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New and Young firms, entrepreneurship policy and the role of government – evidence from the Federation of Small Businesses survey

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Purpose

This study investigates whether new and young firms are different to older firms. This analysis is undertaken for general characteristics and in terms of use of external resources and in relation to growth orientations.

Design/methodology/approach

Data from the 2008 UK Federation of Small Businesses survey provided 8,000 responses. Quantitative analysis identified significantly different characteristics of firms from 0-4, 4-9, 9-19 and 20+ years. Factor analysis was utilised to identify the advice sets, finance and public procurement customers of greatest interest, with ANOVA used to statistically compare firms in the identified age groups with different growth aspirations.

Findings

The findings reveal key differences between new, young and older firms in terms of characteristics including business sector, Owner/Manager age, education/business experience, legal status, Intellectual property and trading performance. New and young firms were more able to access beneficial resources in terms of finance and advice from several sources. New and young firms are able to more easily access government and external finance, as well as government advice, but less able to access public procurement.

Research limitations/implications

New and Young firms are utilising external networks to access several resources for development purposes, and this differs for older firms. This suggests a more explicit age-differentiated focus is required for government policies aimed at supporting firm growth.

Originality/Value

The study provides important baseline data for future quantitative and qualitative studies focused on the impact of firm age and government policy.

Key Words: firm age, entrepreneurs, knowledge, external resources, enterprising individuals

Category: Research Paper

New and Young Firms, Entrepreneurship policy and the role of government – Evidence from the Federation of Small Businesses Growth Survey

1. Introduction

Firm start-ups do not all contribute equally to an economy. Birch (1987) and Acs (2008) found that the most significant contributions to the economy were achieved by fast growing “gazelle” firms, often referred to as high potential firms (Senyard *et al.*, 2008) as opposed to less ambitious or capable firms (Cooper, 1981; Cooper *et al.*, 2004). Shane (2009) argued that more efficient use of public funding should entail directing resources at high growth companies and not on those firms who remain intentionally small. Concurrently, national government agendas have remained focused on knowledge-intensive, research-based start-ups and the evaluation of high technology firms (Heirman and Clarysse, 2004). Such research-based firms contribute significantly in bringing new technologies to market (Christensen, 1997). There remains however, a limited understanding on whether, how and which government programmes and policies are most appropriate for supporting and promoting innovative and growth orientated entrepreneurship (Audretsch, 2004).

This study, therefore, aims firstly to identify the general characteristics of new and young firms (in comparison with older firms) in terms of factors such as entrepreneur background, characteristics, industry sector, firm size, innovation, and exporting activity. Thereafter, the study explores the differences that exist between new and young firms and those at older ages in their use of government (as well as industry and informal networks) “resources” in terms of business advice, finance and public procurement. Finally, the differences between new and young firms and those at older ages in terms of their use of these resources are also compared for different growth aspirations.

This study employs data from the Federation of Small Businesses (FSB) 2008 survey to explore the relationship between firms already explicitly part of a business network, and the relationships between their ages, growth orientations and a range of business support relationships, specifically focusing on the differences between new and young firms (defined as being under four years old) and older firms (defined in terms of a number of categories). The rest of the paper is structured as follows. Section two examines the relevant literature related to business-support-related relationships, in order to identify both the sources of support and the types of support that may exist. In section three, the methodology is outlined, including preliminary analysis of initial descriptive data for firm, industry, and owner demographic variables tested in order to establish a degree of representativeness of the data against the UK government's own Small Business Survey data. Thereafter, factor analysis is undertaken to identify broad categories of external resources (within which several types of government derived resources are identified).

The specific results are thereafter outlined and discussed in section four, evaluating the diversity of sources of support employed by young firms, the numbers and characteristics of the types of support obtained, and the strength of the relationships between these (sources and areas of business support) and links to young firms generally and their growth orientation-aspirations specifically. Finally, in section five, conclusions are drawn as to the implications of the results for stakeholders involved with young firms including implications for government policy. Further areas for research are incorporated in the final discussion.

2. Resource Access, External Sources and Types of Business Support

There are differing views on what the relevant influences are on entrepreneurship and small business. This is certainly the case in terms of what will actually encourage growth, and whether it is possible to identify which businesses can or will grow. For example, successful firms may originate from a variety of industries and circumstances (Henrekson and Johansson, 2008). Research suggests that rapid growth firms can exist in labour and knowledge intensive industries, in both manufacturing and service industries (Davidsson and Delmar, 1997; Wiklund, 1998) and in firms of all ages (Smallbone *et al.*, 2002). Consequently, there is debate about both the purpose and practice of entrepreneurship policy, particularly in terms of new and young firm growth.

A range of factors have been identified as potential signals of high growth outcomes. These include ability, need and opportunity (Davidsson, 1991), education and experience (Cooper *et al.* 1994), technology and higher levels of innovativeness (Allen and Stearns, 2004), firm origins (Davidsson, 1991; Shepherd *et al.*, 2000) and also growth intentions (Covin and Slevin, 1991; Bird, 1998; Cliff, 1998; Katz and Gartner, 1998; Dennis and Solomon, 2001; Wiklund and Shepherd, 2003; Dutta and Thornhill, 2008).

The Importance of the Characteristics of New Firms

Given the myriad potential factors regarding growth, we focus our discussion of the literature on access to resources. Our rationale in this regard is based on the contention that growth intentions influence and shape the entrepreneurial process, particularly the interactions between resources, environment and opportunity (Davidsson *et al.*, 2008). In particular, small firms require resources, knowledge and skills to develop, these resources are defined in terms of assets, capabilities, competencies, organisational processes, attributes, information, and

knowledge controlled by the firm that enable the business to improve efficiency and effectiveness (Barney and Arikan, 2001). Of course, irrespective of the entrepreneur's intention to grow, most entrepreneurs suffer substantial resource constraints in both initial venture creation and during venture growth (Shepherd *et al.*, 2000). The majority of literature that assesses firm development through entrepreneur and founding teams, therefore, focuses on resources.

Within the strategic and entrepreneurship literature various typologies have been employed to delineate and define resources. For example, resources have been defined as “all assets, capabilities, competencies, organizational processes, firm attributes, information, knowledge and so forth that are controlled by its members and that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness” (Barney, 1997, pp.142-143). Alternatively, Dollinger (1995) developed a comprehensive typology that delineates resources through the following classifications: financial capital, human capital, social capital, technological resources, reputational capital and organisational resources. Overall, this suggests that a range of firm and owner characteristics are of possible importance when examining firm potential to access resources and attain growth trajectories. When faced with constraints, therefore, entrepreneurs often draw on the following to develop the firm's resources: 1) Who they are – their traits, tastes and abilities; (2) What they know – their education, training, expertise, and experience; and (3) Who they know – their social and professional networks (Sarasvathy, 2003). This suggests, therefore, that both formal and informal networks may also be of relevance for firms attempting to access external resources.

The Importance of Access to External Resources

Facing resource constraints, entrepreneurs often seek assistance and support, including from pre-existing informal relationships and networks (friends/families), business-related network members comprising of professional services, customers, suppliers, government, university affiliations, as well as trade associations and other business linkages (e.g. Bennett, 1999; Laschewski *et al.*, 2002). These networks, measured in the literature through their diversity and strength of the relationships, can thus impact the firm's ability to secure resources (Sirmon and Hitt, 2003; Liao and Welsch, 2004; Hanlon and Saunders, 2007).

Network literature also highlights several ways networks can be considered in resource access and how they can be measured and employed in empirical tests of performance including research based on several networks (Baker *et al.*, 2003; Davidsson and Honig, 2003), network diversity (Carter *et al.*, 2003) and strength of relationships (Granovetter, 1973), as well as the characteristics of the resources provided. Network diversity and strength of relationships can also impact the firm's ability to secure resources (Sirmon and Hitt, 2003; Liao and Welsch, 2005; Hanlon and Saunders, 2007). Moreover, resource bundling and leveraging resources require additional social activity and interaction (Bruderl and Preisendorfer, 1998).

One central stakeholder that can attempt to influence firm development is government (Brooksbank, 2008; Massey, 2006), therefore highlighting the potential importance of government entrepreneurship policy in providing external resources. In the UK, this has usually taken the form of direct government advice services (Curran and Storey, 2002; Mole, 2002), and government subsidizing existing sources of formal support (such as private consultants or business professionals) to provide business support to new firms (Turok and Raco, 2000), to promote business growth, in areas such as skills development, obtaining

resources, and identifying new business opportunities. In terms of categories of advice offered through government, Bennett and Robson (2003) identified the following areas: business strategy; management organisation; marketing; market research; advertising; public relations; product or service design; new technology; computer services; personnel and recruitment; taxation and finance.

Not all firms, however, favour seeking advice and, in particular, are often reluctant to use external, government sources of advice, because of fear over loss of control (Bennett and Robson, 2003). As a consequence, entrepreneurs may use social (friends/family and social networks) and business (customers/suppliers and membership organisations) as an alternative to government programmes and different types of entrepreneurs use alternative sources of advice (e.g. Robson *et al.*, 2008, with regards to gender in the service sector).

There is also an important firm-age related issue here, given that Bennett and Robson (2003) posit that as firms mature (and grow) they have an enhanced need for specialized advice (with the industry sector also playing an important role), as seeking of advice became less generic and more specific over time. McQuaid (2002) also identified specialized support as particularly problematic for new firms.

In the literature, lack of finance, as well as difficulties accessing the sources of it, are also cited as a particular barrier to entrepreneurship (Fielden et al., 2000; ISBA Review, 2004). For example, the GEM (2007) study revealed that obtaining finance was the largest barrier to graduates starting a business. Fielden et al. (2000) suggests that where entrepreneurs are unable to obtain finance they often have to resort to personal loans and remortgaging their own homes. Audretsch (2004) highlights a range of government policies aimed at assisting

firms or entrepreneurship and focused on increasing access to finance and capital (as well as new markets, innovation and universities, skills development, and general awareness), but also increasingly focusing on encouraging new firm start-up. McQuaid (2002) also identified government policies aimed at improving small firm access to knowledge and innovation resources. This included improved access to universities, in addition to information and advice, and grants to help develop products and processes. Specifically for new technology-based firms, Heydebreck *et al.* (2002) identified marketing, technology, financing and soft service as key areas for support that government provides.

There has also, however, been increasing recognition that public procurement is an important demand-side way in which governments can provide firms with resources; simultaneously reducing the need for direct financial support and improving the delivery of government services (Loader, 2005). Importantly, Elder and Georghiou (2007) argue that public procurement demand can also provide a mechanism to encourage the development of SME innovation, as it can enable trading opportunities from which to exploit innovation. Conversely, Loader (2005) suggests firms often perceive problems in engaging with public procurement regimes, related to lacking awareness of opportunities, ability to attain approved supplier list status, knowledge of the process, focus on cost, and restrictive environmental requirements. Concerns also exist, however, for reasons related to the inertia of public sector organisations in their choice of suppliers, excessive bureaucracy, firms lacking desired qualifications, and the general perception that firms require a previous track record (Loader (2005). This suggests therefore, that in terms of accessing public procurement contracts as a demand side resource from government, new and young firms are at a disadvantage in comparison with older firms.

Given the range (both government and non government) of potential sources of external resource highlighted, the different types of resource, and the potential differences experienced by firms of different ages, there appears to be a need to examine the relationships between access to different resource types and sources and firm age generally. In addition, however, given the focus of government entrepreneurship policy on growth, these issues also need to be explored in relation to firm growth specifically.

The Links between Access to External Resources and Growth

In terms of the specific links between access to external resources and firm growth, Johnson *et al.* (2007) found a focus on employment growth had a positive relationship with seeking business advice. Chrisman *et al.* (2005) used actual (sales and employment) growth as the dependent variable. Whilst they also noted a positive relationship between growth and business support, it was also one where excessive advice could have a detrimental effect on growth.

Government policy has, unsurprisingly, increasingly focused on encouraging entrepreneurship generally (Huggins and Williams, 2009) and firm growth specifically (McQuaid, 2002; Smallbone *et al.*, 2002; Sloan and Chittenden, 2006). Bennett and Robson (2003) highlight, however, that as government supplies business support equally to all firms, including competitors, it is unlikely to provide them with resources that lead to ongoing competitive advantage.

Bennett (2008) contends, therefore, that effective government support policy cannot be provided at reasonable cost-benefit ratios. Mole *et al.* (2008) also highlight that it is the larger, more export oriented firms who are most likely to utilise government business advice

in ways that increase (employment) growth. Westall and Cowling (1999) considered the need for a networked approach which gave new firms enhanced ability to access resources and advice from several sources (not just the formal ones being offered by the Small Business Service and Regional Development Agencies). Bruderl and Preisendorfer (1998) provide evidence to support this “network” approach to entrepreneurship development of new firms. They found support for the view that entrepreneurs with broad and diverse social supporting networks are more successful than firms without such links.

It is, therefore, unsurprising that those such as Mason (2009) have called for an increased research focus in this area in times of economic turmoil, in order to contribute to more effective policy making. The differing evidence in the literature with regard to the types and sources of resources of most use to new and young firms generally, and growth focused firms in particular, highlights that there is a need for additional contributions to the debate about the purpose and practice of entrepreneurship policy.

Methodology

In order to contribute to the research focus called for by Mason (2009), as well as the wider debate about the purpose and practice of entrepreneurship policy, it is first necessary to determine and contrast the general characteristics of small firms at different ages (in terms of factors identified in the literature), in order to provide context for the analysis of access to external resources. We employ a conceptualisation that focuses on the need to improve our understanding of three types of external resources identified in the literature review (in terms of beneficial business advice, finance and access to public procurement markets) that entrepreneurs operating new and young firms can utilise. This access is examined in

comparison with older firms, and also compares those that are growth orientated with those that are not. This translates into the following research questions:

RQ1: What are the general characteristics of new and young firms (in comparison with older firms) in terms of factors such as entrepreneur background, characteristics, industry sector, firm size, innovation, and exporting activity?

RQ2: What are the differences between new and young firms and those at older ages in their use of government-related and non-government-related networks, as these apply to business advice, finance and public procurement?

RQ3 What are the differences between new and young firms and those at older ages in terms of these factors and sources, when considering different growth aspirations?

In order to evaluate these research questions data derived from the FSB survey (2008) is utilised. Previous examples of research using the equivalent FSB Barriers to Growth survey data include Mason *et al.* (2006), who undertook a geographical analysis of the effect of the national minimum wage on the UK small business sector, Carter *et al.* (2009), who examined UK small firm perceptions of employment regulation and, most recently, Mason *et al.* (2011) examination of home based businesses. In terms of the use of the 2008 dataset, Pickernell *et al.* (2010; 2011a, b) have previously utilised it to examine the relationships between SMEs and universities and degree level education, respectively.

The research instrument was developed and piloted, in consultation with the FSB members to ensure the instrument design was logical and transparent. Individual enterprises were considered the unit of analysis, with owner-managers being asked to complete the questionnaire. The 2008 survey was sent out to the FSB's entire UK membership (circa

200,000). This enabled access to a large dataset, with a notable number of usable (in raw or adjusted form) variables. Overall 8,742 enterprises responded, providing 8,422 responses that were usable, with nearly 20% of the firms falling into the category of being under four years old. Firms were considered the unit of analysis with the responding owner-manager the main spokesperson. Examining the issue of representativeness, the 2008 FSB data was compared with the two most contemporary UK government Annual Small Business Surveys (BERR* 2007, 2008). The data was gathered for the FSB and government surveys at around the same time, thus making comparisons to establish representativeness more appropriate. Table 1 indicates the types of firms in the sample, results which illustrate that it is reasonable to assume that firms in the FSB dataset are representative of UK firms as a whole in terms of these variables.

Table 1 Comparison of 2008 FSB and Most Relevant UK Government datasets

| Variables | FSB Survey (2008) n=8,742 | BERR(2007) 2006 Survey n=9905 | BERR (2008) 2007 Survey n=7783 |
|--|---------------------------------|-------------------------------------|--------------------------------------|
| Whole Sample | | | |
| Age SME owners are under 45 | 25% | n/a | 30% |
| Age between 45 and 54 | 32% | n/a | 33% |
| over the age of 55 | 43% | n/a | 36% |
| Industry: Primary industries | 3% | 4% | n/a |
| Industry: production industries | 11% | 10% | n/a |
| Industry: construction | 12% | 10% | n/a |
| Industry: services | 74% | 76% | n/a |
| Young Firms in sample | | | |
| Firms under 4 years old | 19.8% | | 18% |
| Gender (female) | 29.1% | 26% | n/a |
| Anticipated Growth | 85.2% | 82% | n/a |
| Young firms with fewer than 10 employees | 91.4% | 89% | n/a |

*Note: The UK Government Department, BERR, was re-named BIS in June 2009

Given that previous use of the FSB dataset has focused on firms, and that only 6.9% of respondents have more than 20 employees, it is important to emphasize that the study should be seen in the context of micro and small firms. Given that the sample was drawn from FSB

members, they will also differ to some degree from the broader population in some areas of relevance to the analysis. In terms of intellectual property (IP), Rogers *et al.* (2007) found that fewer than 5% of SMEs had used (patent or trademark) IP between 2001 and 2005, compared to the FSB dataset which shows around 9% of respondents holding these types of IP. For beneficial advice, 85% of respondents had received such advice from one or more of the sources, professionals, friends/family, government business services, customers/suppliers, universities or informal networks/trade associations. This is close to, although lower, than the figure of 95% reported in Bennett and Robson (1999) study. Finally, in terms of finance, Tucker and Lean (2003) reported that 64.8% of SMEs had received finance from banks via an overdraft, for friends/family the figure being 17.1%. For the FSB dataset, the nearest equivalent figures were 45.9% and 18.6%. The generalisability of the results obtained, therefore, must be seen in the context of potential differences, though again the values are broadly comparable with prior research.

The characteristics of new and young firms were examined using a range of descriptive firm variables (size, age, location, industry, status, exporting activity, growth potential, IP, e-commerce use) and the owner (age, gender and previous experience). These variables were based on those highlighted by prior studies (Wiklund and Shepherd, 2003; BERR, 2007, 2008). Growth data was gathered on the firm's actual (turnover) growth rate in the previous year and growth aspirations for the following two years. The contemporary Annual Small Business Survey's (BERR, 2007; 2008) approach to defining the growth-related focus of the firms was then used as a guide to create a four category variable. This defined growth orientation in terms of a combination of actual growth and growth aspirations as follows: -

1. Sustained growth (growth by more than 5% in previous year and intention to continue to grow in next two years)
2. New growth (grown by less than 5% in previous year but intend to grow in next two years)
3. Constrained growth (grown by more than 5% in previous year but do not intend to grow in next two years)
4. No growth (grown by less than 5% in previous year and do not intend to grow in next two years).

These variables build on issues highlighted in the literature as being of potential relevance to entrepreneurship, and can be seen in the results section in Table 4.

For business advice the FSB survey defined six sources of potentially beneficial business advice, namely professional services (banks accountants, solicitors, etc.), friends/family, universities, government business services, customers/suppliers and informal networks/trade associations. Respondents were asked if these sources of business support had provided beneficial assistance (coded “yes” or “no”) in terms of 15 categories of help, namely start-up; raising capital; increasing sales; reducing costs; improving supply chain operations; improving existing products or services; introducing new products or services; finding new markets; improving contacts; improving skills; improving overall capacity; increasing confidence; business recovery; improving management skills; and with environmental legislation. This, therefore, generated 90 variables.

For finance, FSB survey respondents were asked to identify whether (in the previous two years) they had obtained finance (coded “yes” or “no”) from 23 possible sources, namely

friends/family, inheritance, personal credit card, pension, savings, second job, redundancy pay, second mortgage, company credit card, retained profit, bank overdraft, financial factoring, unsecured bank loan, secured bank loan, financial leasing, small firm loan guarantee, venture capital, business angel, supplier credit, government grants, government loans and government capital allowances. Finally, for public sector procurement sources respondents were asked whether (in the previous two years) they had supplied (directly or indirectly) 11 government/quasi-government public sector organisations (coded “yes” or “no” for each), specifically the Ministry of Defence, other United Kingdom (UK) central government, devolved government, European Union institutions, government agencies, Olympics, local authorities, schools, National Health Service, Police and Fire Brigade and Universities.

Following the process established in Ramsey *et al.* (2008), to answer RQ2 and RQ3, principal component analysis (PCA) using orthogonal rotation (VARIMAX) was followed, in order to reduce the large number of interrelated business advice, finance and procurement variables outlined above to a smaller number of uncorrelated variables (see Hair *et al.*, 1998). The variables themselves were dichotomous in nature, which is not the norm for factor analysis. Previously, Percy (1976) compared the results obtained from dichotomous and five-point Likert scale variables, and suggested that the technique is viable for dichotomous variables, and, therefore, viable for this study. Because the VARIMAX approach aims to minimise the number of variables with high loadings on a factor, this increases the interpretability of the factors and allows the identification of clear external resource sources/types, which can then be used to compare firms of different ages and growth orientations.

The results of the Kaiser Meyer Olkin (KMO) and Bartlett's test in Table 2 below illustrate that the data is adequate for factor analysis, meeting the basic requirements (as identified in Norusis, 1985) with a KMO value of 0.844, and a highly significant Bartlett's test of sphericity (0.000). The Kaiser criterion (including only those factors with Eigen values greater than 1) and the scree test (plot) were used to identify the relevant number of factors, a factor loading of 0.5 and above used to identify items loading on a particular factor, items that cross loaded being deleted (Ramsey *et al.*, 2008). Of the 124 variables in the initial equation, the final form included 47 variables in the equation, with the total variance explained by the nine factors being 50.73%, within the 50%-60% total variance explained levels used in Borch *et al.* (1999), Brush and Chaganti (1999), Chandler *et al.* (2000) and Pickernell *et al.* (2011a; b), entrepreneurship-focused studies that also used factor analysis.

Table 2 Kaiser Meyer Olkin (KMO) and Bartlett's Test

| | | |
|--|--------------------|------------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | 0.844 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 102056.801 |
| | Df | 1128 |
| | Sig. | .000 |

The final factor solution with factor loadings is presented in Table 3, containing nine easily interpretable factors on which business advice sources (six factors, each of them clearly identified with one of the six sources of advice), finance source (one factor related to government and informal business finance sources), and public procurement customer (two factors, one for more local public procurement customers and one for those more nationally/internationally located) variables loaded. In addition, the Cronbach's alpha for the factors ranged from 0.701 to 0.85, and is within internal consistency and scale reliability limits, as used in Ramsey *et al.* (2008).

Table 3: Rotated Component Matrix

| Item | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 |
|---|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| Informal Networks/Trade Associations helped increase sales | 0.621 | | | | | | | | |
| Informal Networks/Trade Associations helped me improve existing products or services | 0.707 | | | | | | | | |
| Informal Networks/Trade Associations helped me introduce new products or services | 0.693 | | | | | | | | |
| Informal Networks/Trade Associations helped me find new Markets | 0.702 | | | | | | | | |
| Informal Networks/Trade Associations helped improve contacts | 0.703 | | | | | | | | |
| Informal Networks/Trade Associations helped improve skills | 0.672 | | | | | | | | |
| Informal Networks/Trade Associations helped improved overall capacity | 0.618 | | | | | | | | |
| Informal Networks/Trade Associations helped increased confidence | 0.692 | | | | | | | | |
| Informal Networks/Trade Associations helped me improve management skills | 0.625 | | | | | | | | |
| Government Business Services Helped me improve existing products or services | | 0.673 | | | | | | | |
| Government Business Services Helped me introduce new products or services | | 0.626 | | | | | | | |
| Government Business Services helped me find new markets | | 0.643 | | | | | | | |
| Government Business Services helped increase Sales | | 0.629 | | | | | | | |
| Government Business Services helped improve contacts | | 0.653 | | | | | | | |
| Government Business Services helped increased confidence | | 0.650 | | | | | | | |
| Government Business Services helped me improve management skills | | 0.598 | | | | | | | |
| Enhance Government capital allowances | | | 0.775 | | | | | | |
| Public Sector Low interest loan | | | 0.828 | | | | | | |
| Business Angels | | | 0.747 | | | | | | |
| Venture Capital | | | 0.770 | | | | | | |
| Small Firm Loan Guarantee | | | 0.661 | | | | | | |
| Friends and Family helped me improve supply chain operations | | | | 0.610 | | | | | |
| Friends and Family helped me improve existing products or services | | | | 0.753 | | | | | |
| Friends and Family helped me introduce new products or services | | | | 0.769 | | | | | |
| Friends and Family helped me find new markets | | | | 0.699 | | | | | |
| Friends and Family Helped improve Contacts | | | | 0.647 | | | | | |
| Customers and Suppliers helped me improve existing products or services | | | | | 0.831 | | | | |
| Customers and Suppliers helped me introduce new products or services | | | | | 0.829 | | | | |
| Customers and Suppliers helped increase sales | | | | | 0.680 | | | | |
| Customers and Suppliers helped me improve supply chain operations | | | | | 0.684 | | | | |
| Supplied Goods/Services to central government | | | | | | 0.618 | | | |
| Supplied Goods/Services to devolved government | | | | | | 0.690 | | | |
| Supplied Goods/Services to EU Institutions | | | | | | 0.769 | | | |
| Supplied Goods/Services to government agencies | | | | | | 0.614 | | | |
| Supplied Goods/Services to Olympics | | | | | | 0.611 | | | |
| Supplied Goods/Services to local authorities | | | | | | | 0.729 | | |
| Supplied Goods/Services to schools | | | | | | | 0.777 | | |
| Supplied Goods/Services to NHS | | | | | | | 0.699 | | |
| Supplied Goods/Services to universities | | | | | | | 0.716 | | |
| Professional Services helped me improve supply chain operations | | | | | | | | 0.597 | |
| Professional Services helped me improve existing products or services existing products | | | | | | | | 0.692 | |
| Professional Services helped me introduce new products or services | | | | | | | | 0.743 | |
| Professional Services helped me find new markets | | | | | | | | 0.716 | |
| Professional Services helped improve contacts | | | | | | | | 0.623 | |
| University helped increase sales | | | | | | | | | 0.686 |
| University helped me improve supply chain operations | | | | | | | | | 0.710 |
| University helped me reduce costs | | | | | | | | | 0.834 |
| University helped me raise capital | | | | | | | | | 0.739 |
| EigenValue | 5.224 | 3.115 | 3.112 | 2.726 | 2.510 | 2.224 | 1.917 | 1.824 | 1.296 |
| % of Variance | 10.833 | 7.323 | 6.482 | 5.679 | 5.230 | 4.634 | 3.995 | 3.799 | 2.699 |
| Cronbach's Alpha for Factor | 0.850 | 0.757 | 0.809 | 0.737 | 0.776 | 0.701 | 0.756 | 0.702 | 0.734 |

Key: Factor 1= Industry Networks/Trade Associations Beneficial General Business Advice; Factor 2= Government Business Services Beneficial General Business Advice; Factor 3= Finance Sources; Factor 4= Friends and Family Informal Beneficial Externally focused Business Advice; Factor 5= Customers and Suppliers' Externally focused beneficial Business Advice; Factor 6= National/International Public Sector Customers; Factor 7= Local and Regional Markets Public Sector Customers; Factor 8= Professional Services Formal Beneficial externally focused Business Advice; Factor 9= University Formal Beneficial General Business Advice

Results

General characteristics of new and young firms in comparison with older firms

The ANOVA technique was used to examine RQ1, by assessing whether there were statistically significant differences between entrepreneurs from new and young firms (n=1187) and older-age firms (n=4776) in terms of the range of descriptive variables identified earlier. This technique was deemed appropriate for this dataset (unequal group size) and is also appropriate where there may be moderate violations of normality and homogeneity of variance (Corston and Colman, 2000).

Table 4 General characteristics of new and young firms (in comparison with older firms)

| Factor | 0-4 years old | 4-9 | 10-19 | 20+ | ANOVA Sig |
|--|---------------|-------|-------|-------|-----------|
| Age of Business owner (Years) | 45.01 | 48.73 | 53.44 | 59.56 | ** |
| Primary agriculture and energy (% of firms) | 2.86 | 3.35 | 4.21 | 6.20 | ** |
| Manufacturing (% of firms) | 5.38 | 7.94 | 11.57 | 14.19 | ** |
| Construction (% of firms) | 11.28 | 13.33 | 12.62 | 15.20 | * |
| Basic Services (% of firms) | 42.01 | 34.20 | 32.61 | 40.20 | ** |
| Hi Knowledge Services (% of firms) | 38.35 | 41.18 | 38.98 | 24.21 | ** |
| Sustained Growth (including hi-growth) ((% of firms) | 63.01 | 43.73 | 29.94 | 18.39 | ** |
| New Growth (% of firms) | 22.23 | 26.06 | 26.96 | 19.96 | ** |
| Constrained growth (% of firms) | 8.16 | 11.31 | 12.62 | 16.90 | ** |
| No Growth (% of firms) | 6.60 | 18.89 | 30.38 | 44.75 | ** |
| Has a degree or higher (% of firms) | 36.12 | 34.81 | 31.10 | 20.22 | ** |
| Total Number of employees | 6.32 | 6.26 | 8.36 | 8.71 | * |
| Firm is limited company (% of firms) | 46.54 | 56.41 | 54.41 | 44.60 | ** |
| % of Sales that are exported | 5.42 | 6.62 | 7.76 | 7.60 | * |
| Urban location (% of firms) | 65.25 | 64.29 | 62.79 | 61.89 | |
| Previously worked in a Multinational (% of firms) | 34.52 | 38.17 | 36.13 | 31.86 | ** |
| Previously owned and managed a business (% of firms) | 41.45 | 44.10 | 45.91 | 49.93 | ** |
| Firm has I.P. (patent, copyright, | 21.57 | 25.14 | 24.20 | 19.49 | ** |

| | | | | | |
|---------------------------------|-------|-------|-------|------|---|
| trademark, design) (% of firms) | | | | | |
| % of sales via e-commerce | 16.45 | 13.47 | 11.33 | 9.25 | * |

Note: **= significant at the 1% level, *= significant at the 5% level

These results demonstrate that, in terms of general characteristics, younger firms generally have younger Owner/Managers, are more likely to be in basic services, be sustained growth focused and, in terms of education background, have owners with a degree or higher level qualification. They also have a higher percentage of total sales from e-commerce. Conversely, their businesses are less likely to be in other sectors of the economy compared with older firms, are less likely to be either constrained or no growth, to be limited companies, to have owners who previously worked for a multinational or previously Owned/managed a business, or to have IP. Younger firms were also, unsurprisingly, smaller in terms of employment and on average export less of their total production.

Using Sarasvathy's (2003) categorisation of "What they know" factors used by owners when faced with resource constraints, namely education and training, expertise and experience, this suggests that, whilst new and young firms may have advantages in terms of general knowledge resources (as represented by formal education), they are less likely to have specific business-related knowledge encapsulated in factors such as previous work experience and IP. Furthermore, given that new and young firms are also more sustained growth oriented this suggests that they are also more likely to need to seek external resources, as compared with older firms.

The One-Way ANOVA test was employed to assess statistically significant differences between firm age and growth orientation in terms of the external resource factors linked to advice, finance and public procurement identified in the factor analysis displayed in Table 3

(Ramsey et al., 2008), and thus to examine RQ2 and RQ3. The results are reported in Tables 5 and 6.

Table 5 Differences between new and young firms and those at older ages in their use of formal and informal networks

| Item | 0-4 | 4-9 | 9-19 | 20+ | ANOVA |
|---|--------|--------|---------|---------|-------|
| Factor 1: Industry Networks/Trade Associations Beneficial General Business Advice | 1.3193 | 1.2297 | 1.1170 | 0.8655 | * |
| <i>Sustained Growth Firms</i> | 1.4730 | 1.3627 | 1.1909 | 1.1174 | |
| <i>Non-Sustained Growth Firms</i> | 1.1969 | 1.1565 | 1.0773 | 0.8412 | ** |
| Factor 2: Government Formal Business Services Beneficial General Business Advice | 0.4195 | 0.2692 | 0.2682 | 0.1678 | * |
| <i>Sustained Growth Firms</i> | 0.4407 | 0.3480 | 0.3121 | 0.2065 | ** |
| <i>Non-Sustained Growth Firms</i> | 0.4016 | 0.2280 | 0.2642 | 0.1670 | ** |
| Factor 3: Finance Sources | 0.1172 | 0.0898 | 0.0734 | 0.0648 | * |
| <i>Sustained Growth Firms</i> | 0.1242 | 0.0890 | 0.0628 | 0.0795 | |
| <i>Non-Sustained Growth Firms</i> | 0.0995 | 0.0916 | 0.0734 | 0.0583 | |
| Factor 4: Friends and Family Informal Beneficial Externally focused Business Advice | 0.5114 | 0.3420 | 0.2369 | 0.2159 | ** |
| <i>Sustained Growth Firms</i> | 0.5285 | 0.3707 | 0.2028 | 0.2510 | ** |
| <i>Non-Sustained Growth Firms</i> | 0.4803 | 0.3088 | 0.2566 | 0.2135 | ** |
| Factor 5: Customers and Suppliers' Externally focused beneficial Business Advice | 0.9377 | 0.8799 | 0.8250 | 0.7330 | ** |
| <i>Sustained Growth Firms</i> | 1.0955 | 0.9667 | 0.9344 | 0.9069 | |
| <i>Non-Sustained Growth Firms</i> | 0.7927 | 0.8135 | 0.7791 | 0.7281 | |
| Factor 6: National/International Public Sector Customers | 0.3016 | 0.3721 | 0.4131 | 0.2892 | ** |
| <i>Sustained Growth Firms</i> | 0.2881 | 0.4213 | 0.4354 | 0.4575 | ** |
| <i>Non-Sustained Growth Firms</i> | 0.3727 | 0.3368 | 0.4053 | 0.2482 | ** |
| Factor 7: Local and Regional Markets Public Sector Customers; | 0.8332 | 1.0028 | 1.0756 | 1.0055 | ** |
| <i>Sustained Growth Firms</i> | 0.9384 | 1.1187 | 1.2346 | 1.2146 | ** |
| <i>Non-Sustained Growth Firms</i> | 0.7900 | 0.9389 | 1.0187 | 0.9722 | * |
| Factor 8: Professional Services Beneficial externally focused Business Advice | 0.1331 | 0.1313 | 0.01307 | 0.01068 | |
| <i>Sustained Growth Firms</i> | 0.1541 | 0.1413 | 0.1531 | 0.1579 | |
| <i>Non-Sustained Growth Firms</i> | 0.1129 | 0.1254 | 0.1223 | 0.1022 | |
| Factor 9: University Beneficial General Business Advice | 0.0143 | 0.0156 | 0.0267 | 0.0069 | * |

| | | | | | |
|-----------------------------------|--------|--------|--------|--------|---|
| <i>Sustained Growth Firms</i> | 0.0139 | 0.0147 | 0.0179 | .00081 | |
| <i>Non-Sustained Growth Firms</i> | 0.0105 | 0.0166 | 0.0323 | 0.0182 | * |

Note: ** denotes significant at 1% two-tailed level. * denotes significant at 5% two-tailed level.

Focusing on the impacts of the results in terms of their implications for policy requires us to firstly examine the sources of government-related resources. The results in Table 5 for Government business advice (factor 2) demonstrate that New and Young firms generally are significantly more likely (at the 5% level) to attain beneficial advice from government business sources, a result that also holds regardless of growth orientation. For finance sources, the result for finance (factor 3) in Table 5 demonstrates that New and Young firms generally are also more likely to get finance from government and venture capital sources, but this time there is no significant relationship for firms of different ages with different growth orientations. Finally, in terms of public procurement, the results for national/international sources (factor 6) and more local sources (factor 7) in Table 5 show that broadly, New and Young firms are less likely to supply either local or wider levels of public procurement. This time, however, whilst for both sustained growth and non-sustained growth firms there is also a significant relationship with age, this relationship is strongest in terms of sustained growth firms in older age ranges.

In order to place government-related resources (and thus policy) in context, comparison needs to be made with formal non-government sources of external resources. Table 5 illustrates that New and young firms are also significantly more likely to obtain beneficial advice from industry networks and trade associations (factor 1) than older aged firms, this being more strongly significantly related to non-sustained growth firms as they become older. For advice from customers/suppliers (factor 5) New and Young firms are again more likely to receive more beneficial advice than older firms, though this relationship is not significant

when the growth orientation of the firm is accounted for. For university sources of advice (factor 9), the relationship indicates that generally older aged firms are more likely to receive beneficial advice than younger firms, and that this is more linked to non-sustained growth firms. Concerning professional services (factor 8), Table 5 indicates that there is no significant relationship with firm age either generally or by growth orientation.

Finally, and for completeness, informal sources of resources also require analysis. In this regard, young firms are more likely to receive beneficial advice from friends/family (factor 4), and this holds for both sustained and non-sustained growth firms. Overall, this suggests that New and Young firms are more likely to access government related external resources in the form of finance and advice, but are less likely to be able to access public procurement contracts from local or wider sources. However, in terms of relationships with firms having a sustained growth orientation, the results are mixed, with only government advice showing a significantly positive (i.e. in favour of New and Young firms) difference across the age ranges, whilst sales to local and wider public procurement markets are significant but negatively (i.e. in favour of older firms) related across the age ranges, and no significant differences identified across the age ranges with respect to access to finance.

For non-government resource types, New and Young firms were found to be more likely to access more beneficial (advice) external resources from industry networks/trade associations, customers/suppliers and friends/family, but less likely to access these from university sources, and showed no relationship with professional services. The relationships with growth orientation generally (i.e. across the age ranges) were positive for industry

networks/trade associations, customers/suppliers, professional services and friends/family, but there was no relationship with university derived advice.

More broadly, when one adds in other, non-government related sources of resource, it can be seen that New and Young firms generally are able to access a majority of the resources (particularly advice-related) to a greater degree than firms in older age groups, but that this is, in most cases, not a relationship that remains significant for sustained growth oriented firms across the age ranges. The results do not, therefore, indicate that New and Young firms are accessing government-related resources in particular to a greater extent than other, non-government related sources of resource. Neither are New and Young firms with sustained growth orientations in particular able to access government-related resources to a greater extent than New and young firms or older firms with non-sustained growth orientations. Rather, as Table 5 indicates, New and Young firms generally are able to access a broad range of (government and non-government sourced) advice and finance resources to a greater extent than older firms, but perhaps unsurprisingly, they find it more difficult (regardless of growth orientation) to access public procurement markets, or advice from universities, than older firms. In order to examine the link with growth orientation more fully, however, it is also necessary to examine how firms with the full range of growth orientations differ in terms of accessing resources; these results are shown in Table 6.

Table 6 Differences between Firms with different growth aspirations

| Item | Sustained Growth | New Growth | Contained Growth | No Growth | ANOVA |
|---|------------------|---------------|------------------|---------------|-------|
| Factor 1: Industry Networks/Trade Associations Beneficial General Business Advice | 1.3306 | 1.2106 | 1.0443 | 0.883 | ** |
| <4 Years | 1.4730 | 1.3930 | 1.1310 | 0.6176 | * |
| 4-9 Years | 1.3627 | 1.2327 | 1.0979 | 1.0864 | |
| 10-19 Years | 1.1909 | 1.2119 | 1.1698 | 0.9199 | |
| 20 Years + | 1.1174 | 0.9888 | 0.8150 | 0.7854 | |
| Factor 2: Government Business Services Beneficial General Business Advice | 0.3522 | 0.3435 | 0.1704 | 0.1824 | ** |
| <4 Years | 0.4407 | 0.5066 | 0.2381 | 0.2500 | |
| 4-9 Years | 0.3480 | 0.3289 | 0.1804 | 0.1173 | ** |
| 10-19 Years | 0.3121 | 0.3046 | 0.1792 | 0.2637 | |
| 20 Years + | 0.2065 | 0.2724 | 0.1145 | 0.1398 | * |
| Factor 3: Finance Sources | 0.0920 | 0.0993 | 0.0677 | 0.0587 | |
| <4 Years | 0.1242 | 0.1390 | 0.0361 | 0.0455 | |
| 4-9 Years | 0.0890 | 0.1071 | 0.1207 | 0.0517 | |
| 10-19 Years | 0.0628 | 0.1007 | 0.0408 | 0.0621 | |
| 20 Years + | 0.0795 | 0.472 | 0.0622 | 0.0619 | |
| Factor 4: Friends and Family Beneficial Externally focused Business Advice | 0.3678 | 0.3194 | 0.2742 | 0.2545 | ** |
| <4 Years | 0.5285 | 0.5546 | 0.2783 | 0.4853 | |
| 4-9 Years | 0.3707 | 0.3244 | 0.2887 | 0.2994 | |
| 10-19 Years | 0.2028 | 0.2781 | 0.2877 | 0.2246 | |
| 20 Years + | 0.2510 | 0.1604 | 0.2335 | 0.2296 | |
| Factor 5: Customers and Suppliers' Externally focused beneficial Business Advice | 0.9940 | 0.8678 | 0.8587 | 0.6504 | ** |
| <4 Years | 1.0955 | 0.8166 | 0.7143 | 0.8088 | ** |
| 4-9 Years | 0.9667 | 0.8904 | 0.9639 | 0.6173 | ** |
| 10-19 Years | 0.9344 | 0.8742 | 0.8538 | 0.6641 | ** |
| 20 Years + | 0.9069 | 0.8396 | 0.8238 | 0.6423 | * |
| Factor 6: National/International Public Sector Customers | 0.3890 | 0.3519 | 0.4003 | 0.2888 | ** |
| <4 Years | 0.2881 | 0.3974 | 0.3929 | 0.2647 | |
| 4-9 Years | 0.4213 | 0.3423 | 0.4536 | 0.2593 | * |
| 10-19 Years | 0.4354 | 0.4150 | 0.4717 | 0.3691 | |
| 20 Years + | 0.4575 | 0.2239 | 0.2907 | 0.2429 | ** |
| Factor 7: Local and Regional Markets Public Sector Customers | 1.0970 | 0.9675 | 1.0623 | 0.9002 | ** |
| <4 Years | 0.9384 | 0.7817 | 1.00119 | 0.5441 | * |

| | | | | | |
|---|---------------|---------------|----------------|---------------|-----------|
| 4-9 Years | 1.1187 | 0.9016 | 1.0773 | 0.9074 | * |
| 10-19 Years | 1.2346 | 1.1192 | 1.0377 | 0.9219 | ** |
| 20 Years + | 1.2146 | 1.0112 | 1.0705 | 0.9268 | * |
| Factor 8: Professional Services Beneficial externally focused Business Advice | 0.1480 | 0.1477 | 0.09770 | 0.0945 | ** |
| <4 Years | 0.1541 | 0.1135 | 0.0714 | 0.1618 | |
| 4-9 Years | 0.1413 | 0.1365 | 0.1392 | 0.01019 | |
| 10-19 Years | 0.1531 | 0.1766 | 0.0849 | 0.0898 | * |
| 20 Years + | 0.1579 | 0.1493 | 0.0837 | 0.0882 | |
| Factor 9: University Beneficial General Business Advice | 0.0143 | 0.0240 | 0.0111 | 0.0165 | |
| <4 Years | 0.0139 | 0.0131 | 0.0119 | 0 | |
| 4-9 Years | 0.0147 | 0.0179 | 0.0103 | 0.0185 | |
| 10-19 Years | 0.0179 | 0.0375 | 0.0189 | 0.0332 | |
| 20 Years + | 0.0081 | 0.0187 | 0.0044 | 0.0033 | |

Note: ** denotes significant at 1% two-tailed level. * denotes significant at 5% two-tailed level.

Moreover, looking first at government-related resources, the results in Table 6 for government advice (factor 2) demonstrate that there is a positive relationship between growth and government business advice across the age ranges generally. However, Table 6 also highlights that this growth-orientation related result seems most strongly related to firms in the 4-9 year group, with the results for New and Young firms not being significant. For finance sources, the results for factor 3 in Table 6 show no significant relationship related to growth orientation, either generally or by firm age. In terms of public procurement, the results for national/international (factor 6) and local (factor 7) sources in Table 6 show that, while there is a positive relationship with growth, this is stronger for firms that experienced previous growth (including sustained growth) rather than no growth or new growth oriented firms. In addition, for New and Young firms this relationship is only significant for local and regional procurement sources (factor 7). In terms of being positively related to sustained growth oriented firms, public procurement is more related to older firms (10-19 for local sources, and 20 years + for national/international sources).

Comparing this finding with non government, though still formal sources of external resources, Table 6 illustrates that, as well as for firms of different growth orientations generally, it is for New and Young firms in particular that there is a significant link between sustained growth oriented firms and beneficial advice for industry networks and trade associations (Factor 1). For advice from customers/suppliers (factor 5) there is generally a positive and significant relationship between growth orientation and advice from customers/suppliers. Whilst this relationship also holds significantly for New and Young firms, and is seemingly stronger than other ranges, it is also significant across all of the age ranges. Concerning professional services (factor 8), Table 6 indicates that there is a significantly positive relationship with growth focus generally, sustained and new growth oriented firms accessing consistently more beneficial professional advice than firms with other growth foci. However, this relationship is not evident for new firms and, where a significant relationship with firm age does exist, it is for firms in the 10-19 age range, particularly for new growth firms. For university sources of advice (Factor 9), no significant relationship with growth was found to exist.

Finally, for informal sources, in terms of friends/family (factor 4), results in Table 6 suggest that while, generally, there was a significant positive relationship between growth orientation and advice from friends/family, there were different (but not significant) relationships within the age ranges. Overall, this suggests that in terms of the relationships between access to external resources and growth orientation the results are mixed. Overall, government advice and sales to local and regional public procurement markets is positively and significantly related with sustained growth, but there is no significant relationship identified between growth and finance and a mixed association with national and international procurement sources. The results do not, however, indicate that New and Young firms with higher growth

orientations are accessing government-related resources to a greater extent than other New and Young firms. Rather, Government advice was most strongly linked to sustained growth firms in the 4-9 year group; local and regional procurement sources being more strongly and significantly linked to sustained growth for firms aged between 10-19 years old and national and international sources of public procurement most positively, strongly and significantly related to firms over 20 years old.

For non-government resource types, positive, strong and significant relationships with growth orientation generally (i.e. across the age ranges) did exist for industry networks/trade associations, customers/suppliers, professional services and for friends/family, although there was no relationship with university derived advice. Moreover, New and Young firms with stronger growth orientations were more likely to receive beneficial advice (compared with New and Young firms with other orientations) from industry networks/trade association, and customers/suppliers. Only for industry networks/trade associations was this relationship not apparent for firms in older age groups.

The results do not indicate, therefore, that sustained growth oriented New and Young firms are accessing government-related resources to a greater extent than New and Young firms with other growth orientations. They are more able to access beneficial advice (compared with New and Young firms with other orientations) from (industry networks/trade association, and customers/suppliers) other, non-government related sources of resource. For firms of other ages, however, sustained growth firms are able to more readily access other resource sources, specifically, government business services for 4-9 year old firms, local and regional procurement sources for 10-19 year old firms, and national/international procurement sources for 20 plus year old firms.

It appears that, whilst sustained growth oriented firms generally, as opposed to New and Young sustained growth firms specifically, are more able to access a wide range of government and non-government resource types (with six of the nine factors showing a positive and significant relationship between sustained growth and access to the resource), this finding hides considerable variation between firms of different ages, with only access to customers and suppliers showing a positive significant relationship with sustained growth orientation across all the age ranges.

Conclusions

The results of this study reveal significant differences between new and young firms in comparison with older firms in terms of characteristics of potential importance in accessing resources, including owner/manager age, education and business experience, as well as growth orientation. More specifically, given Sarasvathy's (2003) categorisation of "What they know" factors used by owners when faced with resource constraints, and in light of the fact that new and young firms generally are more sustained growth-oriented, the characteristics of new and young firms' business-related knowledge (encapsulated in factors such as previous work experience and IP) suggest that they are more likely to need to seek external resources, as compared with older firms.

It is, therefore, unsurprising that New and Young firms generally were more likely to be accessing beneficial external resources from government in terms of finance and, more particularly, advice, and that this was also the case for non-government advice sources. The results found that New and Young firms generally are more able to access government and external finance, and government advice, but less able to access public procurement contracts. This suggests that, when the firm is newer and younger it accesses advice and

finance resources from a wide range of sources and of different types (as mooted by Bennett and Robson, 2003). This advice seeking, however, is a relationship which is weaker in older firm age groups (to some extent at odds with McQuaid, 2002), whilst other resources grow in prominence as the firm's business record develops, for example public procurement customers (in line with Elder and Georghiou, 2007) and university advice.

When examining these issues in relation to growth orientation it was also found that for firms across the age ranges there were positive links between sustained growth orientations and both government and non-government advice sources (with the exception of universities), as well as local sources of public procurement, though no relationship existed with external finance. This indicates that accessing external resources generally was positively linked to sustained growth orientations, broadly in accordance with Chrisman *et al.*, (2005). The range of specific relationships and their differences across the firm age range also builds on the nuanced picture presented by Bennett and Robson's (2003) study. Specifically, sustained growth oriented firms of different ages had positive and significant relationships with different sets of external resources, with government-related external resources not found to be more likely to be accessed by New and Young sustained growth oriented firms, in comparison with firms in other age ranges. Rather, it is non-government related sources (industry networks/trade associations) that are more likely to be accessed by New and Young growth oriented firms in particular. The relationship between sustained growth orientation and access to advice only remains strong and significant across the whole firm age range for beneficial advice from customers and suppliers. Other resources become more associated with sustained growth orientation, though these may only become so during particular stages of the firm's development, notably government advice during the 4-9 year old period, local

and regional sources of procurement after 10 years and national/international sources after 20 years.

One policy implication of this is that New and Young firms, both generally and with a sustained growth focus, are utilising external networks to access a range of resources of use in their development, and that this accessing is different for firms at older age ranges. Given that different government policies on both the supply and demand side are relevant to sustained growth oriented firms at more mature (as opposed to New and Young firms) age ranges, this potentially suggests a more explicit age-differentiated focus is needed for government policies aimed at supporting firm growth. Furthermore, whilst government entrepreneurship development policy in terms of finance and advice does seem strongly related to New and Young firms generally, this is not the case for sustained growth Young firms specifically, implying either that if existing policy is kept that it need not be growth-firm specific, or that policy changes are required to make it more relevant to sustained growth oriented firms. Finally, it would appear that non-government sources of resources are the ones most strongly associated with New and Young firms with sustained growth orientations, and that government policy might be better employed in terms of supporting these relationships.

Clearly, however, these policy implications can only be tentative. The paper has identified a number of relationships, but has not explored their cause or significant impact. Thus, a limitation of the study is that the relationships have been treated relatively superficially. Whilst the study has allowed a mapping of the relationships, causality cannot be established by this analysis, which by its nature, is only superficial. These are all areas for future research.

This study has however contributed to an enhanced understanding of firm behaviour in relation to accessing external resources from a range of sources. Specifically, it has demonstrated the differences that exist in terms of government and non-government external resource use by New and Young firms compared with older age groups, sustained growth oriented firms compared with firms of other growth orientations, and New Young growth oriented firms compared to other categories.

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