents of HGFs. According to some researchers, HGFs "are found across all sectors of the economy, a heterogeneity that is also reflected in their age, size, origin, and ownership".[107] In other words, HGFs come in all shapes and sizes. With respect to age, we would caution policy makers in Northern Ireland to avoid focusing their efforts towards young firms. This tends to be a legacy effect from the fact that most support for HGFs is essentially a modification of start-up support.

The strong belief that high-tech sectors are significant generators of HGFs is also flawed. Given that genuinely 'high tech' firms comprise only a small part of the UK's HGF base, policy interventions aimed at this sector such as R&D assistance should be scaled back accordingly, allowing for greater resources to be allocated to different types of firms across a variety of industry sectors to best support the HGF population as a whole. In terms of future policies designed for HGFs, other more broadly focused sectors, such as business services, might pose 'better opportunities' for targeted firm growth support.

---

[106] 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), 1260-1272.
[107] Mason and Brown (2013, P.222) op cit.

When examining the thematic nature of support, R&D support dominates. Again we would suggest that this inherently skews support to certain types of firms. Support for growing firms therefore needs to reflect the diverse nature of their business activities, prioritising support for firms with growth ambitions and potential, rather than those with particular sectoral or R&D focus. In terms of high growth support, probably the best approach would be to adopt additional selection criteria within programmes that currently favour high-tech sectors.

The current focus on innovation should be extended to include a wider definition of the term. There is growing recognition of the importance of 'hidden' types of innovation that many HGFs procure from 'open sources' such as suppliers, customers and end-users. Incorporating this wider view of innovation would in itself broaden support to a wider array of sectors, especially services. Interventions to foster stronger links between firms' and their customers and end-users would be particularly beneficial, as research has identified that strong engagement with customers can be a powerful source of both innovation and firm growth.

The other area which policy focuses upon is funding, notably equity funding programmes. The reality is that the vast majority of HGFs are much more reliant on traditional sources of debt financing for growth. Research has found the importance of financial capabilities within HGFs, especially in terms of the ability to obtain credit, budgeting and cash-flow management, financial reporting, analysis of financial statements and cost control.[108] Given that HGFs often encounter difficulties obtaining capital at suitable terms[109], there is likely to be an important gap in the provision of non-venture capital funding for potential HGFs that policy-makers need to address. Policy-makers should therefore resist the traditional approach of establishing venture capital funds and put greater emphasis on developing other types of debt-based finance.

Given the problems some SMEs encounter when obtaining funding, an important route for policy makers to consider is assistance with credit applications. While on the whole HGFs do

---

[108] Barbero, J. L., Casillas, J. C., and Feldman, H. D. (2011) Managerial capabilities and paths to growth as determinants of high-growth small and medium-sized enterprises, *International Small Business Journal*, *29*(6): 671-694.
[109] Rostamkalaei, A. and Freel, M. (2016) The cost of growth: small firms and the pricing of bank loans, *Small Business Economics*, *46*(2): 255-272.

not find access to finance more difficult than other SMEs, many are subjected to inferior loan rates and conditions than their traditional firm counterparts.[110] Busy entrepreneurs often have limited time to allocate to the time-consuming process of applying for loans. Therefore, initiatives designed to improve the financial acumen of SMEs is another approach to help increase access to finance. Indeed, in many cases, entrepreneurs should be encouraged to retain equity rather releasing it. Many entrepreneurs choose to use bootstrapping techniques - creative ways of minimizing or eliminating the need for finance by securing resources at little or no cost - to fund the start-up and early stages of their businesses.

Some tentative suggestions can also be made about other types of business support for rapidly growing firms. One particular area which probably receives insufficient focus in support programmes is support for business internationalisation. High growth researchers have noted that a key "indicator of growth ambition is the desire to grow internationally", so internationalisation support will tend to disproportionately favour potential HGFs.[111] Indeed, research strongly shows that HGFs are more externally-oriented than non-HGFs.[112]

Plus, from our own interviews with potential and future HGFs, often the most valued forms of support concerns support for business internationalisation. This assistance is particularly welcomed when it enablse interaction with potential overseas customers. Such customer interaction not only allows for potential sales generation, but also acts as a further source of internationalisation – *customer followership* into new international markets as current customers expand their own operations. This can be a cost-effective and relatively low risk internationalisation option for many HGFs.

4. Conclusions & Policy Recommendations

The research has highlighted a number of key issues for policy makers aiming to grow their economy through a more selective approach towards business growth and expansion. This comprehensive review of existing empirical evidence coupled with the original insights

[110] Rostamkalaei and Freel (2016) Op. cit.
[111] Mason and Brown (2013) Op. cit. p. 217
[112] Brown and Mawson (2016) Op. cit.

gathered during the survey analysis and interviews enables us to draw a number of tentative conclusions. Some of the policy recommendations will also be discussed below.

Before this, however, it is worth making some general observations about the nature of HGFs. They are highly diverse, making generalisations about them difficult. HGFs come in many shapes and sizes, are found in a range of different sectors and can be found in various different spatial environments. From the analysis undertaken it seems this level of diversity is very evident in NI HGFs. There is very little evidence to suggest that these firms are significantly different from HGFs found in other peripheral contexts.

We now turn to some of the tentative conclusions from our analysis:

First, for the reasons outlined in terms of identifying HGFs, there may be merit in using a turnover-based metric for analytical and practical targeting purposes. This does not, however, mean that rigid metrics should be followed. Second, the incorporation of micro-HGFs within the analytical work of the Department for Economy has some merit given the skewed nature of the local economy. This may, however, exaggerate the role these firms play in economic growth and risks a high deadweight. Therefore, the researchers propose that for future identification purposes, the Department of Economy draw on a modified OECD HGF definition (see third point below), allowing for firms falling below the growth threshold to be included. We would also propose excluding micro-HGFs (i.e those employing less than 10 employees), focusing on those firms with an established track record or quantifiable sales pipeline for growth. In line with others, focusing on turnover seems to be a more useful to metric to use when identifying and targeting HGFs, particularly if we are looking for longer-term sustainable development and growth (sales need to be generated in order to pay for investments e.g. staffing).

Third, our extensive literature review revealed high growth to be extremely problematic for a significant number of firms. Given this situation, the focus within policy frameworks may be better guided towards promoting growth at lower levels over the longer-term. A longer, slower growth period may be a more appropriate aim for some firms. While a lack of research has compared how firms absorb growth at different levels, it would seem easier to manage growth levels of 5-15% than 20%+. In this respect, the work also calls into question the strict adoption or adherence to the OECD measurement criteria within public policy. For future analytical purposes measuring high growth in this range would seem a suitable threshold to adopt.

We now turn to some of the policy recommendations emanating from this research. The work opens up a number of complex issues for policy makers to confront. Owing to their high attrition rate, limited lack of longevity and limited domestic footprint, many observers have called into question the overall aim of promoting HGFs. There are also significant issues with value for money in terms of supporting these firms, many of whom have quite short-term growth aspirations. This is reflected in the strong "exit" culture in many HGFs. These issues all need to be considered when prioritising firms to undertake periods of rapid growth.

Our conclusions have a number of practical policy implications in terms of operationalising high growth support. Our main observations focus on: customer segmentation, identification, nature of support and programme delivery arrangements.

4.1 Customer Segmentation

To help guide policy makers in NI, the researchers have suggested a much clearer delineation of different types of firms within the economy, which fall under the realm of HGFs. One approach was to segment using a size-based metric: start-ups, pre-scale, scaling and companies of scale. This mirrors the approach gradually being adopted by agencies like InvestNI and other UK counterparts such as Scottish Enterprise. One benefit of this approach is the way in which different types of support policies can be targeted towards firms with common problems and support needs. The work also suggests that public support in terms of resources should be concentrated on those with a demonstrable growth "track record" in the pre-scaling and scaling size ranges.

4.2 Identification

Identifying firms to help grow is not easy; neither is engaging the right ones. One of the main criticisms of high growth policies is the difficulties associated with "picking winners". Traditionally, policy makers have attempted to "pick winners" by targeting support towards particular types of companies. This work suggests that these attempts are flawed and that a better approach would be to "back winners" rather than pick them.

What the work strongly suggests is that using age or sector, as is common in policy approaches elsewhere, is a deeply flawed approach towards trying to identify potential HGFs. These criteria are likely to ensure that policy makers are "looking in the wrong places" for these firms. Indeed, the strong emphasis on high-tech sectors in particular is questionable given the evidence presented (see Figure 2). Of course, a lack of high-tech HGFs in NI can be viewed in one of two ways. Some could suggest that these firms need more help to help them grow. In other words, high-tech firms need to prioritised further to create more of them. Alternatively, a counterargument would be that if high-tech sectors provide relatively few HGFs it begs the question why policy makers focus their efforts so strongly towards these sectors? In our view, high-tech firms probably do need different types of specialist support than more prosaic firms. However, we strongly believe that **policy makers should avoid excessive sectoral prioritisation in support** and caution against implicitly favouring high-tech firms through R&D based eligibility criteria.

The work suggests that from an organisational perspective the most useful method of targeting growth companies is to focus on turnover based measures rather than employment, which tends to dominate. Indeed, more flexible adaptive measurements of "real-time" growth may be more suitable (order books, growth aspirations, international focus etc.), especially for targeting current growers rather than the retrospective growers often captured by the OECD criteria. Another important issue identified by researchers is projected growth. Research shows that growth expectations by entrepreneurs are often closely correlated to realised growth[113]. In other words, entrepreneurs often know how fast they will grow. Therefore, the projected growth levels of entrepreneurs might be another

[113] Lee, N., Sameen, H., & Cowling, M. (2015). Access to finance for innovative SMEs since the financial crisis. *Research policy*, *44*(2), 370-380.

practical method of pre-selecting firms to receive future support. As mentioned in our conclusions, priority should be given to firms who wish to grow sustainably rather than for very short periods of rapid growth. Firms with these strong growth aspirations are the types of "winners" who are likely to succeed and grow.

4.3 Nature of Support

In NI there has been a history of strong support for private enterprises, which some claim has resulted in a "grant mentality" within the company base. This is evident in the strong use of employment grants to subsidise the costs of new employees. This issue has become path dependent, with many firms remaining somewhat fixated on financial or transactional types of support (e.g. employment, innovation, capital grants etc). Changing the enterprise culture of economies is a very long-term process, as the majority of research reveals[114]. For the longer-term, however, the private sector in NI would benefit by becoming more familiar with softer forms of relational support, which often involves offering minimal financial benefits to firms. Relational support might take the form of management development, or peer mentoring (see 5.4 below).

From a thematic perspective, it became apparent that a number of issues seemed to feature strongly for HGFs. From the analysis of support approaches elsewhere, assistance accessing other sources of finance and greater levels of support for internationalisation seemed suitable types of support for HGFs. Indeed, the firms interviewed perceived the need for help with sales and marketing support and internationalisation.

Common issues raised during this work also strongly resonate with the findings from studies of these firms elsewhere. A notable factor concerned recruitment. It appears there may be scope for agencies to help signpost firms to help with their recruitment. Interestingly, a recent survey of HGFs found that 74% ranked access to talent as one of their top three growth constraints compared to 22% cited access to venture capital.[115] Increasing evidence on the success of HGFs suggests that successful recruitment is key to enabling firms to

[114] Fritsch, M., & Storey, D. J. (2014). Entrepreneurship in a regional context: historical roots, recent developments and future challenges. *Regional Studies*, *48*(6), 939-954.
[115] Coutu (2014) op cit.

sustain their level of growth. Conversely, poor recruitment and "bad-hires" can result in firms become less successful and could even undermine the firm's future success.

4.4 Delivery Arrangements

Typically delivery arrangements for business support programmes are undertaken by the public sector directly or contracted out to the private sector. In many instances, management and leadership development is undertaken by university providers. While the mechanism for delivery support may seem to be relatively unimportant, recent evidence seems to suggest that high performing firms have specific preferences in terms of "who" they wish to deal with in terms of support. HGFs in particular seem to prefer advice and guidance from their peers rather than public or private sector intermediaries[116]. This type of peer to peer support is becoming a notable feature of some of the most well developed support programmes across the OECD.[117]

These types of programmes clearly rely on the good will and time of existing successful entrepreneurs. In this respect, there does on paper appear to be an appetite for entrepreneurs to share their experiences with others. A recent survey by the Entrepreneurship Forum and Ernst & Young surveyed some of Ireland's most successful entrepreneurs - nearly 90% said they would take time to share their experiences and knowledge with other entrepreneurs.[118]

While there is a desire to promote these kinds of initiatives, the manner in which these are constructed requires considerable care and attention. Such initiatives have to be designed to appeal to high aspiration entrepreneurs rather than the lowest common denominator. Programmes that offer superficial and ad hoc advice would fall into the latter bracket. In our view, the "office hours" programme in Ireland would be one such initiative. This is a largely untargeted enabling new entrepreneurs the opportunity to tap the expertise of more experienced entrepreneurs. The problem with this type of light touch mentoring is the lack

[116] Fischer and Reuber (2003) Op. cit.
[117] OECD (2013) Op. cit.
[118] Entrepreneurship Forum (2014) Entrepreneurship in Ireland: Strengthening the Startup Community, Report for the Entrepreneurship Forum/Department of Jobs, Enterprise and Innovation, Dublin.

of coherence between the different parties and the web-based nature of this form of interaction.

For these programmes to work effectively, participating entrepreneurs must be fully committed to very open, interactive and demanding peer-to-peer support. Often entrepreneurs want to share experiences with similar organisations; they also want these to be outward looking and challenging for the participants, rather than a local “bragging shop”. Good examples exist and many of the programmes examined are beginning to incorporate this kind of peer-to-peer support.

5. Suggestions for Further Research

The evidence base on HGFs is expanding, but much remains unknown about certain aspects of these firms and how best to support them. Given the strong policy focus on promoting rapid growth, it is essential that policy makers have sufficient evidence to help inform their policy frameworks and interventions. Various authors have identified certain limitations with the overall high growth literature which merit further investigation. Owing to the methodological limitations and wider variations in definitions used, a recent review of the high growth literature was quite critical of the empirical literature.[119] While leaving aside these definitional and methodological intricacies, we wish to highlight some key omissions which require further research. In short, there are two main categories of further research which could advance our knowledge and understanding of HGFs.

The first body of work concerns the nature of these firms. While a considerable body of work has examined the characteristics of HGFs, much remains unknown about certain aspects of HGFs. A first issue concerns finance. First of all, a lack of finance can hamper growth. Indeed, recent research has shown that almost half of all SMEs in NI use no external source of finance and that the proportion of those using no external finance increased between 2012 and 2014 from 42% to 49% respectively.[120] Worryingly, this was particularly evident in medium-sized firms who should, in theory, be able to obtain finance

---

[119] Demir, R., Wennberg, K. and McKelvie, A. (2016) The Strategic Management of High-Growth Firms: A Review and Theoretical Conceptualization. *Long Range Planning*. http://dx.doi.org/10.1016/j.lrp.2016.09.004

[120] https://www.economy-ni.gov.uk/sites/default/files/publications/deti/business-access-to-finance-2014.pdf

more readily than small firms. Given that access to finance is crucial to aid the growth of firms[121], identifying what is deterring SMEs (especially medium-sized firms) from seeking external sources of finance would also be a valuable exercise.

Clearly rapid growth can be problematic for a number of firms and excessive growth can provide firms with financial difficulties if they face liquidity issues. Within the literature there have been surprisingly few studies examining the financial structures of HGFs and their ability to grow rapidly. Clearly access to finance will determine a firm's ability to grow and to be able to sustain growth. Therefore, more needs to be known about the capital structure of HGFs, their ability to access to finance and obtain finance at the right cost. This is especially important for an economy such as Northern Ireland, as research has found that innovative SMEs located in peripheral regions incur difficulties obtaining both equity and bank forms of finance.[122]

A second issue concerns the mode in which HGFs grow. Surprisingly, this aspect of high growth companies is often overlooked. Firms are, however, faced with important decisions about how best to optimise and undertake growth, whether it be through exporting, strategic alliances, new product innovation or acquisition. This kind of growth decision-making is often very pertinent to ambitious firms who undertake these riskier types of growth strategies. Indeed, expanding through exporting or other modes of business internationalisation is often a key indicator of future growth and a requirement of a firm's ability to sustain growth. However, international expansion is often extremely difficult for SMEs with limited capabilities and locally-based customers. Despite the importance of firm internationalisation, very little empirical work has specifically examined the internationalisation patterns and processes within HGFs. Again, this is especially important for economies with limited domestic markets, such as Northern Ireland and Scotland, where

[121] Beck, T., and Demirguc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, *30*(11), 2931-2943.

[122] Lee, N., & Brown, R. (2016). Innovation, SMEs and the liability of distance: the demand and supply of bank funding in UK peripheral regions. *Journal of Economic Geography*, doi: 10.1093/jeg/lbw011; Nightingale, P., G. Murray, M. Cowling, C. Baden-Fuller, C. Mason, J. Siepel, and C. Dannreuther. 2009. *From funding gaps to thin markets: UK Government support for early-stage venture capital*. London: National Endowment for Science, Technology and the Arts (NESTA).

firms often have to internationalise at an earlier stage in their growth lifecycle than firms located in larger domestic markets.

The second type of research which would advance our understanding of rapidly growing firms relates to the practicalities of targeting and assisting potential and existing HGFs. In terms of the former, very little is known about the nature of potential HGFs. What characteristics do these firms exhibit which could help policy makers identify future HGFs? We could speculate that potential HGFs would have strong growth ambitions, entrepreneurs with above average levels of human capital, strong networks, previous entrepreneurial experience and some access to start-up finance. However, without further research very little is known about the entrepreneurial antecedents of HGFs.

Another issue relates to the nature of firms who do not receive assistance yet still manage to achieve rapid growth. Most studies examine firms who receive support from public sector bodies, such as the study covered in this report. However, useful insights could be gained from further examination of firms who have not been recipients of public sector support. It could be useful to enquire why these firms have not sought (or deemed it necessary) to seek assistance, the nature of their growth and how they have overcome growth challenges and growth bottlenecks.

One final, and very important area, for further research concerns evaluating the effectiveness of high growth or business scaling support. In recent years there has been a move by policy makers to undertake more systematic, innovative and comprehensive assessments of how business support impacts companies.[123] This is especially important for interventions that intensively assist companies and which are often resource-intensive, such as high growth support. One novel form of evaluation of these types of interventions involves randomised control trials (or RCTs). RCTs are often considered to be the gold standard for understanding the impact of programmes, with participants randomly assigned into or out of the programme, thus allowing for unbiased estimates of the impact of the programme to be computed. Other methods of analysis suffer some level of bias because

[123] Cowie, P. (2012) SME Policy Evaluation: Current Issues and Future Challenges in (Eds) Blackburn, R. A. Schaper, M *Government, SMEs and Entrepreneurship Development: Policy, Practice and Challenges*. Routledge, Farnham.

they compare people who choose to sign up for a programme to those that do not—this selection bias can be particularly significant when considering entrepreneurship and innovation programmes. The challenge for RCT evaluations is that while they allow greater confidence in assessing whether any effect is causal, they lose external validity making it hard to tell whether programmes would work elsewhere. This makes it particularly important to test programme design in the NI context.

Organisations such as Nesta and the Innovation Growth Lab are promoting this form of evaluation process within the innovation and high growth policy making community to help gain greater insights into these important policy interventions. Nesta's Innovation Growth Lab runs calls to sponsor and part-fund these innovation evaluation exercises in conjunction with policy makers across the UK.[124] Undertaking an RCT of participants on bespoke high growth or business scaling programmes could provide invaluable insights for policy makers in Northern Ireland.

[124] http://www.innovationgrowthlab.org/funding-opportunities

Appendix 1

Denmark's Growth Houses

Context

With a strong history of fostering new entrepreneurial start-ups, in the early 2000s Denmark considered a new approach to entrepreneurship policy. Much like in other countries, the focus had been on encouraging new starts, with limited emphasis on – and track record of – encouraging business growth and scaling. Compared to other EU countries, Denmark had a lower success rate of creating HGFs.

In 2007, after two years of development, Denmark launched the Danish Growth Houses, or 'Væksthuse'. There are five of these Business Development Centres across the country, one for each geographic region. This programme targets 'new and small businesses with growth ambitions and growth potential'. Classified as 'growth start-ups', these firms must be a maximum of five years old employing at least five employees; they must commit to an increase in growth and employment of at least 20 percent over the following three years. [125]

Programme advantages and disadvantages

The programme reflects best practice on HGF support in a number of ways. With no sectoral focus or preference, firms are supported across all industries, which maximises the potential for identifying growth firms. Each growth house has a certain degree of autonomy, which gives it operational flexibility in terms of meeting regional business needs. This is particularly important in more peripheral geographies. Inputs are wide ranging, covering exports, management and strategy and financing options via the Vækstfonden.[126] The selection based on growth potential rather than the OECD measure allows for the selection of 'potential HGFs', which allows the programme to target those organisations that need or would benefit from support rather than those that have already successfully achieved rapid growth.

[125] See OECD (2013) An international benchmarking analysis of public programmes for high-growth firms. Paris: OECD.

[126] Vækstfonden is a state investment fund that provides venture capital, loans and guaranties in collaboration with private partners and Danish financial institutions to start-ups and SMEs (www.vf.dk)

Despite these advantages, the programme also has its limitations. First, the selection criteria can still be problematic given the focus on very young firms (less than five years old). This can result in a cohort of embryonic firms that are not yet ready for – or capable of – transformational growth. In addition, the Growth Houses do not deliver their own services, relying instead on a network of private sector intermediaries. This limits continuity of service and approach and, arguably, subjects businesses to the latest 'fads' in business development rather than more focused initiatives aimed at longer-term organisational development and sustainability. Finally, there is no dedicated focus on scaling successfully growing ventures into larger businesses. Given the temporary nature of business growth, and high rates of acquisition by international buyers, this longevity becomes of critical importance if employment levels (or growth) are to be maintained.

It is currently difficult to empirically assess the impact of this programme as evaluation measures and data do not appear to be publicly available. There is, however, speculation that many companies fail to reach their growth targets despite full programme involvement. [127]

[127] OECD (2013) ibid.

Scotland's Companies of Scale programme

Context

With a large proportion of Scotland's business base comprising microenterprises and sole-traders, policy has increasingly prioritised developing and scaling companies into larger organisations. The Companies of Scale programme (now SCALE) was piloted in 2005 with the intention to support existing high growth businesses to become larger, internationalised firms.

For inclusion in the programme, firms must have turnover exceeding £10m, with strong ambitions to become a £100m plus businesses. Although there are no sectoral requirements, firms are selected from the pool of c. 2,000 Account Managed companies supported through Scottish Enterprise, which works with six key sectors (Food & Drink; Creative Industries; Sustainable Tourism; Energy; Financial & Business Services; Life Science). Initially there were fewer than 10 companies on the programme, growing to nearly 20.[128] Today, given the rebranding to the SCALE programme, the programme appears to serve a much larger number of clients.

Programme advantages and disadvantages

The programme has a number of advantages. In line with recommendations from the literature, it is predominantly a relational programme focused on peer-to-peer support, which HGFs are noted to value. It is also time sensitive, recognising that not all firms growth and develop in the same way or at the same rate, and that a range of interventions will be needed at different throughout each firm's journey. Another benefit is that firm involvement is linked to their ongoing support though the Account Management programme, which allows for a more interconnected experience for participants (and, arguably, fewer replications of interventions).

This link to Account Management is also a disadvantage, with only those firms currently within Scottish Enterprise's portfolio eligible for inclusion. This potentially excludes firms operating in non-priority sectors but which have significant scaling potential. The

[128] OECD (2013) Op. cit.

programme, in its original form, also had very few participants, largely due to the limited number of Scottish firms of a significant size with the potential for additional scaling. This small cohort, whilst beneficial in some ways, means that the programme is too selective to fully assist HGFs and those with significant high growth potential. Importantly, firms that are not yet scaled but which have outgrown start-up services are not currently covered by support measures targeted at growth and scaling.

The UK's Growth Accelerator

Context

Growth Accelerator was a large-scale support service designed to help growth-oriented Small and Medium Sized Enterprises (SMEs) achieve their next stage of growth. The project was delivered by a set of private sector organisations, led by Grant Thornton, Winning Pitch, PERA, and Oxford Innovation. Eligibility was determined on the basis of growth orientation, being UK registered, having fewer than 250 employees and less than £40m in turnover. The project was launched in May 2012 but abruptly axed in the November 2015 Spending Review.

The service was primarily delivered by "Growth Coaches" who develop and help implement a tailored plan for growth. Firms paid a small fee to participate, and coaches worked with them to develop a roadmap for growth focused on removing the barriers faced by these firms in growing. These were to be focused on four areas:

* Raising finance

* Leadership and Management

* Commercialising innovation

* Strategy development and execution

Other support was also offered to participants in the form of grants for leadership and management training, access to sources of external advice such as UK Trade and Investment and the Technology Strategy Board, and "Master-classes" and alumni networking.

Programme advantages and disadvantages

Growth Accelerator was subject to formative evaluation and this revealed very positive views from participant firms. The early evaluation of the programme suggested that around 97 of participants would recommend the service.[129] This finding was confirmed by

[129] BIS (2014) Interim evaluation of Growth Accelerator. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/298002/bis-14-687-growthaccelerator-commentary-on-the-year-1-monitoring-surveys.pdf

subsequent evaluations.[130] There does not appear to be a publically available robust quantitative evaluation of the programme.

The main challenge faced by Growth Accelerator was achieving scale without sacrificing quality. The programme had a large cohort, and the private providers used to deliver the programme would have found it challenging to reach a suitable number of genuine firms. The criteria for admission into the programme were, for related reasons, relatively non-specific. Second, Growth Accelerator started up quickly and was only seen to be running very smoothly later on, and there were concerns that the programme had only begun to work well shortly before it was ended, something which led to complaints from firms who were involved. This highlights the importance of continuity in business support provision.

[130] BIS (2015) Formative evaluation of Growth Accelerator. BIS Research Paper, 189. Avialable from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/395557/bis-15-41-formative-evaluation-of-growthaccelerator-bis-research-paper-number-189.pdf

The UK’s Future Fifty

Context

The growth of the UK’s high tech sector, particularly around the Old Street area of London – “Tech City” – has been an important area of government policy since the early 2010s. The Future Fifty is a highly selective business support programme run by Tech City UK as part of this agenda.

The aim of the policy is to provide support for growth-stage companies in the digital sector who are likely to make significant contributions in terms of numbers of new jobs. The programme criteria are quite strict: To be eligible, participants must have a net revenue of more than £5m in the past 12 months, be able to demonstrate average annual revenue growth of 30% over the previous two years, and be a UK headquartered company. Firms are selected from an open competition by a panel of independent experts, with this selection by expert an important part of the ‘signalling effect’ from participation.

Support lasts for up to two years and consists of bespoke support offered by government and a range of other specialists, including private sector organisations such as Barclays. Participating companies receive a range of benefits, including development opportunities, with workshops and summits, access to and support from government policymakers, including the Department for International Trade and UK Visas and Immigration, branding as one of the ‘Future Fifty’, and shared learning and engagement with other similar businesses. Some of this support is in areas including access to skills, leadership capacity, financing, and developing the cohort network. In particular, the idea is that membership of this group helps firms in future funding rounds. Many of the programme alumni have been highly significant tech businesses such as Hailo, Funding Circle and Deliveroo.

Programme advantages and disadvantages

Clearly the Future Fifty is a relatively selective process which means that while it may aid the growth of some established firms, it is unlikely to create new companies in this area. Because of this, it is a national programme rather than one specific to local economies which are likely to have a thinner pool of potential candidate firms.

Moreover, while Tech City UK provide strong figures on outcomes for participants, there are two important caveats. Firstly, the programme by its nature selects firms which are likely to do well and there is no robust counterfactual against which to consider its growth. Secondly, many of these firms achieve exits (see the recent example of Skyscanner) rather than sustained, long-term growth. While there are no clear figures on cost available, it is likely to be highly resource intensive, particularly when the opportunity cost of government agency time is included.