



**“NEW PERSPECTIVES
ON FIRM GROWTH”**

1st Inter-RENT Online Publication

Editors

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Firm Growth As a Research Issue (Editorial)

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Introduction

A key issue of debate regarding small firms over the past two decades has focused on the ability of small firms to engender growth, particularly fast-growth firms. Many commentators believe that it is a minimal group of enterprises germinating rapidly that provide the real jobs and therefore, that it is these firms which policy makers should be converging upon. But how can small businesses be transformed into fast-growth firms? As Tuck and Hamilton (1993) noted, despite the magnitude of research on small firms, especially regarding growth, researchers are still uncertain why some firms grow and others do not when originating from similar circumstances. This online journal examines growth from four perspectives, including tourism in New Zealand, the role of business advisors, small firms in mature industries, and strategic renewal. To give these papers a context, this editorial takes a brief overview of what is meant by fast-growth and the role that fast-growth firms play in generating employment, before profiling entrepreneurs and organisations of fast-growth firms, and the primary barriers to growth. The editorial will finish with a review of the process that was undertaken before arriving at the publication of this, the inaugural Inter-RENT online publication.

What is 'Fast-Growth'?

Part of the difficulty of achieving consensus regarding how to transform small businesses into growth firms originates from the inability to find a settled definition for 'what is a growth firm?' This question leads to other queries such as - what is 'fast-growth'? Or whether a business must be young to be fast-growth, and over what time period must this fast-growth occur? Additionally, the terms 'fast-growth' and 'high-growth' are used interchangeably when these terms are essentially quite different. Arguably, 'fast-growth' implies growth over time and measurement of speed, whereas 'high-growth' alludes to quantity. Before arriving at a working definition of a 'fast-growth firm', it is worthwhile initially, examining other interpretations of these terms.

Having reviewed research studies related to high-growth firms, Hoy et al (1992) recorded that a wide variety of growth measures were used, ranging from increased market share or enhanced venture capital funding, to growth in revenue, return on investment, or the number of customers of a firm. But within these studies, employment was generally the most accepted method of measuring growth. This occurs because the data is easily gathered, determined and categorised, and because this system is already frequently utilised to ordain firm size. Additionally, employment figures will be unaffected by inflationary adjustments and can be applied equally in cross-cultural

studies, although difficulties may arise in determining how one measures part-time or seasonal employees. It is also worth noting that while a firm may increase its level of employment, it does not necessarily follow that it has expanded its market or financial success. Another method of measuring growth is through financial appraisal. Dimensions such as turnover, total assets, and profit are used, but given the intricacies of present day accountancy practices, the manner in which these figures are presented will be dependent upon the accounting policies and procedures of the firm (e.g. depreciation and goodwill valuation). As accountancy practices and standards deviate across countries, the opportunity for comparing 'like-with-like' becomes less feasible.

Another method of measuring growth is through performance in the marketplace. Sales, by value or volume, are regularly used to assess growth levels, as is market share on occasions. A difficulty with using market share as a measure is that it is dependent upon how a firm defines the market. For example, if a company producing chairs was increasing its share in a declining market for chairs then the indication would be that it was doing well. However, the furniture market as a whole may be expanding rapidly and accordingly the enterprise's share in that overall furniture market would be declining. Similarly, sales volume may increase but market share decrease; sales value may expand but volume can contract. Merz et al (1994) contended that entrepreneurship on a continued basis might be best measured by combining two components of revenue change - average annual sales growth rate and sales variance over some time period. Table 1 offers a small choice of the research work available on fast-growth firms and is used to give a flavour of the variety of criteria selected.

Table 1 – Selected Criteria For Determining A Fast-Growth Firm

Dunkelberg et al (1987)	Positive Change in employment, sales, satisfaction
Feeser and Willard (1988)	Used firms from the 'INC' fastest growing firms
Gallagher and Miller (1991)	Turnover > \$5.25m or Employed > 50 within 5 years
Reynolds (1993)	Compound Sales Growth > 100% or Annual Sales > \$5m per year
Kinsella et al (1994)	Pre-tax Profit > \$90,000, Total Pre-tax profits > \$263,800 and Av. Return on Assets > 37%
Barkham et al (1995)	Employment Growth > 100%
Hogan and Foley (1995)	Began with < 25 employees , now has > 50
INC (1995)	Compounded Annual Sales Growth

Fast-Growth Firms and Employment

Much data has been gathered over recent years on the value of fast-growth firms to the economy and their ability to engender employment in particular. Numerous articles (e.g. Deutschmann, 1991; Mangelsdorf, 1992) and books (e.g. M.J. Storey, 1988) have documented their impact on the economy, just as special annual editions of 'INC' and 'Fortune' magazines dedicate themselves to the celebration of fast-growth firms who have attained exceptional growth figures over the previous 12 months. However,

research studies across different countries have demonstrated both the merits and the rarity of fast-growth firms.

Work by Dunkelberg et al (1987) in America, followed later by Cooper et al (1988), examined patterns of growth and their relationship to performance over a period of time. The longitudinal study by Dunkelberg et al provided insights into the characteristics and behavioural styles of the evolution of fast-growth firms in comparison to more moderately performing enterprises. An expansive study was undertaken in Minnesota and Pennsylvania where Reynolds' (1993) investigation of the top 2% fastest-growing new firms sought to uncover their distinctive features and offered considerations on how such firms could be bred. Reynolds found that the composition of fast-growth firms established by teams were generally constituted of men, had a large number of founding members, had people experienced in start-up, accentuated financial objectives and controls, and had a strategic emphasis on quality.

In Britain, Wynarazyk et al (1993) noted that fast-growth firms are likely to have an economic impact that is out of proportion to their numbers. Gallagher and Miller (1991) undertook a study contrasting the formation and performance of new small firms in two different regions of the U.K. In the South-East 92% of the jobs were created by 18% of the firms, while in Scotland 62% of the jobs were generated by 11% of the firms. According to the authors, the lower number of jobs created in Scottish small firms (average for 'high flyers' in the South-East was 348, while in Scotland it was 160) was due to the choice of industry sector and location. Storey et al (1987) found that the median fast-growth firm was three times larger in terms of assets and employment by their second year than the median non-fast-growth firm. They also identified that fast-growth firms were more likely to be owned by directors who were already directors of other enterprises, and that fast-growth firms tended to start much larger and were much more professional than non-fast-growth firms. According to Storey et al, from every one hundred small firms, the fastest growing four firms will create half the jobs in the group over a decade. These figures were supported by other studies such as Gallagher and Miller (1991), and Smallbone et al (1993). These new findings on the ability of fast-growth firms to mushroom jobs ensured that the concentration of interest would remain firmly on the issue of employment.

Table 2 - Number Of Jobs Created: 1984-94 (By Size Class)

Number of Employees	% Increase	Average Increase Per Co.
Less than 10	1900	90
10 - 49	455	107
50 - 249	155	186
250 - 500	125	426
Total	170	185

SOURCE: EFER (1995)

In contrast to these findings that fostered the idea of fast-growth small firms as the principal formula to reducing rates of unemployment, lies the counterargument made

by Oakey (1991). He suggested that the fixation with the potential of fast-growth small firms (particularly high-tech firms) for generating employment distracted attention from the more mature sectors of industry where only large firms can compete and where in absolute terms a large number of jobs is possible. This viewpoint was endorsed in EFER's (1995) report on Europe's 500 Dynamic Entrepreneurs as indicated in Table 2. The table shows that although employment grew fastest in the smaller companies the real gains were made in the larger companies. According to these proponents of a more inclusive vision of employment generation, taking a myopic approach to addressing the issue of high rates of unemployment would be counterproductive to successfully dealing with the challenge. Instead, a sectoral breakdown by industry and firm size followed by targeted policies would be more appropriate.

Profiling the Entrepreneurs of Fast-Growth Firms

A number of studies have been carried out to assess the profile of entrepreneurs that bring about fast growth in small firms. Barkham et al (1995) drew up a list of characteristics that they found were strongly associated with entrepreneurs from faster growing companies. These included: younger owner/managers do better, shared ownership (the presence and influence of others led to accelerated growth), multiple ownership of firms (those who had several companies did better), and membership of a professional organisation. 3i / Cranfield European Enterprise Centre (1993) carried out a survey of privately-owned middle sized companies that had experienced rapid growth over the two year period studied and found that 46% of the entrepreneurs were aged between 40 - 49 (with 20% between 30 - 39). Interestingly, the report also stated that 80% used retained profit and 22% used long-term debt to finance growth, which was similar to an EFER (1995) survey of Europe's top 500 dynamic entrepreneurs that also found that most of the finance for growth was self-generated. Additionally, they found that the typical "European Dynamic Entrepreneur" was male and aged 40-45. Less than one-in-eight had a post-graduate qualification and fewer than one-in-four had the equivalent of a first degree. Macrae (1991) argued that the chief executives of high and low growth firms were equally motivated and were likely to operate in markets of similar growth. The differences, however, were that the chief executives of fast-growth firms were significantly more educated, had taken more business training, had more management experience, placed a greater emphasis on the management of their people and the positioning in the market of the enterprise, than the chief executives of non-fast-growth firms. However, Turok's (1991) study of firms in West Lothian indicated no significant statistical differences between growth and stable firms by way of an entrepreneur's age profile, education/training, previous employment status, prior work experience, or motives. Other offerings on the characteristics of entrepreneurs who lead fast-growth firms have included: the need for significant experience at mid-management level (Teach et al, 1986); the misconception of the benefit of previous start-up experience (Chambers et al, 1988); future orientation with regard to gathering information (Ginn and Sexton, 1989); and the willingness to become involved in situations with uncertain outcomes (Sexton and Ginn, 1990). Begley (1995) examined a sample of CEOs from the New England region, and of the tests used, none were

effective in creating a distinct entrepreneurial profile. Just as 'hunting the Heffalump' (Kilby, 1971) became a popular research activity in previous years, becoming overconcerned with developing a definitive identikit of the entrepreneur who establishes fast-growth companies is a regressive research activity. This is because it can lead key players (support agencies, venture capitalists, banks, etc.) to eliminating potential successes due to their perception of an individual's failure to meet a set criteria of entrepreneurial prerequisites.

Storey et al (1987) examined the motivations business people have for growth and suggested that it was either due to a desire to maximise profits, to increase personal income, to enjoy economies of scale, or to fulfil potential sales and asset possibilities. But these alone do not explain why people expand their business. Others seek growth for security, to gain an edge over competition, or simply because they are driven by the need for achievement. Feeser and Watson Dugan (1989) concluded that founders of fast-growth firms were motivated by a desire to control the kind of work that they undertake. Hay and Kamshad (1994) suggested that one of the major limitations to growth was management aspiration, since many owner-managers evade growth in favour of other objectives. This would be particularly true for 'lifestyle entrepreneurs'.

A study carried out by the Cambridge Small Business Research Centre (1992) found that 64% of entrepreneurs surveyed expressed that their objective was to grow moderately over the next three years, while only 23% wished to grow substantially. However, Storey (1994) questioned these statistics arguing that there were a number of reasons for the gap between those expressing a desire to grow and the proportion of firms who have actually achieved growth. The first is that those firms who do not seek growth are reluctant to say it publicly. Secondly, the interpretation of the definition of 'growth' may differ between those asked in advance and those measured later. Thirdly, there are firms who may wish to grow but have not been able to do so. It was the proposal of Beaver and Jennings (1995) that policy makers should concentrate their scarce resources on those who are stimulated to grow, so as to benefit a wider group of stakeholders than just the personal ambitions of the entrepreneurs. Undoubtedly, the mindset of the entrepreneur is a major influencing factor in targeting and achieving growth, but the difficulty for policy makers is in determining how does one identify and measure such mindsets.

Because people possess varying characteristics and different career motivations, attempting to place any particular traits as primary requirements to becoming the founder of a fast-growth firm is fraught with difficulties, as identified above. In the search to identify unique attributes that might distinguish fast-growth firms from all other firms, some researchers have concentrated on the features of the organisation itself in the hope of unearthing common features that can be replicated in potential fast-growth enterprises, and these are examined next.

Fast-Growth Firms As Organisations

In examining growth firms as organisations rather than through their founders, Turok (1991) discovered a number of interesting findings. He revealed that growth companies were more concerned about increasing revenue, were more actively engaged in keeping the enterprise up-to-date, and were also more likely to be registered as limited companies than firms who had failed to achieve growth. Turok, moreover, stated that growth companies were more likely to be engaged in manufacturing activities, although this finding is contrary to the findings of a 3i/Cranfield (1993) study and an EFER (1995) study. Burns and Myers (1994) published the results of a survey of over 1350 SMEs (employing less than 500 people) across Britain, France, Germany, Italy, and Spain, which identified what they termed 'winners and losers'. The principal conclusions were that growth is associated with having clear objectives for where the company should be in three years, having a product or service that is better or different from competitors, and that organic growth was the approach most often used by successful companies. Overall, they found that businesses were more likely to grow if they concentrated on quality, or provided something different from their competitors, rather than competing mainly on price. Siegel et al (1993), in their examination of the Reynolds (1993) database, found that growth firms were leaner with fewer managers, had slimmer payrolls, and used their assets more productively than non-growth firms. Evans (1987) evaluated the relationship between firm growth, size, and age for 100 manufacturing enterprises, and determined that firm growth, the variability of firm growth, and the probability that a firm will fail decreases as the firm ages. Evans also judged that firm growth decreases at a diminishing rate with firm size. However, Storey et al (1987) discovered that young firms were more likely to achieve greater profitability and grow faster than would old firms. While they additionally identified a wide range of contradictory studies on the issue, they did state that there was little relationship between the size of the firm and growth rates.

Table 3 - Factors Influencing Growth In Small Firms

ENTREPRENEUR	FIRM	STRATEGY
Motivation	Age	Workforce Training
Unemployment	Sector	Management Training
Education	Legal form	External equity
Management experience	Location	Technology
Number of founders	Size	Market positioning
Prior self-employment	Ownership	Market adjustments
Family history		Planning
Social marginality		New products
Functional skills		Management recruitment
Training		State support
Age		Customer concentration
Prior business failure		Competition
Prior sector experience		Information and advice
Prior firm size experience		Exporting
Gender		

SOURCE: Storey (1994)

What was required for leaders of rapidly growing businesses, according to Stumpf (1992), was a dynamic model of the firm that inspired discovery and learning in a swiftly changing environment. Grant's (1992) 'Entrepreneurship Leadership Paradigm' was represented by a troika, where the elements consisted of the lead entrepreneur, the venture team, and external influences. Storey (1994) suggested that instead of examining descriptive models, researchers should utilise prescriptive paradigms, and that there was significant merit in considering the growing small firm through a categorisation combining the following components: entrepreneur, firm, and strategy. As can be seen in Table 3, he identified key elements to each component, and argued that all components need to combine appropriately for the firm to achieve rapid growth. Less rapidly growing, no-growth or failing firms may have some appropriate characteristics in the entrepreneur, firm or strategy areas, but it is only where all three combine that the fast-growth firm is found. Each component provides a distinctive contribution; the entrepreneur can be identified prior to start-up, the firm reflects decisions made upon start-up, while strategy determines its rate of growth. But accurate prediction is more beneficial to the entrepreneur than historical description, and Storey's mechanistic approach ignores the chemistry or bonding that unites these properties for success to occur. However, as an analytical tool it is useful for dissecting firms to discover relevant issues.

In attempting to separate the attributes of the entrepreneur from the characteristics of the firm, one is reminded of the Irish poet William Butler Yeats who talked of the idea of "how can we separate the dancer from the dance?" The profile of the firm is a reflection of decisions taken by the entrepreneur. Acceptance of this viewpoint could then lead one to seek a more complex model that incorporates the activities of the entrepreneur

and the firm. This requires a model that brings together a variety of inputs that can alter over time since the entrepreneur operates in a dynamic environment.

Barriers to Growth

If a firm is to achieve sustained expansion, it must satisfy a number of requirements for growth: it must increase its sales, it must have access to additional resources, it must expand its management team, and it must extend its knowledge base. Each set of requirements establishes a different set of obstacles. Barber et al (1989) suggested that some of these barriers are external to the firm, a feature of the firm's operating environment that is impracticable to alter. But many of the barriers will be internal, generated by the growth of the firm. The principal barriers Barber et al outlined were management attributes, lack of finance, and the external labour market and market structure. Berney (1994) had a broadly similar list. He wrote that barriers to growth might include the product (poor quality, wrong costs), funding (inappropriate funding/equity), psychological/motivational factors (low levels of ambition, risk aversion, fear of loss of control), managerial deficiencies (finance, organisational, production, marketing), and government policy (taxation, incentives).

Much of the empirical work on barriers to growth has focused on the external factors. Burns' (1994) analysis of a survey in five European countries identified the greatest barrier as the depressed state of European economies. Second was competition from home and abroad, next was the cost and availability of funds (particularly for small companies), and finally, government bureaucracy. Grant Thornton International (1995) carried out a survey of 17 European countries and divided the barriers into short and long-term. The principal short-term barriers were cost of finance, shortage of orders, and domestic legislation. The primary long-term obstacles were limited market demand, accessing new markets, and the cost and availability of finance.

Terpstra and Olson (1993) identified the key barriers to growth as being internal, with sales and marketing the most dominant, followed by internal financial management, human resource management, general management, and then the regulatory environment. These rankings were different to those that they ascertained for the start-up stage of the firm where external finance scored highly and organisational management issues scored lower. As Peterson et al (1995) suggested, eliminating growth defeating management practices might be more important than adopting growth promoting management practices. These barriers influence the structures and strategies selected by managers, and negatively impact upon the ambitions of the organisation. Some of the barriers to growth are perceived rather than real, but once they exist in the mind of the entrepreneur they will act as a deterrent to growth aspirations and practices.

Inter-RENT Online Publication 2004

The first Inter-RENT Online Publication focuses on firm growth as it seeks to expand upon the context described above. The idea behind Inter-RENT is to increase co-

operation and networking of entrepreneurship researchers between various RENT-conferences and as an output, a new online journal will be published annually which will deal with a specific topic each year. The idea came originally from the Board of the ECSB and was developed by the ECSB secretariat together with a group of ECSB members (such as the editors of the first Inter-RENT publication). The process behind this publication was relatively simply. A total of eleven RENT conference papers that were presented at the RENT 2003 Conference in Poland were invited to participate in the writing process. The theme of the publication was selected to be 'Growth' since it is one of the key areas of research carried out in the field of entrepreneurship during the past two decades and a substantial number of good quality papers had been presented on the theme at the conference. From the initial invitations, the authors of eight of the conference papers expressed a desire to participate in the process.

Once the papers had been identified, the process began with a peer review of the papers. Each participant was asked to review two of the papers, which meant that each author would receive feedback from two of their peers, plus they would develop their own editing skills by reviewing other papers. Each author was then asked to revise their paper based upon the feedback received from their peers. Eight expert referees were then selected based on their background and expertise in growth and other issues relevant to the paper topic. The eight revised papers were reviewed again and further feedback was offered to the authors on how the papers could be developed further. During the course of Inter-RENT, three people evaluated each paper, before all ECSB members were invited to comment on the paper through the ECSB website at a later stage of the process. Finally, the editors made the decisions about selecting the best four papers for the publication based on the referee reports and the final papers submitted by the authors.

As in any new initiative, Inter-RENT was a learning process for everyone involved. It is important therefore to thank most sincerely the first participants of Inter-Rent, those authors who contributed so significantly to the long process. The papers that are not in the publication were also of high-quality but were not included as it was determined that the selected ones created a more coherent publication to represent the first ever Inter-RENT book. The active participation and guidance by the referees of the process is also highly appreciated. The referees of the Inter-RENT were (in alphabetical order):

- Dr. Thomas M. Cooney, Dublin University of Technology
- Dr. Jarna Heinonen, Turku School of Economics and Business Administration
- Dr. Ulla Hytti, Turku School of Economics and Business Administration
- Dr. Pasi Malinen, Turku School of Economics and Business Administration
- Prof. Asko Miettinen, Tampere University of Technology
- Dr. Colm O'Gorman, University College Dublin
- Dr. Marko Seppä, Tampere University of Technology
- Dr. Laura Sinisalo-Ojala, Turku School of Economics and Business Administration

- Dr. Jouko Toivonen, Turku School of Economics and Business Administration

From the ECSB secretariat, Ms. Paula Kuopusjärvi administered the process throughout its duration and ensured that everyone was kept fully informed. She also held lead responsibility for the website and for the final publication online. Paula's work has been immense and her huge contribution is particularly acknowledged.

It is the belief of the Editors that the selected papers represent high-quality work and provide an excellent collection of different perspectives on small firm growth (i.e. strategic renewal, regional development, mature industry, role of advisors). Therefore, it is with great pleasure that the Editors announce the papers selected for the first Inter-RENT Online Publication as:

- 1) Factors Influencing the Use of External Business Advice by SMEs: Evidence from a Sub-Regional Survey - Johnson, Webber & Thomas
- 2) Small Tourism Firms and Regional Development: A New Zealand Scenario - Ateljevic
- 3) Competitive Positioning and Resource Configuration of Small Firms in a Mature Industry - Borch & Forsman
- 4) Strategic Renewal and Its Effect on Small Firm Performance - Folkeringa, Meijaard & van Stel

It is the belief of the Editors that these papers will make a welcome addition to the body of work already written on growth firms and that they will further enlighten the understanding of what is required to engender growth in small firms.

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Factors Influencing the Use of External Business Advice by SMEs: Evidence from a Sub-Regional Survey

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Abstract

This paper examines the factors that influence the propensity of a firm to take up external business support. It presents a nominal probit regression analysis with random effects to capture sector heterogeneity of data collected through an extensive survey of over 2,000 organisations in the South Yorkshire sub-region of the United Kingdom. The results suggest a strong positive association between the orientation of the firm towards growth and its propensity to seek external business advice. 'Push' factors, including the existence of recruitment difficulties, are also identified as key triggers when seeking business advice. These findings could prove valuable for public policy organisations concerned with business development and competitiveness.

Key Words: *Business advice, business support policy, multivariate probit analysis*

Introduction

This paper investigates the factors that are associated with the use of external business advice services¹. UK Government policy towards small businesses (see for example Small Business Service, 2003) is based largely on the premise that encouraging more businesses to seek outside advice will help to improve business competitiveness and growth. However, little is known about the reasons why some firms make use of business advice services, and by implication why others do not. Much of the research on these issues (see, for example, Smallbone *et al.*, 1993; Johnson *et al.*, 1998) has utilised small-scale survey or case study approaches and simple bivariate analyses of the data. While this has yielded interesting and valuable results, it is clear that the process of seeking and utilising external support is a complex one, involving a number of inter-related factors.

A number of studies by the Small Business Research Centre at the University of Cambridge (see for example Bennett and Robson, 2003; Bennett and Robson, 1999), based on large-scale surveys of SMEs in the UK during the 1990s, confirm the complexity of the relationship between firm characteristics and the use of business advice. Focusing on the manufacturing and business service sectors (i.e. excluding many sectors with high levels of SME activity) the most consistent finding from these

¹ The authors are grateful to André van Stel for his very useful comments and suggestions as part of the 'Inter-RENT' process. All remaining errors and interpretations are the responsibility of the authors alone.

studies is that use of external business advice tends to increase with firm size. Firm age, sector, innovation and export activity are also key variables.

A further strand of work has sought to establish a causal relationship between the use of business advice and the subsequent performance of the individual business. The Cambridge research team (Bennett and Robson, 1999; Robson and Bennett, 2000) used a five-point scale based on the responses of firms that had received external support and demonstrated that, on average, firms perceive a positive impact from the receipt of such advice. Respondent assessments of the impact of advice varied according to the source of the advice (highest for customers, lowest for public sector agencies) and the size of the firm (in most cases larger SMEs perceive a greater benefit)

Wren and Storey (2002) analysed the impact of one particular source of publicly-funded support, the Enterprise Initiative that operated in the UK throughout the 1990s. Their results suggested that the probability of participating in the programme increases with firm size, but the relationship becomes negative once employment reaches 150 people. The support initiative does not appear to have increased the overall rate of firm survival. However, a positive impact on survival rates was found for medium-sized businesses and a negative impact for larger SMEs. The Enterprise Initiative also appears to have increased the rate of firm growth for small and medium-sized businesses participating in the scheme.

This paper does not explicitly consider the impact of business advice, but follows the Cambridge studies in focussing upon the factors that determine the use of external business advice by firms across all sectors within a sub-region of the UK. The theoretical approach is based upon the resource-based theory of the firm favoured by Bennett and Robson (2003) following on from Penrose (1959), Teece (1986), Porter (1998) and others. This approach focuses on the extent to which the firm seeks to derive competitive benefits through increasing strategic knowledge and information from internal and external sources. This in turn may be determined by a number of factors, including the sector, size, and age of the business, the skills of the entrepreneur, his/her attitudes towards growth, and innovative activity, amongst other things.

The paper does posit a relationship between the use of business advice and firm performance, but suggests that the causation is not unidirectional. In other words, the seeking of external business advice can be viewed as a *consequence* of past performance and/or intended future growth, along with a range of other structural and business-related variables. Drawing on the resource-based theory of the firm, it can be argued that a business that has grown in the past and/or intends to grow in the future is likely to find that its internal sources of knowledge and information are being stretched and is more likely than other businesses to seek external advice and information to supplement internal sources.

This argument is not necessarily incompatible with the view – implicit in government policies towards SME support – that more and better external advice will help to improve business performance. As suggested by Wren and Storey (2002) in their discussion of selection effects, it may be that policy intervention is helping those businesses that already have a growth record and/or growth intentions to grow even faster. As will be suggested at the end of this paper, such a view has important implications for the targeting of SME policies based on the provision of external business advice.

The results of our analysis have a number of potential implications for policy and practice. An understanding of the characteristics of those business that tend to seek external business advice may help policy makers and practitioners to target initiatives towards those types of businesses that are likely to be most receptive. Conversely, this type of analysis may help to pinpoint groups of businesses that may benefit from external advice, but at the moment are not seeking or receiving such advice. Finally, an understanding of the characteristics of ‘advice-seekers’ may help to identify the reasons why such advice is sought, and hence suggest improvements in the content and delivery of advice services.

The paper commences with a discussion of the factors associated with the use of business advice. Section 3 then provides details of the data set and Section 4 presents and discusses some results from a bivariate analysis of the survey data. Section 5 goes on to provide the results of a multivariate analysis using random effects probit models. A key message is that it is important to take into account the influence of the sector in assessing the factors associated with the use of external business advice. Section 6 concludes and provides policy implications.

Factors Associated With Use of Business Advice

A priori reasoning, and an overview of the literature, suggests a number of factors that are likely to be associated with the propensity to utilise business support services:

- **Structural factors**, notably the size and age of the firm, have been shown by some studies to be associated with the use of external business advice services. On the basis of a bivariate analysis, Johnson *et al.* (1998) suggested that the use of business advice by SMEs is positively associated with firm size. Bennett *et al.* (1999) and Boter and Lundstrom (2001) found similar results using multivariate techniques. The work of Smallbone *et al.* (1993) indicated that, despite a widespread belief that advice and support is most useful to new and young businesses, many mature firms can and do benefit from such support.
- A further set of structural factors relates to the extent to which the business uses **technology**, and/or is involved in research and development activities. Greater technological sophistication – in relation to product or process – is likely to require external assistance in the form of training or technical support. R&D often involves collaboration with organisations such as universities, research centres or other businesses.
- The nature of the **market** within which the business is operating may influence the extent to which a business owner-manager feels the need to seek external

advice or support. A business operating within mainly local markets is likely to need limited support, particularly in relation to market development, whereas those operating in, or planning to enter, export markets may need considerable advice.

- Research has suggested (Storey, 1994; Boter and Lundstrom, 2001) that the most common source of advice for small business owner-managers is his/her bank manager or accountant. Hence it might be expected that a business that is in need of **external finance** is particularly likely, *de facto*, to obtain wider business advice or support. Moreover, the raising of external finance can be taken as an indication of changes in the business that might require additional advice. These might be 'positive' changes, such as investing in new equipment or premises, or 'negative' changes such as cash-flow difficulties.
- One of our main hypotheses is that a key set of factors inducing businesses to seek external advice relates to the past and intended future **performance** of the business. In line with Johnson *et al.* (1998), the paper suggests a positive relationship between 'growth orientation' and the seeking of external advice. Businesses that intend to grow – in terms of profits, turnover, employment and/or market coverage – are more likely than others to need (and benefit from) external advice or support. At the other end of the scale, businesses facing difficulties of various types are likely to seek support to assist in overcoming these problems. In some cases – such as recruitment difficulties – the problems may be a consequence of growth. In most cases, however, problems arise due to poor performance and/or adverse external factors.
- Finally, a considerable amount has been written about the nature of the **owner-manager** of the business as a key factor influencing the behaviour of the organisation, including the use of external advice and support (Gibb, 1993; Storey, 1994; Devins, 1999). The owner-manager is viewed typically as being independent-minded, usually with limited qualifications and consequently averse to seeking or accepting external advice. Factors such as the age, experience, qualifications, and psychological make-up of the owner-manager might therefore be expected to influence whether s/he is inclined to seek outside help with business issues. Unfortunately, the survey on which this analysis is based did not collect personal information about the respondent, so the paper does not test this set of hypotheses directly. However, it is suggested that indicators such as the degree of formal planning in the organisation and orientation towards growth, to some extent reflect the personal characteristics of the owner-manager (see, for example, Clark *et al.*, 2001).

This paper presents some results of bivariate analysis that attempt to describe the relationship between many of the above factors and the propensity to use external support services among independent single-site organisations in the South Yorkshire sub-region of the United Kingdom. The paper also extends this analysis, recognising the interaction between many of these factors, by employing multivariate statistical techniques. The model presented in Section 5 of this paper attempts to incorporate as many of the above factors as possible to explain the extent to which surveyed businesses used any form of 'external business support services' during the two years prior to the survey. The term 'business support' was defined broadly to include 'business information, advice, guidance, consultancy, training and financial support' but excluding routine banking facilities and audit requirements. External support could be sought from any types of organisation, including banks, accounts, and private sector

consultants, as well as publicly funded institutions such as Business Link.² The next section describes the data in more detail.

Data

Data used in the analysis were taken from the South Yorkshire Employer Survey, which was conducted in 2000 by the Policy Research Institute (at Leeds Metropolitan University) on behalf of the Training and Enterprise Councils (TECs) in South Yorkshire. This survey is part of a regular series which provides labour market information to inform the work of the TECs (now the Learning and Skills Council, LSC) and local partner organizations such as the Small Business Service and Business Link.

South Yorkshire is a sub-region in the north of England that has experienced a significant degree of restructuring in recent years, particularly associated with the decline of traditional industries such as coal mining, heavy engineering, and steel production. The extent of the problems faced by the sub-regional economy has been recognized by the European Union and South Yorkshire was granted Objective 1 status from 2000. The promotion of an enterprise culture, higher business start up rates, and improved competitiveness among existing SMEs form important components of the Objective 1 strategy and programme over the period from 2000 to 2006. Business support by agencies such as Business Link, alongside the provision of financial support, infrastructure development, and support for workforce training are seen as key components of a strategy to regenerate the area. Identifying the types of business that might be most open to, and make most use of, such external support, would clearly be valuable to the effective operation of the Objective 1 and associated programmes.

The survey comprised telephone interviews – using a structured survey instrument – with over 2,000 employers located in the Sheffield, Doncaster, Rotherham, and Barnsley districts of South Yorkshire. A stratified sampling approach was adopted in order to produce a sample that was representative (after weighting) of employers in all sectors in the sub-region. The majority of the questions focused upon labour market variables such as employment growth, recruitment, skill shortages and training activities. However, a number of questions covered business variables such as investment, finance, R&D and – crucially for this study – use of external business support services.

The bivariate analysis presented in the following section focuses upon a sub-set of the survey sample, namely organizations that are independent and operate from a single site within South Yorkshire. The multivariate analysis utilizes the whole database but, after attrition, the full sample for analysis amounts to 1,229 firms. This is smaller than the total number of firms surveyed because of omitted observations for variables that are included in the econometric analysis.

² Unfortunately, the survey data do not allow us to distinguish between different sources of advice.

Twenty nine per cent of respondents had used at least one type of business support, with the most popular business area being training and development, followed by business planning and development and then by health and safety. The overall figures are much lower than those reported by Bennett and Robson (2003) on the basis of a national survey. The discrepancy is most likely to be explained by differences in definitions used and the fact that the latter's survey covered only the manufacturing and business service sectors. However, the possibility of a sub-regional effect cannot be ruled out. Table 1 summarizes the types of external advice and support that the surveyed businesses had used in the past two years. They are ranked according to the frequency of use of external advice. As an example, of those who did use external business advice 25% used external business advice for recruitment purposes.³

Table 1 - Business Support Used by South Yorkshire Organisations (2000)

Area of support	% of all respondents receiving support
Any support	29.1, of which
Training and development	51.5
Business planning and development	42.1
Health and safety	38.4
Information and communication technology	26.7
Marketing	26.2
Environmental issues	25.9
Recruitment	24.8
Legislation	24.5
Business information and research	21.4
Raising finance / grants	20.1
Accounts / bookkeeping / tax	18.4
E-commerce / web design	15.9
Quality initiatives	15.6
Sales	14.8
Production issues, including new technology	11.1
Product approvals	8.9
Exporting	7.5
Product / service design	7.5
Re-location	5.6
Intellectual property rights	3.9
Other	2.2

Source: South Yorkshire Employer Survey, 2000, independent single-site organisations only (N=1268)

Bivariate Analysis of Factors Associated With Use of External Support

As noted above, the South Yorkshire Employer Survey collected a wide range of information about each responding organization. This has been used to investigate that relationship between a number of the key factors noted in Section 2 and the propensity

³ The questionnaire did not ask respondents to indicate the organisation that provided the support, but as noted above, previous research has indicated that banks and accountants are very important sources, with only a minority of businesses contacting public or quasi-public organisations such as Business Link.

of individual organizations to utilize external support. Two notes of caution should be sounded at this point. Firstly, the issue of causality is important. The authors adopted a conceptual framework and model that suggests that the seeking of external support is a consequence of the factors that have been described here. In other words, external advice seeking is seen as a dependent variable, although it could equally well be argued that the causality lies the other way, with external support seeking conceptualised as a key independent variable. The reality is that external advice seeking can be seen as both a cause and a consequence of many of the factors being examined, and what is being describing are associations which are useful in an applied policy context as a means of identifying groups of businesses that are more or less likely to get involved with providers of business support. Secondly, the limitations of bivariate analysis should also be recognised. The propensity to seek external business support is clearly likely to be related to a combination of factors that are not easy to isolate within a bivariate framework. Moreover, many of the 'independent' variables examined in this section are likely to be strongly related to each other (for example the age and size of an organisation). This makes it difficult to isolate the main causal factors from those variables that appear to be significant, but are merely acting as proxies. Multivariate analysis can help to overcome some of these problems, particularly where guided by a clear theoretical framework.

Table 2 - Structural Characteristics of Organisations and Propensity to Use External Support

	% of sample with stated characteristics	% using external support
SECTOR		
Primary	3.9	36.0
Manufacturing	17.2	41.8
Construction	10.6	15.5
Retail / wholesale	23.1	18.9
Hotels / restaurants	6.7	9.9
Transport / communications	5.7	19.7
Finance / real estate	17.4	42.4
Health and social work	5.7	41.8
Other public services	9.6	29.4
NUMBER OF YEARS IN PRESENT LOCATION		
Less than 2 years	9.1	34.9
2-5 years	19.0	35.5
6-10 years	21.6	28.1
11-20 years	28.1	24.5
More than 20 years	22.1	28.5
NUMBER OF EMPLOYEES		
200+ employees	1.1	76.9
50-199 employees	5.5	64.1
11-49 employees	28.8	34.3
6-10 employees	15.7	31.1
1-5 employees	48.9	20.9
MARKET ORIENTATION		
Global	7.9	52.1
Europe beyond EU	6.3	50.6
European Union	11.4	44.0
National	45.6	40.0
Regional	55.7	29.3
Local	80.0	27.2
ALL RESPONDENTS	100.0	29.1

Source: South Yorkshire Employer Survey, 2000, independent single-site organisations only (N=1268)

Despite the caveats, bivariate analysis does provide a very useful basis upon which to base an exploration of the factors associated with the use of external business advice services. This section presents three tables, each exploring a related group of variables and indicators which relate as closely as possible to the factors suggested by the literature. Table 2 focuses attention on some structural characteristics of the organisation, namely sector, size, age and market orientation. A key point to note from this table is the overwhelming importance of sector as a key factor associated with, or determining, the use of external business support. This is an issue that is explored later in the paper through the use of probit analysis.

A further point of note is the association between the age of the organisation and its use of business support. As might be expected, younger organisations are more likely than average to seek out external support, presumably due to their relative lack of knowledge and experience particularly at the start up stage. However, there is no evidence from these results of a significant decline in the propensity to use business support as the organisation becomes more mature. For example, the percentage of businesses established for 20 years or more that made use of support services in the previous two years is only just below the average for all respondents. The other results in Table 2 are more predictable on the basis of theoretical reasoning and the results of previous research. Larger organisations are significantly more likely than their smaller counterparts to use external support, and the wider the geographic spread of the market addressed by the organisation, the more likely it is to seek outside advice or assistance.

Table 3 - Operational Aspects of Business and Propensity to Use External Support

	% of sample with stated characteristics	% using external support
Has written business plan	36.8	41.8
Has written training plan	24.3	50.5
Planning horizon = 3+ years	9.5	51.3
Planning horizon = 1-3 years	15.2	47.8
Planning horizon = 6-12 months	24.7	33.8
Planning horizon = 1-6 months	17.5	19.7
Planning horizon = one month	16.2	12.8
Organisation uses ICT	70.3	36.2
Organisation funds employee training	47.2	45.5
Raised finance during previous year	22.0	43.2
Business objective 'to increase turnover'	35.2	27.8
Business objective 'to increase profitability'	50.1	29.1
Business objective 'to increase employment'	7.9	34.0
Business objective 'to expand market base'	17.2	40.6
Business objective 'to develop products/services'	14.0	43.6
Business objective 'to compete more effectively'	11.8	41.7
Experiencing problems that restrict development	36.0	40.2
Experienced hard to fill vacancies	16.6	45.9
ALL RESPONDENTS	100.0	29.1

Source: South Yorkshire Employer Survey (2000) independent single-site organisations only (N=1268)

Table 3 goes on to investigate the relationship between the ways in which the organisation is run and the extent to which outside support is sought. These results clearly raise issues of causality - for example a business might instigate a written business plan or provide training for employees as a result of external intervention. Equally, it may be argued that businesses that plan their activities formally and over a long period of time are more likely than others to seek external support to assist with the implementation of these strategies.

Notwithstanding these reservations, some interesting points emerge from Table 3:

- More formal and/or long term planning of business activities is clearly linked to the use of external business advice, support, finance or information;
- Employee training activities and external support are clearly related;
- The seeking and/or raising of finance for the business appears to be a potentially important trigger for the use of external support, particularly where this relates to significant investment or other business changes (see Table 4 below);
- Businesses that have more specific objectives than simply to expand turnover and/or profitability appear to be more likely to require and use external business support;
- On the other hand, negative 'push' factors such as the experience of recruitment difficulties or other problems also appear to result in higher than average use of external support.

Table 4 takes this analysis one step further by looking at the future plans of the organisation, and the results appear to corroborate many of the suggestions made above. The most likely organisations to use external support are those that are planning or intending to make significant changes in their business activities. For example, the 24 per cent of organisations that envisage an increase in employment are twice as likely to use external support as those that foresee no change in employment. Anticipation of recruitment difficulties in future, intended development of new products, processes, services, and/or markets, all appear to be key determinants of external advice seeking.

Table 4 - Anticipated Business Changes and Propensity to Seek External Support

	% of sample with stated characteristics	% using external support
INTENDED CHANGE IN EMPLOYMENT		
Increase	24.2	48.0
Decrease	2.0	32.0
Stay the same	68.1	23.2
In sector anticipating recruitment difficulties	19.1	47.5
INVESTMENT PLANS		
Plans to invest in premises	35.3	39.4
Plans re-location in next two years	12.3	46.7
Plans to invest in work processes	24.3	47.5
Plans to invest in equipment	57.4	35.2
Plans to invest in product/service development	25.4	51.0
Plans to invest in new markets	29.7	47.3
Likely or very likely to explore new export markets	12.9	54.8
Plans to invest in ICT	48.1	41.6
ALL RESPONDENTS	100.0	29.1

Source: South Yorkshire Employer Survey, 2000, independent single-site organisations only (N=1268)

Multivariate Analysis

Multivariate statistical techniques, such as probit regression analysis, enable the authors to take account of the complexity of the factors associated with the use of business support, and to investigate the inter-relationships between variables. The size of the South Yorkshire Employer Survey database, and the range of information collected, allows such an analysis to occur. Thus a picture can be assembled of the type of businesses that are most (and by implication least) likely to seek out business support. A model is presented that is estimated through random effects nominal probit regression analysis to incorporate heterogeneity that may be attributable to the sector in which the firm is operating. Clustering in this way identifies the significance of sector heterogeneity and highlights the extent to which adopting external business advice can be explained by the membership of a sector.

A priori reasoning and previous research findings (Johnson *et al.*, 1998) provide strong rationale for suggesting that firms in certain sectors are more (or less) likely to seek external business advice than others. Businesses in rapidly changing sectors (such as information technology or financial services) are much more likely to seek external advice than those in more stable sectors such as retailing or transport. To the extent that there exist a number of other sector-specific attributes that might be associated with use of external advice (e.g. export orientation), it is very important to ensure that the model controls for sector effects in order to avoid drawing erroneous conclusions. More widespread use of such multilevel, multivariate techniques in small business research might lead to a clearer picture being built of the relationships between small firm behaviour and policy. As such, the use of multivariate statistical techniques could

provide a useful additional tool for policy makers and practitioners in devising, implementing, and evaluating business support policies.

Table 5 - Means and Standard Deviations of Variables Used in Estimation

Variable	Definition	Mean	Stand. Dev.
<i>Advice</i>	= 1 if the firm has used external business support services in the past 2 years; = 0 otherwise	0.300	0.459
<i>Est. Years</i>	The number of years that the firm has been established	18.207	26.835
<i>TotalEmpl</i>	Total number of employees	17.078	24.608
<i>PcentLocal</i>	The percentage of the turnover deried locally (within a 10 mile radius)	55.858	41.680
<i>ExpanEmpl</i>	= 1 if the firm intends to increase employment in the next year; = 0 otherwise	0.232	0.422
<i>WillExport</i>	= 1 if the firm will explore new export markets in the next year; = 0 otherwise	0.123	0.328
<i>UpProfits</i>	= 1 if the firm's main objective is to increase profitability; = 0 otherwise	0.514	0.500
<i>UpTurnover</i>	= 1 if the firm's main objective is to increase turnover; = 0 otherwise	0.332	0.471
<i>NoFillVac</i>	= 1 if the firm is experiencing, or has experienced over the last 12 months, difficulty filling vacancies; = 0 otherwise	0.171	0.377
<i>Problems</i>	= 1 if the firm is experiencing problems that restrict its ability to prosper; = 0 otherwise	0.360	0.480
<i>UseIT</i>	= 1 if the firm uses information technology/computers; = 0 otherwise	0.748	0.434
<i>ResDev</i>	= 1 if the firm has a research and development budget; = 0 otherwise	0.130	0.337
<i>FundTrain</i>	= 1 if the firm had funded or supported any training of employees over the last 12 months; = 0 otherwise	0.528	0.499
<i>Finance</i>	= 1 if the firm has raised external finance in the past year; = 0 otherwise	0.216	0.412
<i>BusPlan</i>	= 1 if the firm has a written business plan; = 0 otherwise	0.457	0.498
<i>TrainPlan</i>	= 1 if the firm has a written training plan; = 0 otherwise	0.334	0.472
<i>Doncaster</i>	= 1 if the firm is located in the Doncaster area; = 0 otherwise	0.231	0.422
<i>Rotherham</i>	= 1 if the firm is located in the Rotherham area; = 0 otherwise	0.234	0.424
<i>Barnsley</i>	= 1 if the firm is located in the Barnsley area; = 0 otherwise	0.253	0.435
<i>Sheffield</i>	= 1 if the firm is located in the Sheffield area; = 0 otherwise	0.282	0.450

It is unlikely that each firm included in the sample were random, as it may be true that each firm has similar characteristics to other firms in the same sector. If firm characteristics are not totally random but instead can be clustered according to sector, then using ordinary probit estimation will produce biased results. The solution to this problem is to use a model in which the degree of dependency within clusters is jointly estimated with the usual model parameters. Accordingly, the results are generated by nominal probit regression with random effects for sector heterogeneity (both the log-likelihoods and the significance of the random effects variance term suggested that the random effects models are significant improvements on the ordinary probit results).

Table 5 summarises the variables used in this analysis, Table 6 (after the References) presents their correlations, and Table 7 highlights the results from the nominal probit estimations that incorporate random effects. The dependent variable in each regression is whether the firm used external business advice in the two years prior to the survey. The first model (1) includes a full set of regressors, while the second model (2) includes only those variables that are identified as being statistically significant once the log likelihood ratio test has been employed to test for statistical support for variable deletion. Considering only those firms that are analysed throughout the random effects regression, Table 5 illustrates that 30% of the sample has used external business advice. A large majority of these firms (75%) use IT, nearly half (46%) have a business plan, and over half (51%) indicate that their main objective is to increase profitability. The random sample is drawn relatively evenly from across the four areas with the most coming from Sheffield (28%). Table 6 illustrates that the correlations between each variable is fairly low, with the greatest correlation being between *BusPlan* and *TrainPlan* at 0.549; no other correlation coefficients are greater than or equal to 0.36.

It is clear from Model 1 that the *a priori* expectations regarding the signs of most of the coefficients are borne out. Having a forward-looking approach to business, as proxied by the presence of a training plan (*TrainPlan*), increases the likelihood of taking up external business advice. Similarly if the business has experienced problems (*Problems*), then this also increases the probability of using external business advice. There is some evidence to suggest that greater concentrations in local markets reduce the likelihood of using external business advice, although the variable, *PcentLocal*, is significant at only the 10% level. Some other evidence of this may be inferred from the coefficient on *WillExport*, which is positive and very significant.

Interestingly, there is no evidence that size of firm exerts any significant influence once other factors have been taken into account. This contrasts with some of the findings of the bivariate analysis which demonstrate a positive relationship between firm size and advice seeking. One possible explanation for this apparent paradox is that the size of the organisation is acting as a proxy for many of the other significant factors (e.g. business planning, market orientation) that influence advice-seeking behaviour. In addition to the above, it can also be seen that firms using IT (*UseIT*), or those who possess a research and development budget (*ResDev*), are also more likely to take up external business advice. There is some evidence that location is important with firms

based in Rotherham and Barnsley less likely to take up external advice than those located in the larger urban/metropolitan centres of Sheffield. Doncaster is not statistically different from Sheffield and this might be because Doncaster is an urban/metropolitan area similar to Sheffield.

Model 1 is then reduced via the likelihood ratio test to statistically eliminate variables to form Model 2. There does not appear to be any omitted variable bias to the coefficients of each regressor in each model as the log-likelihood statistics are very similar. It is quite clear that variable deletion has made little difference to the significance of each regressor. Of particular interest here are the coefficients on the variables that relate to the future plans or ambitions of the business (*ExpandEmpl*, *WillExport*, *UpProfits*, *UpTurnover*). The mean values of these variables (Table 5) indicate that there is a 'hierarchy' of growth ambitions with just over half of responding organisations aiming to increase profits and 33 per cent wishing to increase turnover. At the other end of the scale, 23 per cent envisaged an increase in employment and 12 per cent had aspirations to export. The results of the probit analysis (Table 6) suggest that, in general, businesses that are aiming for increased profit and/or turnover without necessarily entering new markets or recruiting new staff, have a relatively low probability of requiring external business support. It appears to be more substantive changes – new markets, new employees or indeed new products or processes – that are most associated with the need for external assistance. It can therefore be suggested, along the lines indicated by Johnson *et al.* (1998), that growth orientation (using anticipated employment growth as a proxy) is a key factor that predisposes businesses to seek external support. This finding has important implications for the targeting of advice services.

The seeking of external advice is also positively related to the extent to which businesses have experienced particular difficulties that they feel have impaired their ability to prosper. This is clear in relation to recruitment difficulties (*NoFilVac*), which might lead businesses to contact the public employment service, recruitment agencies, educational institutions, or other organisations that might be able to provide advice or assistance in filling vacancies. More generally, surveyed firms mentioned problems related to increased competition, shortage of finance, difficulties in finding new customers, cash flow problems and access to training as affecting business growth and profitability. These 'push' factors can and do combine with the 'pull' factors associated with business growth, to create a potential demand for external advice or assistance.

Table 7 - Probit Estimation

Variable	1			
<i>Estyrsn</i>	0.003	(1.86)*	0.003	(1.85)*
<i>Totempn</i>	-0.001	(0.20)	-	
<i>Pcentlocal</i>	-0.002	(1.68)*	-0.002	(1.67)*
<i>Expandemp</i>	0.366	(3.63)***	0.369	(3.69)***
<i>Willexpt</i>	0.557	(4.33)***	0.560	(4.37)***
<i>Uprofits</i>	0.003	(0.03)	-	
<i>Upturn</i>	-0.001	(0.01)	-	
<i>Nofilvac</i>	0.234	(2.07)**	0.230	(2.06)**
<i>Problems</i>	0.498	(5.52)***	0.495	(5.52)***
<i>UseIT</i>	0.426	(3.30)***	4.28	(3.37)***
<i>Resdevt</i>	0.225	(1.78)*	0.227	(1.82)*
<i>Fundtrain</i>	0.626	(6.35)***	0.627	(6.45)***
<i>Finance</i>	0.302	(2.97)***	0.301	(2.97)***
<i>Busplan</i>	0.038	(0.35)	-	
<i>Trainplan</i>	0.201	(1.81)*	0.215	(2.22)**
<i>Doncaster</i>	-0.004	(0.03)	-	
<i>Rotherham</i>	-0.402	(3.29)***	-0.399	(3.71)***
<i>Barnsley</i>	-0.283	(2.28)**	-0.279	(2.57)***
<i>Sheffield</i>	-		-	
Constant	-1.693	(8.91)***	-1.688	(9.47)***
Likelihood Ratio Test	-		0.16	(0.999)
Log likelihood	-579.530		-579.611	

Notes: Absolute z values (pseudo t statistics) in parentheses. *, **, ***, denote significance at the 10%, 5% and 1% level respectively. The dependent variable in each regression is whether the firm uses external business advice.

Notwithstanding the complexities involved in the interpretation of the results of these models, the message appears to be that it is important to take into account the influence of the sector in assessing the factors associated with the use of external business advice. Nonetheless, the results do indicate that 'pull factors' (growth orientation, non-local markets) and 'push factors' (recruitment difficulties, other problems) both play an important role in influencing whether a business seeks external business advice or support.

Conclusions and Policy Implications

Some firms use external business advice, while others do not. This paper has presented an analysis which has been designed to improve the understanding of the factors that distinguish these two groups of firms. Using a data set collected through a relatively large scale employer survey of the type conducted by a range of organisations including the Small Business Service and the Learning and Skills Councils (both in the UK), it has been possible to test a number of hypotheses about

the determinants of business advice use, and the results can add value to the insights obtained from a bivariate analysis of data.

Notwithstanding the potential for further theoretical and empirical development of this model, a number of factors can be identified that are associated with businesses that are more likely than average to seek out and use external business support, as follows:

- They can be of any size,
- They are more likely to be located in densely populated metropolitan areas,
- They are more likely than average to be using information technology and/or involved in research and development activities,
- They are likely to be planning to grow their business, particularly in terms of employment and/or expansion into new geographical markets,
- They may have had, or be currently experiencing, difficulties in recruiting new employees,
- They are more likely than average to have sought and received external funding for their business in terms of a bank overdraft, loan, grant, or equity investment.

As noted in the introduction, policy towards small business at national and local levels is based heavily upon the provision of advice and support services of various types. This paper has been unable to distinguish between the types of organisation providing advice, due to the limitations of the data source; however, it would seem reasonable to conclude that businesses that are inclined to seek advice from (say) their bank or accountant are more likely than average to be prepared to use publicly funded advice or support services. While there may be specific barriers to the use of publicly funded services (such as mistrust of government, lack of trust in the quality of the service) research suggests that the key hurdles lie in convincing owner-managers to accept *any* external advice or support.

If this reasoning is valid, one line of argument might be that it is legitimate for publicly funded advice services to be targeting those types of businesses that are predisposed to the use of external advice, and attempting to add value to the advice and support that they already receive, for example by making links between different types and sources of support. This argument is strengthened by the observation that, in general, such businesses want to grow and develop their businesses, and in many cases create new jobs and enter new (sometimes export) markets. By helping businesses to improve their competitiveness in this way, publicly-funded business advice services should contribute to widely-accepted policy objectives of improving competitiveness at national and possibly EU level. However, care needs to be taken to ensure that the provision of free or subsidised advice does not distort competition between SMEs.

In order to ensure the most effective use of public funds to promote economic development in areas such as South Yorkshire, the findings in this paper, together with those of other researchers such as Wren and Storey (2002), suggest that the primary focus should be upon subsidising and/or providing assistance for businesses that have characteristics that are associated with external advice-seeking behaviour, notably

pursuit of growth through innovation and/or market expansion. Policies to address issues that arise as a result of achieved and/or intended expansion or innovation, notably skill shortages and recruitment difficulties, also need to be directed primarily at this group of businesses. This is not to suggest that firms with little or no growth potential should be excluded from receipt of publicly-funded external business advice. However, it is clear from this analysis that such businesses are significantly less likely than average to seek external advice, raising questions about the efficiency and/or effectiveness of expending public resources on increasing the number of businesses receiving advice rather than improving the targeting and quality of advice to those that seek it.

A central issue here is how to identify 'advice-seeking' businesses, given the large number of businesses within the catchment areas of most agencies. This problem is reduced considerably by the observation that such businesses have already sought advice or support from at least one organisation on at least one issue. For example, approximately 15 per cent of the survey sample sought advice or support on training-related issues, suggesting that training organisations, colleges, and similar organisations should be important partners for agencies that supply wider business advice and support. Similarly, organisations providing support on financial issues (such as banks and accountants) are in a good position to refer clients on to other advice providers. Clearly, confidentiality issues will prevent many organisations from handing over client records. However, it would seem feasible for business support organisations to work with banks (for example) to identify likely beneficiaries, perhaps using a model of the type outlined in this paper. Indeed, this is the type of approach that is currently being piloted in the UK in order to encourage banks to refer their customers to appropriate providers of management and workforce training.

A further potential target group, but one which is more difficult to identify, consists of those businesses that have characteristics that are associated with advice-seeking, but that do not currently use external advice. Such businesses could be identified through surveys such as the one analysed here, through direct marketing efforts, or possibly through contact with organisations such as banks and accountants. In the last case, businesses may have contact in relation to 'routine' issues, but do not seek further advice or support on business, employment or related issues. Engaging such businesses more effectively with business support would, according to the results of this study, pay potentially large dividends in terms of improved business performance, competitiveness and employment opportunities.

To summarise, although the approach to this paper yielded some useful results that help to identify businesses with a predisposition to seeking external advice, it does not provide a magic formula. However, it does provide a possible basis upon which fruitful partnership with a range of support providers might be developed, and for the effective targeting of scarce resources in a way that focuses upon the ultimate objective of publicly-funded business support – more competitive businesses and a more competitive economy.

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Small Tourism Firms and Regional Development: A New Zealand Scenario

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Abstract

Small firm development is being touted as the path for enhancing local economies and delivering more appropriate development to marginal and/or peripheral social, cultural, and physical environments. Ironically, the small-scale tourism operation, the essence of its vibrancy, also acts as a severe and debilitating constraint to development with potential negative implications for the quality and consistency of the wider regional product. Attempts to improve performance and managerial expertise within the small firm sector have often proved misguided and misdirected largely due to poor understanding of the issues affecting owner/managers. This paper examines the range of influences in the external institutional environment that affect the development of small tourism firms (STFs). These include the role of government agencies, policy infrastructure, managerial support, and relationships with the financial and accounting sectors. The discussion draws on a study of the Wairarapa region, one of the most recent tourism developments in New Zealand.

Key Words: *Small (tourism) firms, development constraints, role of government, regional development*

Introduction

Small tourism firms (STFs) are, in both industrialised and developing countries, a rapidly expanding and dynamic sector of the regional tourism industry. Small firm development is being touted as the path to enhance local economies and deliver more appropriate development to marginal and or peripheral social, cultural and physical environments. Small firms have also been linked to creative product development and innovative entrepreneurship. Ironically, the small scale of operation, which is the essence of the vibrancy of STFs also acts as a severe and debilitating constraint to their development, with potential negative implications for the quality and consistency of the wider regional product. Attempts to improve performance and managerial expertise within the STF sector have often proved misguided and misdirected largely due to a poor understanding of the primary concerns affecting owner/managers. Therefore the ultimate objective of this research is to identify the key issues that directly affect the development of STFs with attention to the matrix of relationships that form their 'external institutional environment'.

Whilst some scholars acknowledge the lack of institutional support (primarily government related agencies), an increasing number of researchers tend to overstress managerial incompetence to be the principal obstacle for small (tourism) firms development and performance. Frequently, the literature on small business firms

argues that managerial weaknesses contribute to recurrent business failures (Aldrich & Zimmer, 1986; Davidson & Dutia, 1991; Curran & Blackburn, 1994; Dewhurst & Burns, 1993; O’Gorman, 2000; Stokes, 2000). Included under this rubric are personal characteristics such as inflexibility, a lack of insight, networking, and task delegation, as well as operational weaknesses such as under-capitalisation, high overheads, inappropriate marketing mix, limited access to necessary information (e.g., about markets, competitors), and inadequate cash flow, accounting records and billing systems.

Similar to small firms from other sectors, STFs encounter difficulties related to lack of financial resources and management skills, and limited access to expertise in core business disciplines as well as life style motivations that create long-term economic problems. STFs in particular face management constraints critical to their development and growth, particularly with regard to the inadequate management skills of the proprietors/managers which contribute to poor performance and business failure (see Dewhurst & Horobin, 1998; Boer, 1998; Buhalis, 1999). STFs commonly pursue informal organisational structures and management strategies which are often shaped by the owner’s lifestyle and values. As such, the process of decision-making is rarely based on formal rationality. Tourism specific literature frequently argues that small firms require institutional help to overcome their intrinsic disadvantages and avert failure (Thomas, 1995; Thomas & Thomas, 1998; Wanhill, 2000). However, it remains unclear how the relationship between STFs and the institutional sector works and how it might be improved upon.

The discussion in this paper, related to a range of influences in the external institutional environment that affect the development of STFs, draws on a study of Wairarapa, one of the first sheep farming regions in New Zealand to contribute to a more integrated conceptualisation through which effective policies that would enhance rather than constrain the activities of STFs could be conceived and implemented. The area is dominated by rural settings with a few provincial towns, providing a unique opportunity to explore the entrepreneurial process in the growing tourism sector. In many respects this example reflects broader issues elsewhere. Similar to some European governments, New Zealand government policies and initiatives at the local and national scale are making the growth and development of small [tourism] firms a top priority. Like many governments scrambling to deal with global economic systems, the power of transactional corporations, and the failure of formerly secure domestic industries, successive New Zealand governments had to initiate major economic reform. Until the mid-1970s, New Zealand governments generally played a central, regulative role in economic planning and management with barriers in place to protect the domestic economy (le Heron, 1998). By the mid-80s, New Zealand undertook a massive programme of economic restructuring, introducing a free market economy in order to establish and restore competitiveness at an international scale. These changes spread quickly throughout all economic and social activities, and within all organisations, industries, and regions of the country, regardless of scale and operation (Kelsey, 1995). Economic and political restructuring, which had occurred since the 1980s,

opened up the economy to international investment and led to the economic diversification that has now shaped much of the existing pattern of tourism developments in the country (Pearce, 1998). The New Zealand tourism industry is characterized by a mixture of a large number of small businesses, and a few medium-to-large firms (Pearce & Simmons, 1997). International investment was primarily intended for larger hotel properties, tour operators, and other tourism related activities focused on large cities and more 'attractive' localities. Tourism was also seen to provide new opportunities for diversification for small entrepreneurs since, for example, redundancy payouts provided a source of start-up capital, former post offices and banks were converted into restaurants and cafés, or farmers sought an additional income stream by taking in guests.

The process of restructuring and deregulation at the national level created significant changes at the local and regional levels that had significant implications for regional tourism developments and local tourism businesses (Pearce, 1998). New Zealand central government recognised tourism as a key sector for national and particularly, regional economic development. At the regional level, local government has played an important role through a mix of regulatory initiatives. On the other hand, having just emerged as autonomous entities, inadequate funding and revenue sources are now serious problems for local governments. Therefore, local governments are actively campaigning to attract new businesses and industries to their respective areas as a means of both increasing revenue sources and expanding their economic base. With limited finance and intense regional competition for the highly sought businesses, some regions have found it hard to be successful (Doorne, 1998). Local authorities have taken a proactive role trying to reverse population decline and to regenerate regional growth by developing economic tourism plans, investing in tourism infrastructure and establishing Regional Tourism Organisations (RTOs). In this process, farming communities have become particularly entrepreneurial, combining both tourism and agriculture activities to remain economically sustainable. Although tourism in New Zealand, particularly in its periphery, is seen as a panacea, there have been a few attempts to understand how the effects of small business development have shaped regional tourism in New Zealand (Ateljevic, 2002).

With regard to these issues, the following study illustrates the nature of relationships surrounding the managerial and structural environment of STFs. More specifically, the purpose of the study is to identify specific and generic issues and constraints affecting STFs' development in order to inform decision-making in the policy and regulatory environment with a view to more effectively integrating the small firms sector into wider regional and national economies. The discussion begins with an overview of the study of the structural changes in the global economy and the rise importance of small (tourism) firms, identifying the range of perspectives and theoretical constructs that inform contemporary understanding. The paper then discusses the extent to which economic factors have remained central to the analyses and concurrently point to emerging studies of tourism entrepreneurship and small tourism firms that have begun to play an important role in regional development. Following this, the case study is

introduced with an outline of the study approach, followed by a background to tourism in the Wairarapa region. The case study presents a description of the industry structure and agency dynamic and from this proceeds to discuss the key issues which emerged during the research. This research clearly identifies important criteria for the effective interaction of local governments and small tourism firm owners, as well as an illustration of how small tourism firm owners are facing challenges in one of the freest markets in the world whilst taking action to ensure periphery endurance.

Structural Adjustment and Importance of Small (Tourism) Firms

The structural economic crisis of the developed Western world in recent decades has questioned the paramount dominance of the manufacturing sector and large firms in general (Freeman & Perez, 1988; Dicken, 1998). An increasing number of scholars believe that a healthy small firm sector is essential for countries seeking to encourage economic development opportunities (see, for example, Story, 1994, Carter and Jones-Evans, 2000; Scase, 2000). Indeed, the revival of small firms in the late 1970s became a feature of development across the whole of the industrial world, and as the OECD note, 'small firms are particularly important in net job growth' (1985:80). Drucker (1992:110) observed that this transformation can be attributed to various developments: the growth of SMEs during 1980s is not seen as an independent process, but is attributed to the decentralisation strategies of large firms (Sengenberger & Pyke, 1992); a shift from labour-intensive to knowledge-intensive industries together associated with technological and management changes; and the shift of manufacturing production/assembly to developing countries for cheaper labour. The changing nature of developed economies has, in turn, led towards service based economies including marketing, distribution, media, communications, and leisure (see Morgan & Pritchard, 2000) and the resurgence of small firms (Frank & Landstrom, 1997). New modes of production based on technological advancement and new organisational and management strategies, along with ever-increasing consumerism, have created a range of additional products and services.

The implications of the production/consumption changes are not confined to the commercial environment. They have also affected the social context, which is coincidental with a 'cultural turn', and the realignment of social groups (gender, ethnicity, vocation, education level), changes which in turn inform the context of entrepreneurship, consumer practice, and regional development. In other words, structural economic forces provide a basis for entrepreneurship and small business start-up. Thus, an increasing number of individuals are attracted to enter the world of the small sector for economic reasons, employment opportunities, and in opposition to the increasingly competitive corporate environment in which many entrepreneurs 'would have found it almost impossible to work' (Carter & Jones – Evans, 2000:4). Indeed, this global transition, which leads in turn to broader processes of economic, social, and cultural change (Dicken, 1998; Montanari & Williams, 1995), is seldom more apparent than in the travel, tourism, and leisure sectors. Due primarily to the progress in transport technology, international tourism has spread rapidly around the

globe, rising from 25 million to 673 million travellers between 1950 and 2000, (WTO, 2000: 1). As the range of tourism products has expanded rapidly (Pearce, Morrison and Rutledge, 1998), opportunities have been created worldwide for a wider array of specialised small-scale tourism firms. In the context of this shift, and a corresponding demand for differentiated, 'tailor-crafted' tourism products, the importance of small-scale firms has been widely recognised (Williams et al., 1989; Buhalis & Cooper, 1998; Thomas, 1998; Page et al., 1999).

As a result of the growth in international tourism, small firms (and STFs in particular) have gained political importance in both developed and less developed countries as governments have assumed the strategic direction of regional development goals using small firm programmes to target specific geographical or demographic groups (Telfer, 2002; Etemad & Wright, 2003). As Deakings, Jennings, & Mason (1997: xi) highlight, the growth of small companies is at the heart of the contemporary economic development process and in particular, 'the fact that small businesses have proved to be much more effective at generating employment than larger firms has made the development of small businesses of major interest to government, academics, educators, and financiers'. As a result, the relationship between small firms and government has witnessed noticeable rejuvenation (Castillo, 1995; Painter & Goodwin, 2000, Smallbone & Wyer, 2000) due to the ability of small firms to deliver economic and social benefits that larger organizations fail to provide (Curran & Burrows, 1994; Allen, 1992; Kao et al., 2002). Moreover, the exchange of tourism activities in a locality 'extends far beyond the narrowly economic' (Montanari & Williams, 1995:7). Due to their local embeddedness, STFs have been recognised as an effective mechanism in fostering sustainable development, the concept that has become a core discourse in the face of continual cycles of economic crisis (see Stokes, 2002; Kao et al., 2002). Small-scale tourism production has an inherently 'sustainable' character with respect to socio-cultural, environmental and economic values when compared to multinational corporate interests (e.g., Deegan, Donal, & Dineen, 1997). Indeed one of the main characteristics of small tourism firms is their significance to host communities. Most small-scale operations are characterised by ownership which favours local, often family owned businesses - thus small firms and local communities are often integrated into the entire local economic and social fabric (Ruisi, & Faldetta, 2002; Scott, Park & Cocklin, 2000). A typical enterprise, such as the bed-and-breakfast establishment, is perceived as having low barriers to entry, employing existing, underutilised (fixed and human) capital, and placing modest demands on public assistance (Slee et al., 1997). On the other hand, the small-scale of these operations may render ineffective in their efforts to improve local welfare. Indeed, as Slee et al (1997) argue, institutional support of STFs may only serve to cannibalize existing enterprises as demand is redistributed among large number of firms.

Despite their emerging significance and level of representation in many world economies, small firms face numerous difficulties quite unlike those of larger concerns (Scase & Goffee 1989; Story, 1994). The most cited constraints to small firms' development are short-term horizons affecting investment and business development,

difficulties in securing financial facilities, insufficient skills and adaptability of the work force, barriers to market entry, and a regulatory environment inhibiting business growth and new entry (Gomes-Cassers, 1994). The research suggests that small enterprises face particular challenges during market disruption in which they are less able to readjust since they are disadvantaged by lack of economies of scale, influenced by asymmetric information, and have fewer financial, human, and technical resources. In this context, in order for small firms to accept economic change they require access to a range of management skills. In the tourism context these disadvantages present barriers to successful tourism development, particularly in isolated areas dominated by small-family owned business. In such situations the role of government, working through specific agencies, has been to identify good practices, benchmarking, provide financial support, and invest in the skills of the labour force (Wanhill, 2000). Public sector support programs in the STF sector are essentially designed to prevent 'market failure'. In tourism, there are normally three prime reasons of intervention: the inability of private markets to provide public goods, the creation of externalities, and when information asymmetries occur. The latter is particularly characteristic of the rural tourism sector where the persistence of an information gap produces discrimination against STFs, largely because they are invisible to the institutional gaze of banks and credit providers (Binks, Ennew & Reed 1992). Market failure occurs when these enterprises are rejected by private market institutions in favour of other businesses or sectors displaying a similar risk profile.

It should be noted that support mechanisms are frequently designed, implemented and evaluated in short time frames. Wanhill (1996), for example, observed that insufficient patience is exercised when evaluating the outcome of European Union targeted rural programs which feature a variety of support instruments. Further issues emerge in respect of the focus of evaluation. It is worth noting that if personal and subjective elements characterise the motivation and definition of success of the entrepreneur, then evaluative criteria should similarly reflect the internal as well as external context of their development role (Fleischer & Felsenstein, 2000). While governments may take actions that are expressed through specific tourism policies implemented by various government agencies at the national, regional, and local level, Pearce (2001) implied that there are frequently no clear-cut responsibilities and well developed policies for tourism planning and development. Instead, the public sector gets involved in tourism in a variety of ways, at different levels, and through many agencies and institutions often lacking in co-ordination. This confusion becomes apparent if the multitude of participants a government may have to work with to formulate and implement policy. Many disparate interest groups simultaneously vie for the power to influence government policy at various scales. Therefore, small tourism firm owners will not possess the ability to influence public policy regarding tourism unless they act collectively. Power and the ability to influence policy are intimately linked (Hall, & Jenkins, 1995), presenting an additional challenge for small business to lobby their interests.

Non-government institutions also play a critical role in creating a broader environment for STFs. With a decline of the direct government intervention in the state economy since the early 1980s it has stimulated the rise of governance - the exercise of authority by non-government institutions (see Painter & Goodwin, 1995). This transfer of power has major implications at the local level and the small tourism sector where both public and private institutional infrastructure has become more complex and interconnected (Ateljevic, 2002, Pearce, 2001).

Methodology

The firm is often regarded as a primary unit of analysis by STFs researchers. However, without a close look at the personality of its owner/manager, no STF can be analysed and understood effectively (Scase & Goffee, 1980; Cameron & Massey, 2002). The key to identifying and understanding the critical issues facing STF owners is to examine the complex and multifaceted web of social, economic, and political connections that surround and embrace the STF owner. The process of STF development is holistic, dynamic, and unique - encompassing an array of elements related to human decision-making: individual firm performance, growth, and discontinuity; the nature the tourism industry; and institutional infrastructure (Ateljevic & Milne, 2003). These complex characteristics place considerable stress on many models from economics and management studies that are commonly adopted in STF studies.

The methodology used here draws on a triangulation of mix methodologies (Denzin, 1989; Decrop, 1999) incorporating participant observation, in-depth interviewing, and a quantitative analysis of the demographic and historical characteristics of entrepreneurs and their enterprises. A total of 47 interviews were conducted during 1999, 2000, and 2001 with a range of tourism firms from the Wairarapa region (34), and public and private sectors representatives from Wairarapa and Wellington (13). In the paper, many of the respondents' views are integrated into the interpretation and a number of statements are quoted to illustrate the key issues of the analysis. The interviews were accompanied by a survey instrument gathering quantitative data on the personal and business characteristics of entrepreneurs. Local RTO databases containing the entire population of tourism-oriented businesses provided the main sources for sampling. An attempt was made to balance the number of potential respondents from different tourism activities. Approximately 250 STFs (50% of the total number in Wairarapa) were identified as potential participants. The survey was conducted during the summer of 2001. More than 30% (79) of the selected businesses were quick to respond after one mailout (Table 1). The information gathering was supplemented by participant observation drawn from a number of days during the three years the researcher spent in the area.

Table 1 - Sample Structure

Types of Operation	Frequencies
Home-based Accommodation (B&B/homesteads)	37
Motels/Backpackers/Hostels	9
Restaurant /café/lunch bar	7
Tourist Adventure activities & Attraction	6
Arts/crafts & Souvenir shops	5
Local Tour Operators & Travel Agent	5
Hotels	3
Camping Grounds	3
Transport operators (coaches & rental cars)	2
Vineyards	2
Total	79

Wairarapa – The Research Context

In Wairarapa, tourism has been seen as a means of regional rejuvenation in many rural localities faced with the challenges of economic restructuring. Recent tourism development has often been associated with the emergence of wine growing in these two regions. The region is officially part of the Wellington greater area, which encompasses most of its rural area, and is split into three separate districts (Masterton, Carterton, and Southern Wairarapa – Martinborough) with a total population of 39,200. The majority (24,000) live in Masterton, the main urban area (Statistic New Zealand, 1997). Being geographically separated from the Wellington urban area, as well possessing a distinctive natural landscape around which tourism activities are based, presents significant identifiable characteristics that make the Wairarapa a distinctive tourism region.

The Wairarapa region was once the most important sheep-farming region in New Zealand and its economy is still dominated by meat and wool. However, as at the national level both products' earnings - which underpin the agricultural sector - have significantly decreased. Consequently, the population is also declining. This identifies one of the major problems the Wairarapa has faced since the mid-1980s. Between 1991 and 1996 the population dropped by 0.2 % while the national population rose by 7.2 % (Welch, 1998:33; Statistic New Zealand, 1999). Statistics indicate that the majority of people leaving the Wairarapa were between 18 and 35 years old. However, recently the population has experienced growth (mostly from Wellington), helping to mitigate population erosion. However, the average age is still high - as only a small percentage of those moving into the region are young. In fact, most of the newcomers are either retired or soon to be retired, attracted to the Wairarapa by its unique natural features and rural lifestyle. The bulk of the regional economy will be land-based for some time to come. The warm dry climate and soils are suitable for wine growing and the area has developed a reputation for Pinot Noir and Chardonnay. However, the process of transition from cattle farming to the new, more lucrative, wine production or olive growing is a long term one. Additionally, a major part of the Wairarapa's economy

is connected to forestry products which are struggling to return profits. Under such circumstances the future prosperity and survival of rural and provincial communities is very much dependent upon their own ability and initiative. The wine industry is a good example of government policies causing little disturbance to the development of a new industry with an increasingly sought after product.

As result of a cooperative effort within the region, Wairarapa has recently experienced rapid growth in both visitor numbers and new business initiatives. Subsequently the wine and tourism industries contribute over NZ\$40 million annually to local communities, from which the tourism industry alone generates over NZ\$20 million (MBE - Masterton Business Enterprise, 1999:23). The limited data that exists on visitor numbers to the Wairarapa area indicates a steady growth over the last decade. According to the commercial accommodation monitor, the number of guest arrivals increased from 55,000 in 1996/97 to 62,000 by the year 1998/99 (Statistics New Zealand, 2000). The total visitor number, including day-trippers (about 160,000), was estimated to be over 315,000 in 1999, of which 90 % was domestic. The region's tourism is based on two major markets: the Capital Retreat favoured by short-break professionals from Wellington using Wairarapa for a so called rural retreat, and the special events driven day-trip visitors, mainly travelling with family and friends, primarily from places in the southern part of the North Island within 2-3 hours driving distance (Milne, McCready & Ateljevic, 1998). In general, Wellington is by far the largest source of Wairarapa visitors, supplying about 80 % of all travellers (MBE, 1999).

The Wairarapa's tourism industry is dominated by home-based accommodation, reflecting both the nature of tourist demand (e.g. younger couples, professionals) and the regional background (B&Bs, cottages, and farmsteads). The increasing number of conference facilities also indicates a growing demand for evolving market niches such as meetings and conferences. Martinborough (Southern Wairarapa) is a major draw for visitors to the Wairarapa region. The area is becoming the fastest growing wine region in the country, increasing from four vineyards first established in 1997/80 to 25 wineries by the end of 1999 (Tourism Wairarapa, 2000). As a result, the area has become the heart of the regional tourism development. According to the SWDC (South Wairarapa District Council) (1998/9:32), almost 100 new liquor licenses and 457 building consents were issued and over 80 land use applications were considered in 1989-99. The support for tourism is reflected in the Council's strong encouragement and financial support of the RTO which operates two VICs (Visitor Information Centres) in the Southern Wairarapa District (out of four in the whole Wairarapa).

The local RTO, Tourism Wairarapa, was established in 1993 in response to increasing tourism growth and funded by the local governments from the three regional districts. Although its chief functions are marketing activities, Tourism Wairarapa is seen as a leader for developing a cohesive regional product and balancing interests of multiple stakeholders in the local areas. While the Southern Wairarapa District Council is increasing its financial contribution annually (about NZ\$50,000 by the year 2000), local authorities from other areas are considering reducing their participation in the common tourism strategy, as they believe that the main benefit from the regional tourism

activities flows to Martinborough. The Carterton District Council feels that it is too difficult to build all its costs into a comparatively small district rating mechanism, and therefore it has started to reconsider any funding scheme, including tourism (Hallam, Julie, 2000, personal communication). Certainly, given the micro-scale of tourism activities created to provide supplementary income to their owners, it is less likely to make councils proactive in regional tourism development (Hallam, Julie, 2000, personal communication). The Council also believes the district receives little benefit from the RTO (Carterton is the only place in the Wairarapa region without a VIC). Instead, councils are improving infrastructure and tourism facilities in their own areas by encouraging the small initiatives in the hospitality, arts, and crafts sector which are necessary for district identity. As a result, the RTO undertakes various initiatives to increase its income, including commercial activities. The RTO manages four visitor centres (e.g. reservation/booking fees, merchandising) and organises joint marketing activities with tourism operators through membership (spending about NZ\$58,000 annually) as well as individual marketing activities. The RTO develops more informal relationships with small tourism businesses (Hallam, Julie, 2000, personal communication).

Development of the institutional support for the increasing number of small businesses in the region is still lags behind entrepreneurial needs. Currently there are two semi-public business development organisations in the Wairarapa region. The Masterton Business Enterprise offers support for economic analysis, facilitates joint venture partnerships, helps analyse investment opportunities, and builds government relationships and immigration assistance. The South Wairarapa Enterprise Board in Martinborough (SWEB), unlike the previous organisation, has been specifically designed to encourage and provide assistance for local business initiatives. One of the interesting features of the Wairarapa small economic sector is increasing participation by women. According to the South Wairarapa Enterprise Board, Wairarapa women are crucial in the rapid growth of small businesses. Although they have been regarded as 'passive' in traditional farming communities, more recent commercial enterprises such as tourism and winemaking have seen women dominate the small firm sector (MBE, 1998).

STFs and Regional Development

A profile of the businesses included in the survey is presented in Table 2. The majority of STFs were relatively new; over 50% were in operation less than 4 years. Most of them were characterised by being small in scale and scope, had operations and financial support revolving around family units, and in many cases (35%) were run by women. Financially, most ventures were based on personal assets such as family homes, farms, or savings, particularly in the start-up phase, whereas bank borrowing tended to be more important for financing subsequent product development. The average gross income was significantly low, in most cases below NZ\$50,000.

Table 2 - Business Profile

Operation Period (years)	%	Source of Capital (start-up phase)	%
3 years & less	44.5	Personal / Family saving	64.2
4 – 6	30.8	Mortgage (home loan)	21.5
7 – 10	18.7	Bank loan	8.4
11 – 14	1.8	Private loan	0
15 years & over	4.2	Government grant	0
		None	2.4
		Other	3.5

Type of Business	%	Capital Requirements (NZ\$)	%
Partnership	49.6	< 30,000	27.8
Solo trade	32.7	30,000 - 50,000	10.1
Family trust	1.8	51,000 - 100,000	11.4
Company (LTD.)	3.4	101,000 - 500,000	39.2
Other (e.g. not registered)	12.5	501,000 - 1 million	6.3
		> 1 million	5.1

Firm Size (employee numbers)			Annual Turnover (NZ\$)	%
	<i>Full-time %</i>	<i>Part-time %</i>	< 30,000	50.6
0	43.7*	59.4	30,000 - 50,000	10.6
1-3	50.6	24.5	51,000 - 100,000	15.3
4-7	2.3	6.3	101,000 - 500,000	18.8
8-11	3.4	5.2	501,000 - 1 million	13.5
12 & over	0	4.6	> 1 million	1.2

**Business is run on a part-time basis*

The home-based accommodation sector accounted for over 60% of businesses with a turnover of under \$30,000. Only 4.7% of businesses (e.g. motels, small hotels and restaurants) achieved the highest turnover over NZ\$500,000 per annum. Few of the businesses appeared to be economically viable, as the income they generate in most cases only supplemented the owner's monetary needs (see Table 2). The tourism business was often cited as an opportunity to generate additional income and diversify economic activities, mostly because the necessary assets for the proposed activity, such as land in a tourist location, farm and vineyard were already in place. One of the owner-managers of a farm said: 'We had something (animals, settings) that people were interested in and it is just another way to put another egg into the basket, to spread our activities through out the whole year, because the farming income comes in at a certain time of the year, plus we see a big future in the industry in Wirarapa. If we did not have such assets (building, farm, location), we would not have put that much money into that venture as it is seasonal and it is risky business.'

Obstacles to STFs' Development

The study identified a number of perceived constraints to STFs' growth. Competition, particularly from other small businesses (44.5%), labour costs (22%), lack of demand

(36.7%), and high operational costs associated with regulatory and financial obligations, followed by high interest rates, lack of skilled workers, and competition from larger businesses, were the main concerns for owner/managers (see Table 3). The barriers were not unified across the region which largely reflects the differences in terms of level of tourism developments as well as the structure of the tourism sector. Home-based accommodation operations (e.g. B&B, home-farm stays) are increasingly dominant in Wairarapa for which businesses entry barriers, including government regulations, are lower than for motels, hotels, restaurants, and adventure activities.

Table 3 - Perceived Constraints to Business Performance in %*

Inflation	18
Labour costs	22
Interest rate	15.5
Lack of skilled employees	19.6
Competition from large businesses	11
Labour productivity	5
Lack of customer demand	36.7
High rents and rates	13
Lack of motivated employees	7.3
Limited access to finance	16.6
Government regulation	23.2
Lack of external guidance	14.9
Competition from other small businesses	44.5

(*multiple responses)

With each of the issues above, government plays an active role either at the central or local level, in terms of policy development, legislation and regulatory compliance enforcement, or indirectly through setting social and economic market mechanisms and standards. Specific issues were identified, including changes to taxation which incurred additional costs through external accountancy assistance, and the processes and cost of compliance, especially when conflicts with front-line staff were perceived to influence administrative efficiency. Increasing competition ('saturation') from growing numbers of new entrants was seen as the most influential factor affecting performance of STFs. The assumption that increased competition enhances the quality of tourism products and services, was widely disputed with some respondents who argued that uncontrolled entry had the opposite effect. In this context there were tensions between part-time home-based accommodation providers and established businesses as the following comment illustrates: "There are not many professionals in this business in the region. People tend to have the wrong perception of the industry. They expect easy money in a short period of time - just by having couple of spare rooms with beds and do that very unprofessionally, which could affect all of us. I believe the council should be responsible for that by imposing certain standards" (motel/restaurant owner/manager). Such a competitive environment is more likely to favour local authorities as explained by one of the senior managers from the Business Development Department at the Martinborough local council: "I know that competition

is quite tough especially in the accommodation sector. There are a number of establishments which have become a threat for older ones who are struggling because these new entrants provide better service and have better products, new facilities, etc. There are also some home-based accommodation (homesteads) which, without much in the way of promotion activities, are doing fine.” Tourism development and economic conditions create the demand for premises. In the Martinborough area especially, where the wine and tourism industry have become heart of the local economic development, real estate prices have significantly increased (over 50 %) in the second half of the 1990s. Consequently the rent had become a significant part of the entire business costs. Short lease agreements, particularly in more attractive locations, were also concerns for operators.

Regulatory Requirements

STF owners agreed that most regulatory compliances, such as fire alarms and hygienic requirements, as well as consents related to new building and alterations, were essential but expensive. Additionally, liquor licenses or resource consents were described as excessively time consuming and often required legal advice. Some respondents regarded that many compliances were inappropriate to the micro-environment (a homestead, for example, requiring a liquor license to serve wine with a meal) and also regarded the administration process as similarly unfavourable to small business development. Small business owner/managers also identified personality clashes with, or a lack of competence from, those working in government departments as obstacles that would slow the process and increase the price of meeting regulatory requirements. As one of the owner/managers observed: “We had considerable difficulty getting resource consent through once it had been approved. We believe it was more or less personalities. The local government representatives are meant to be promoting investment and small businesses. However, they make it difficult by imposing obstacles and red tape, which costs money and time.” Through this process of getting the necessary requirements, a number of operators faced difficulties in establishing communications with individuals representing different local government departments. The diversity of the sector presented difficulties in establishing exactly which regulations applied to which activities.

Tourism operators argued that many policy advisors have a ‘large business’ concept because they have rarely or never worked for the small sector, or even in the private sector in general. The concept of the small sector is fundamentally different from the large sector. The small ones (home-based businesses) believe that government compliances are not fairly imposed, creating hostility between commercial (which provide the main source of income) and non-commercial businesses (hobby, lifestyle enterprises). While ‘commercial’ businesses such as motels see an increasing number of home-based or casual lifestyle operations competing unfairly as they have a few requirements to meet, the latter ‘non commercial’ group argues that they have far fewer resources to get to grips with government regulations. Nature-based tourism enterprises are required to gain resource consent from the Department of Conservation

(DoC) to use natural resources, raising similar issues related to scale. As one Wairarapa tour operator noted: “If I want to take my customers up the Rimutaka Hill, I have to fill out an 18-page questionnaire. All I wanted was just to go through the gate drive up the hill and come back. The irony is that it was the same questionnaire they send to big Rotorua and Queenstown operators.” The respondent also believes that the consent is rather expensive and takes too long to obtain. They suggested that the DoC should provide environmental compliance assistance to small businesses and place a greater emphasis on developing strategic environmental management beyond regulatory compliance, thus ensuring full public access to information about the performance of industry.

Many businesses differentiated their product according to demonstrated environmental values and argued that their small scale facilitated more sensitive environmental practices, yet also anticipated that these activities would translate into structural and administrative support. In particular, environmental compliance assistance and the development of a more efficient reporting system were suggested to overcome these constraints.

External Support Structures

Despite the availability of a limited amount of government grants, none of the respondents received government financial support in the start-up phase. Those who tried to obtain financial support from the government explained the process is too complicated. As one person stated: “too much red tape, and too hard to get a responsible person. It is very time consuming.” Again the limited resources and expertise of some owner/managers highlighted differences in the expectations of administration and STFs, as the comments of an art gallery owner illustrate: “I applied for help (city council) and was refused. Apparently the application was not very professionally written. I did it by hand as I could not have afforded to pay professionals.” Other operators had lower expectations of support but raised further issues, as one of the owner/managers illustrates: “I don’t think one should expect much help from the government. You are in the industry to make money, but certainly local government needs to be more efficient in providing information. Because information in the business environment is no longer free, with an increase in efficiency the government could be providing valuable support.” From the local government perspective, the level and availability of financial support depends largely upon the industry’s contribution to the local economy, although as local authority representatives admitted that in other economic activities it is easier to calculate the spin-off. Obviously, other benefits (e.g. social) are not factored in as part of the equation.

Management Training and Information

Many owner/managers agreed that running a small business in the past was very different from today. As one respondent remarked: “Probably 2-3 decades ago, all you had to do was to be in business and you could make money, but now it is becoming more and more difficult. In fact, you have to have a formal education, often a university

degree... you can always find somebody to do your accounting, book-keeping, but I also think that NZ universities tend not to teach students these things because there is a lack of understanding about small business management at the tertiary level.” The types of training were very diverse as Table 4 depicts. The most common course completed, before and during the current operation, by owner/managers from all sectors was related to the small business management and marketing, skills which appear to have been essential in running a small business.

Only one third (27.6%) of respondents were aware of the existence of free business advice services offered by various government agencies. Respondents indicated that marketing and promotion were their most pressing concerns, although these did not feature in the workshops provided. However, those using the services expressed problems with their pitch, content, and relevance to the STF environment. Apart from basic courses related to business start-up or bookkeeping, all other courses are only available at a relatively high price. Other barriers to more effective training development reflected the regional farming background and a lack of professional services, and its physical isolation from large business centres including Wellington.

Table 4 - Formal Training Courses

Training Courses	N=52 in %
Personal Training Management	38
Information Technology	36
Small Business Management	21
Marketing	8
Business start-up	8
Kiwi Host*	48
Accounting	2
Other	13

**A private company provides a basic 2-day workshop on customer service*

Lack of skilled workers was identified as a major constraint to business development by nearly a quarter of respondents (19.6%). The most common needs related to cooking, computer skills, customer service, and marketing, as well as cultural awareness and a general knowledge of New Zealand. Awareness of available training was also an issue with approximately one third of respondents who were unaware of the training opportunities in their localities. Other owners cited a lack of professional recognition accorded to the tourism and hospitality industry as a contributing factor for the lack of training support beyond “a brief training program”. In fact, most jobs in the industry are not regarded as professions. A small number of respondents from the adventure tourism sector were knowledgeable about education or training provided by regional tertiary providers although perceptions of quality were specific to the institution.

Public Sector Relationships - Tourism Organizations

As part of understanding the context within which SFTs operated, it is important to understand the organisations that support enterprise in the New Zealand tourism sector. The following profiles the nature of STF's relationships with public sector tourism organisations at the national and regional levels.

Tourism New Zealand (TNZ)

Tourism New Zealand, formerly the New Zealand Tourism board (NZTB), is the NTO responsible for promoting New Zealand overseas. One of the key messages emerging from the research was that operators would welcome a more proactive role by the agency in industry development activities at the local level. Over half of the respondents knew little or nothing about TNZ and its role, even given the establishment of the Tourism Marketing Network (under the 100% Pure New Zealand campaign) is supposed to develop more direct communication across the tourism industry. The network operates through 12 units, based on particular products (e.g. wine, rural tourism farm stay, adventure activities), the goal being "to find these little people and to get them working on international marketing, otherwise they are not able to do that as they lack resources and knowledge" (TNZ representative, 1999). From the STF perspective, a perceived absence of local involvement by the NTO contributed to feelings of alienation at the local level and a perception of the agency as 'distant' and encouraging unrealistic expectations. Small operators' demands centred on practical ('appropriate') help with, for example, information technology and website development.

Centre Stage Macro Region (CSMR)

This CSMR marketing group (established in 1998 to integrate the central part of New Zealand into a single marketing entity) was unknown to the majority of operators. Only 7% of respondents, mainly those targeting international markets, were formally associated with the organization which was commonly assumed to be part of the NTO. Regional tourism organisations themselves raised a number of issues regarding the initiative as one representative (RTO) illustrates: "The [CSMR] is supposed to develop stronger international marketing because we have no money for those activities. It is particularly good for Wellington to be promoted with the other 3 regions given its different dimensions; however, it is too hard to package it at all because of the physical barrier (Cook Strait). Also, Wellington is not an international gateway and therefore we should develop stronger networking for international marketing with Auckland and Rotorua." Tour operators and wholesalers, rather than local industry, are the key focus for the CSMR initiative through which it attempts to change the perception of the region and to re-shape domestic air transport routes. RTOs acknowledged that being more active domestically and attracting FITs (Free Independent Travellers) to the areas was good for all member regions.

Relationships with regional tourism marketing organisations (RTOs) were perceived as the most significant institutional linkages across the STF sector. Equity and the distribution of resources were the main concerns of operators, particularly those in more remote locations with most perceptions of unequal treatment between sectors or scales of operation. Relationships between STFs and local government were most commonly through Visitor Information Centres (VICs). Operators often invested time and energy building relations with a few front-line individuals but were often frustrated by high staff turnover. More formal relationships with RTOs were generated through the payment of annual subscriptions, although few operators noted tangible benefits because booking fees and a presence in promotional material were additional costs. Many operators described rising costs associated with RTOs and were actively pursuing alternative channels. Compounded with perceptions of preferential treatment to high profile sectors (e.g. wine industry) or larger operators, these were the core reasons behind the lack of STF support for collaborative marketing initiatives. Conversely, under-resourced RTO offices were often frustrated by demands from small operators who “don’t understand the structure of the industry and the dynamics of the marketplace” (RTO representative, 2001). Further constraints to RTO initiatives are ‘a groundswell of antipathy’ towards tourism development, or jealousies between small communities over their respective tourism attention. Given the composition of regional councils, these issues are sometimes transferred to the political realm and policies guiding the roles, resources and functions of RTOs. One RTO responded by abolishing its membership subscription, thereby reducing operator expectations, and concentrating on providing advice and guidance for new businesses.

Local Rivalry As Barriers To Tourism Development

In the Wairarapa region rivalry exists in different forms and on different levels: amongst small tourism operators from the same activity, between small communities within the regions, as well as between different type of products. This was particularly noticeable in Martinborough where vineyards are regarded as the main visitor draw, and the centres for tourism development. This has led to a growing number of clusters formed by self-organized tourism businesses in the small communities across the region. A competitive business attitude by individual operators was increasingly seen as an obstacle to more constructive and comprehensive collaboration in the region. Growing competition and a level of jealousy are clearly seen as barriers to more effective formal and social networking. Local authorities saw the proliferation of the local market groupings as potentially inconsistent with current RTO marketing initiatives within each region. Marketing and promotion activities undertaken by local groups may undermine more marketing co-operations within the region. There is also a possibility of duplication of marketing efforts carried out by RTOs. Yet the competition or rivalry between small towns in Wairarapa raises awareness of local communities and increases their participation in tourism development.

Private Sector Relationships - Financial Services

This section details the issues affecting STFs in their relationships with financial service providers in the private sector, notably banks and accountancy practices.

Banks

An important part of the STF business environment is the relationships developed with accountants and bank managers. Both the survey and personal interviews displayed relatively low levels of bank borrowing for business set-up although, as noted earlier, the need for external finance increases with business development. Some 35% of the businesses introduced external capital during the study period, most commonly through banks in the form of commercial/personal loans or overdraft arrangements. All participants from the banking sector noted that the failure rate of small businesses in the first years of operation shaped lending policies which commonly limited loans to 3-5 years. The lending period for buying or replacing equipment was usually shorter than for buying commercial property (up to 15 years) and in the case of leasing, arrangements were limited to the duration of the lease. Small businesses commonly pay higher interest rates than larger companies and borrowing was less negotiable. Interest rates were cited by owner/manages as barriers to development.

Banks were increasingly prudent where loans were dependent on evidence (financial statements - cash flow, trading history), and consequently the tourism and hospitality industry, which was regarded as the least attractive sector for lending, accounted for only a small percentage of clients. In most cases STFs, particularly restaurants and cafes, were required to meet all lending criteria as well as higher levels of collateral. As one bank manager commented: "We are not really keen in taking on cafes or restaurants. It involves a very high-risk. We are looking at professionals such as lawyers, accountants, dentists - solo credential businesses/people; also manufacturing we regard as good." Whilst business managers with experience were considered more favourably than those without, bank managers argued that only a small proportion of restaurants and cafes are able to demonstrate attractive business performance. Moreover, a high number of these businesses operate on leased premises that provide little value for loan security. Banks were similarly unsupportive of the STF accommodation sector. As one manager argued: "the lease is only as good as the people operating the motel before. For instance, you may have people [business owner/managers] who just walk away from it." Conversely, urban and tourist resort hotels (Wellington) were valued clients largely due to their ability to provide a clear trading history and longer term possession of premises.

Another issue of concern for banks was the high daily cash flow of STFs. Handling cash is highly costly for banks and consequently they will try to avoid businesses with over \$5,000 in cash transactions per day: "the higher the cash flow the more we are inclined to stay away from it, particularly cafes and restaurants; it is a lot of time to manage for very low profit." A business plan was normally required for businesses with no clear financial history. Even if the main lending criteria are not met, it provides an

effective form of communication between the two parties and as one bank manager noted: “keeping communication is the best mechanism for long and satisfactory relations between the bank and the business.” Overdrafts were the most popular form of borrowing as many STFs were heavily reliant upon short-term finance for their day-to-day operation. The criteria for obtaining these were less structured and usually based on established relations between the bank and applicant. Again, as one manager commented: “those businesses that have been banking with us one year and longer and had no financial difficulties for smaller amounts of overdraft facility do not need to provide any security and the decision is based on their trading record.” Overdrafts were, however, regarded as extremely risky given the volatile cash flow of many small businesses with many overdraft facilities being an ‘on-demand’ facility, able to be demanded back by the bank any time.

In an increasingly competitive financial sector, banks have become more proactive in relationships with their clients. They often recommended borrowing structures (e.g. family trust, mortgage, personal needs), and provided advice on how to bridge gaps in loan costs and how to manipulate money. One bank had developed a software package to help small businesses prepare business plans and carry out SWOT analysis. Most commonly, however, relations with STFs were limited to finances and banks were reluctant to provide business advice as one manager explained: “Banks cannot provide that kind of service. If someone requires assistance, we direct them towards an accountant; we do only banking services, 24 hour banking, that kind of assistance, but not beyond that. We do actually give suggestions about tax liability related to the loan’s interest but we do not provide any business suggestions.”

Accountants

Interviews with accountants suggest that there have been significant changes in recent years to their services. Most had moved away from pure accounting and compliance roles (e.g. tax returns) to providing assistance in marketing and business planning. As one respondent observed: “Today’s business owners need somebody to talk to regularly about what is happening in the market place ...but less and less is spent purely on financial aspects which I believe is gone. We still do it but far more time is given to other issues...we look at business achievement, in certain areas it is far more a consultancy approach.” Information technology (IT) has had a considerable impact on the accountant-STF relationship. IT development has enhanced the efficiency of communication and enables owner/managers to do much of the paperwork, significantly reducing fees for small firms. As one respondent noted: “four or five years ago we had more paperwork, and we would charge on the basis of the amount of time and job. Instead of \$5-6,000, now we charge, for example, less than \$4,500.” Despite changes to the charging structure of advice, costs remained prohibitive for micro STFs. A business with 10-15 employees and turnover of 2 million dollars, for example, can expect an annual fee exceeding NZ\$30,000. Accountants also reiterated owners’ concerns that, despite government claims, small businesses faced increased tax compliance costs.

Accountants were generally proactive in tracking small business concerns. As one respondent noted: “before I would spend most of my time in the office, whereas now I spend half of my day outside the office, because I get a far better feel if I visit a particular business.” Besides finance, accountants have begun focusing on other aspects of small businesses, including business plan preparation, feasibility studies, valuations (advice in purchasing or selling situations), marketing and management reporting, and monitoring business performance. There was agreement amongst the accountants interviewed that most STF owners spent excessive time ‘running but not managing’ the business, subsequently losing sense of direction: “A lot of small firm people come from big companies. They know the little area they set up their own business in, but then they tie themselves up working in the business 60-70 hours a week and all other things (e.g. paper work) have to wait for tomorrow but tomorrow never comes. They become more and more focused on the operation and finally lose sense of the wider business environment” (accountant, Nelson, 2001). Accountants have also become mediators for borrowing applications between STFs and banks, contributing professional expertise which many managers lack. Also, accountants have emerged as advisors in the day-to-day running of businesses as well as providing strategic decision-making for STFs. Few, however, claimed more than a superficial understanding of the tourism industry and its markets, and most had only limited experience in the tourism and hospitality sector.

Discussion and Conclusions

This research clearly identifies important criteria for the effective interaction of local governments and small tourism firm owners, as well as an illustration of how small tourism firm owners are facing challenges in one of the freest markets in the world whilst taking action to ensure the periphery rejuvenation. This study confirms that government regulations are amongst the main concerns of small firms, including those from the tourism sector (Goss, 1991; Gray, 1993; Thomas & Thomas, 1998). Compliance in several areas such as resource consent, health and safety, and the sale of alcohol have become major issues for new operators. Regarding these issues, opportunities for effective government participation with STFs lie in two areas. Firstly, ease the ‘intensity’, the scope, and the level of regulatory compliance; and, secondly, simplify the compliance processes through improved access to information and compliance staff. In this way, evasion becomes less attractive, fewer compliance costs are passed on to the end user, and managers will be freed to address the strategic environment, in effect reversing the replacement of local administration based on social relations observed in recent years (Doorne, 1998). The heterogeneous nature of the small tourism sector has presented challenges for the consistent application of compliance standards. Indeed, differing levels of compliance are to be expected in such a broad tourism sector, which many have argued, already requires minimal regulatory compliance (Morrison, 1996; Morrison, Rimmington, and Williams, 1999). This generalised observation, however, fails to take into account the diversities of scale, scope, and the significance of location as significant distinguishing elements

within regions - elements which underlie many of the development constraints faced by STFs in this study.

The small scale of operations had implications for the availability of skilled labour for STFs. Not only are employees expected to be specialised (e.g. chef, receptionist, guide) but they also require detailed understanding of the business and the dynamics of the industry sector. As Scase and Goffee (1987:162) argued, STF owners “measure the quality of their employees’ performance against their own.” Similarly, education and training programmes were perceived as more appropriate to larger firms with few institutions developing links with STFs to address their training needs (see also Curran et al. 1993). With respect to tourism organisations, a shift towards public/private initiatives again sees STFs too small in scale and diverse in scope to influence the policy environment (Elliot, 1997). At the regional level this blurring of private/public sector boundaries has seen local authorities drawn into rapid tourism development, particularly in small localities with unclear economic direction, a fragile natural environment and small populations (Haywood, 1988; Murphy, 1988; Becker & Bradbury, 1994; Wanhill, 2000). However local authorities are obligated to serve the best interests of the local economy (Hirst, 1997) in an environment of volatile markets and shifting policy infrastructures (Thomas and Thomas, 1998; Ateljevic & Doorne, 2000). This situation has major implications for STFs as broader marketing and development decisions are beyond their influence. In this context, the STF is often simply a reactive micro management unit relegated to second-guessing strategy.

Particular issues in achieving a workable and harmonious mesh between STFs and RTOs addressed the perceived role of the RTO with respect to business support initiatives, and expectations of equitable resource distribution. Where expectations were not met, the development of collaborative marketing initiatives were clearly undermined. Instead a common response from STFs was to devote time and energy to developing one-on-one relationships with VIC (Visitor Information Centre) staff, and making personal investments which were perceived to deliver more tangible benefits. At the central government level the implementation of blanket policies for regulation and compliance often affect STFs adversely, particularly regarding resource access and taxation. These direct policy initiatives are part and parcel of a broader, more indirect, shift towards a more competitive financial environment. In times of financial uncertainty, financial institutions are reluctant to take risks and increasingly banks are wary of the tourism and hospitality sector. A lack of capacity to meet security (collateral) requirements, uncertainty or risk associated with small tourism operations, and high rates of business failure in the first 3-5 years were identified as major issues. STFs with high daily cash transactions were also regarded as resource intensive by lending institutions as they delivered marginal returns.

Further indirect consequences of the policy transformation were noted in relationships with accountants. These had changed markedly in recent years, with external advisors playing a more active role in management and decision-making. The tourism sector was, however, uncharted territory for many accounting practices, the relationships focusing on day-to-day management and efficiency, and charting a course through an

increasingly complex tax and compliance regime. Most significantly, accountants have also assumed a mediating relationship with the banking sector by acting as vetting and auditing agents for development loan applications through providing the specialised expertise which is crucial to loan access.

Further issues intimately linked to business development and finance are labour and training. The study revealed differences between the training delivery agency's perception of base competencies and the actual skill levels within the STF sector. Poor business skills influence lending institutions' perception of STFs plus potentially impact on the consistency of quality of the regional tourism product (Buhalis, 1996). Given an observed positive correlation between lifestyle entrepreneurs (as opposed to experienced business managers) and the emergence of innovative tourism products (Ateljevic & Doorne, 2001), the constraints imposed by the lending sector can have significant implications for the creative edge of the industry at large.

STFs are clearly an integral, dynamic and rapidly growing sector of a fragmenting tourism sector (see also Ateljevic, 2002). Underlying all of the issues above are the constraints of small scale and scope, the very qualities which contribute to the responsiveness and sectoral diversity of destinations as well as the spatial penetration of tourism for marginal economic areas. Transecting the tourism industry based on the common constraints of scale reveals a diversity of needs for policy prioritisation yet given their spatial and sectoral diversity, STFs remain a considerable challenge for effective support delivery. To this end, achieving a more inclusive and integrated conceptualisation is essential to achieving a more harmonious and productive relationship between policies, agencies, and the micro sector of the tourism industry.

Clearly, each of the above issues affecting small firm development has the potential to be addressed and supported by policy frameworks implemented through the relevant agency. The myriad of issues identified and their representation across a range of policy environments suggests that policy coordination and integration is required across the breadth of government agencies either directly (e.g. regulation, compliance) or indirectly (e.g. interest rates, regional tourism marketing) involved in small firm development. Given that the small firm is by its very nature both multifaceted and relatively impotent politically, there is an imperative for research to demonstrate not only the issues affecting development within the sector but also the benefits that the sector contributes to wider processes of regional economic development. Whilst there is evidence that small firms often carry a creative energy of product development and have the capacity to initiate development in marginal economic environments, more evidence is required which demonstrates the value of the sector to broader development initiatives. It is through this process that appropriate levels of policy attention and support can be directed to address the sort of issues identified here.

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Competitive Positioning and Resource Configuration of Small Firms in a Mature Industry

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Abstract

This paper focuses on the competitive positioning of small firms entering and operating in a mature industry characterized by harsh internal competition. The aim of the paper is to investigate the relationships between resource configurations, competitive strategy, and performance in small and entrepreneurial firms. The study draws theoretically on the resource-based view of strategic management, emphasizing distinctive resources as a platform for the development of adequate competitive strategies. The relationship between firms' resources, competitive strategies, and performance were analysed using survey data collected from 605 food-processing ventures in Finland, Norway, and Sweden. The results indicate that in a mature industry the small firm may configure its resources and capabilities into entrepreneurial strategies facilitating customer value and differentiation together with cost efficiency positioning.

Key Words: *small firms, mature industry, competitive strategy, resources, performance, food industry*

Introduction

This paper focuses on the competitive positioning of small firms entering mature industries. Mature industries are characterized by harsh competition due to stagnating demands, high negotiation power of customers, and larger companies serving as market leaders (Harrigan, 1980; 1982; Porter, 1980; 1985). In a mature industry, competition on price is severe due to others' efforts to achieve scale advantages leading to overcapacity of production. Additionally the range of products is often high due to intensive product development efforts and access to substitutes. There is room for product innovations but not to such an extent as, for example, in emerging industries (Barney, 2002). In this setting, achieving competitive advantage is a demanding task for a small firm. However, even in mature industries there are smaller companies making their fortune with more distinct strategies and creative resource bundling. As an example, rather mature markets for food products have experienced a wave of new firm start-ups, both in the Nordic countries and in the rest of Europe (Carter, 1999; Borch, 1998; Forsman, 2004; Tregear, 1998), although there is limited knowledge about the range of positioning opportunities for small firms in this type of industry (Borch, 1999; Hyvönen and Erälinna, 2002; Forsman, 2004). The main focus of strategy research during the 1980s and 1990s has been the strategic action of firms

that have expanded into international markets (Dess and Davis, 1984; Hambrick, 1983a; Kim and Lim, 1988; Morrison and Roth, 1992). Strategy research shows that the mainstream strategic posture in mature industries is exploitation of scale advantages. However, in several industries one can find entrepreneurial efforts achieving a broader range of competitive tools (Hill, 1988; Borch, 1999; Cambell-Hunt, 2000; Parnell, 2000). This has led to a shift in contemporary business research from an emphasis on the competitive strategies to the source of competitive strategies, that is, the firm's distinctive resources and capabilities.

The aim of this paper is to show how small firms in a mature industry develop resource configurations that support complex, hybrid competitive strategies. The paper elaborates on the possibility of smaller firms mobilizing a broad range of competitive positioning instruments. It builds upon the resource-based view of strategic management and provides a more in-depth internal analysis model for linking the firm to external competitive positioning (Wernerfelt, 1984; Barney, 1991; Grant, 1991; Barney and Arian, 2001). It additionally presents the resource configurations and competitive strategies of 605 small food-processing firms in three Nordic countries. The paper is organized as follows. First, a theoretical framework that will serve as a foundation for the empirical analysis is presented. Second, the data and methods are briefly described. Thirdly, the main results are presented, followed by a discussion on how resources contribute to entrepreneurial competitive posturing in a mature market setting. Finally, suggestions for the future research are provided.

Theoretical Framework

The Mature Industry and Competitive Positioning Tools

A significant amount of strategy research has discussed the importance of choosing competitive strategy according to an industry structure. Different industry structures (e.g. fragmented industry, emerging industry, mature industry, international industry) provide different opportunities upon which firms can build their strategies (Barney, 2002). The mature industry is characterized by a high degree of internal rivalry, a slow growth potential, limited introduction of new products and services, and decreased industry profitability. A stagnating market increases the buyers' negotiation power. There is often overcapacity in the industry resulting from efforts to achieve economies of scale. The established firms, and especially the market leaders of the industry, will strive towards creating barriers for new entries into the industry (Porter, 1980; Hambrick, 1983b; Harrigan, 1982). Thus, in a mature industry quantitative growth is limited and, instead, firms should put more emphasis on quality. There is room for product innovations but not to such an extent as, for example, in emergent industries. The most common types of opportunities in a mature industry is to refine a firm's current products, to increase the quality or service and to focus on reducing manufacturing costs and increasing quality through product innovations (Barney, 2002). Smaller firms entering such industries therefore have to be creative in their positioning efforts and the development of adequate competitive strategy tools.

Competitive strategy is concerned with how a firm competes in the market (i.e. how it achieves and maintains a position of competitive advantage - Hofer and Schendel, 1978; Teece et al., 1997). From the resource-based logic, competitive advantage can be defined as identifying valuable firm resources and translating them into a position of competitive advantage (Barney, 1991; Barney and Arikan, 2001). In this study, a competitive positioning tool is defined as a market-oriented instrument that creates superior value for the customer, and positions the firm in the industry so that they reduce or eliminate the threat from established rivals, substitutes, and new entrants through superior customer value differentiation and/or price-cost leadership.

The main categories of competitive positioning tools are cost advantage and differentiation advantage (Porter, 1985; Mathur, 1992). Considering the limited ability of small-scale firms to pursue a low-cost strategy, differentiation is regarded as a more secure basis for competitive advantage than cost advantage (Pelham and Wilson, 1996; Grant, 1998). Differentiation is often associated with product differentiation based on physical product characteristics. Within strategy research it has been suggested that the scope of competitive behaviors explored in empirical records is too narrow (Campbell-Hunt, 2000; Miller, 1992). In addition to actual differences, product differentiation can be based on perceptual, intangible differences (Dickson and Ginter, 1987). Hence, to understand the unlimited opportunities for differentiation it is necessary to extend the perspective towards positioning on dimensions such as marketing and sales, reputation, and trust. Speed of action has also been launched as an important competitive dimension (Miles and Snow, 1986; Parnell, 2000). It may even be easier for smaller producers to base the differentiation on factors other than physical product characteristics. Typical examples are knowledge of product origin, direct distribution, delivery reliability, customization, personal contacts, etc. (Forsman, 2004). These focus opportunities may prove valuable for small firms trying to enter an industry with large companies. However, this creates additional challenges for the development and maintenance of competence and dynamic capabilities of the firm.

In a mature industry characterized by the harsh competition, one may find efforts towards hybrid competitive strategies where firms combine differentiation and cost leadership (Borch, 1999; Cambell-Hunt, 2000; Parnell, 2000). With severe competition on most competitive parameters, cost efficiency-oriented tools cannot be ignored (Borch and Forsman, 2001). In several mature industries, there are typically low-commitment products and close substitutes, which implies that the price variations cannot be large compared to the products provided by competitors. Hence, it is not simply a matter of how to differentiate but how to develop heterogeneity and create customer value without using too expensive, cost escalating resources (Grant, 1998; Hoopes et al., 2003). Referring to the previous example, it can be stated that the cost advantage perspective combined with differentiation is crucial when competing with firms with similar product offerings (Borch, 1999; Forsman, 2004).

To achieve high performance, a competitive strategy must be supported with appropriate resources and distinct competencies (Snow and Hrebiniak, 1980; Barney, 2002). According to the resource-based logic the most critical elements in creating sustainable competitive advantage are found in the internal resource configuration of the firm (Amit and Schoemaker, 1993; Barney, 1991; Black and Boal, 1994). We still have limited knowledge about the interplay between the range of positioning tools towards customers and competitors and the internal resource configuration (Barney, 2002).

The resource-based view emphasizes the significance of a firm's unique or distinctive resources as sources of increased customer value and sustainable competitive advantage (Barney, 2000). According to this view, a firm should acquire, refine and combine resources in innovative patterns that create value added for the customer and reduce the threat from competitors, substitutes, and new entrants. The core of the resource-based view is that the potential for success lies in valuable resources that are rare, costly to copy, and difficult to substitute, and that firm resources are both heterogeneous and immobile (Barney, 1991; 2001). Small firms have to develop bundles of resources that serve as the foundations for the development of extra value for the customer and outmaneuver competitors. According to the resource-based view of the firm, differences in resources should be utilized and should lead to differences in sustainable competitive advantage.

There are different classifications of resources within the resource-based view. In this paper, a distinction is made between basic resources and capabilities. Basic resources (cf. Forsman, 2004) refer to resources such as machines and financial capital that are easy to achieve, copy or substitute whereas capabilities are compositions of physical resources and individual competence and creativity that cannot be so easily acquired in a market (Amit and Schoemaker, 1993; Javidan 1998; Rugman and Verbeke, 2002). These resources require 'critical mass' to be deployed, they are often history-dependent, and may take a long time to acquire, such as firm reputation and trust relations (Dierickx & Cool, 1989; Hunt and Morgan, 1995). A third type of resource is the dynamic capability emphasizing the firms' ability to develop new resources, reconfigure them, and remove redundant resources (Teece et al., 1997; Makadok 2000). Thusfar, much of the focus of research within the resource-based view has been on larger firms (Barney, et al. 2001). Recently this perspective has also been adopted and used within entrepreneurship and small business research (Borch, 1999; Alvarez and Busenitz, 2001; Barney and Arikan, 2001; Sirmon and Hitt, 2003; Forsman, 2004). Yet, there are comparatively few studies addressing the role of resources and resource-based strategies in very small firms. The role of resources in new venture creation and small firm growth have, however, been identified (e.g., Greene et al., 1997). Small firms are often argued to be very dependent on their business environment, and they have limited ability to shape their environment (Smallbone et al., 1999). Moreover, small firms may not have the same opportunities for new resource investments such as production technology as their larger counterparts. This is often

due to limited financial resources and because only one or a few persons are usually in charge of running the business. On the other hand, this fact may serve to stimulate creative efforts towards combining existing low cost resources into new resource bundles. The dynamic capability is crucial in stimulating a small firm towards developing combinations of positioning tools not thought of among their competitors. By identifying, utilizing, and combining its valuable resources, a firm should be able to differ itself from its competitors and achieve sustainable competitive advantage in the market (i.e. a favorable position towards customers and competitors generating extra rent on a long run basis).

In mature industries, however, it may be difficult to build persistent competitive advantages. In some cases it may be even dangerous to try to build sustainable advantage if the resources on which the advantage is based cannot easily be adjusted to changing market challenges. Hence, for smaller firms with flexible organization structures, the ability to build temporary competitive advantages might even become an important resource (Forsman, 2004; see also Fiol, 2001). Temporary competitive advantage may be achieved through corporate entrepreneurship using another company as a starting platform. As an example, among the new start-ups in the food sector, a farm connection may become a valuable resource. A rural location may provide resources such as rural food traditions, regional heritage, and agricultural expertise that can represent strategic value aspects in products and associated services. The present capability may provide benefit in the development of new products by re-utilization of existing resources (Carter, 1998; 1999; Alsos and Ljunggren, 2003).

Methodology

Research Design

This study focuses on competitive positioning tools and resources related to performance in small firms in a mature industry characterized by intensive internal rivalry. Empirical data were collected from the Nordic food industry. The food industry is in most countries characterized by stagnating demands for the main products, several larger companies with high and excess production capacity, a broad range of direct competing products and substitutes, and high negotiation power with the large retail chains at the buyer side. The study was cross-sectional in nature, designed to look at relationships between resources, competitive positioning tools and performance.

Sample and Data Collection

The target group for the study was micro- and small-scale food processing firms located in rural areas in Norway, Sweden, and Finland. To identify as many firms in the target group as possible, various sources were utilized. For the Norwegian and the Swedish data, a similar study previously conducted was utilised (Borch and Iveland, 1997). Other sources used were membership in organizations for small-scale food

processing firms and registers including firms receiving public support. In Finland, the sample was chosen from the Business Register maintained by Statistics Finland.

The data collection was based on a postal survey. A structured questionnaire was created and mailed to the owner/manager of the firm. The data were collected in Finland in 2000 and in Norway and Sweden in 2001. The data were elicited from a total of 605 firms of which 168 were from Norway, 199 from Sweden, and 238 from Finland. The response rate of the study was 35 per cent. The median firm age was 8 years and the average number of man labour years was 2.5. The data included both farm-based firms and firms without a farm connection.

Measures

On the basis of items used in the literature and previous research, several pools of measures were generated to measure competitive positioning tools, resources, and performance. The items were measured on five-point Likert-type scales.

Resources

Resources are firm specific and a single firm can have an endless number of different combinations of resources. At some level, everything in a firm can be seen as a resource (Conner, 1991). In this study, resources were operationalized in terms of some basic resources and capabilities in different fields of business. Variables were drawn from the literature and previous research (e.g., Hyvönen and Kola, 1995; Borch and Iveland, 1998; Forsman, 1999; Traill, 2000). Eight variables were employed as resource measures. They were derived from principal component analysis based on 18 items (see appendix) and were labelled as follows:

- 1) Management control capability
- 2) Product development capability
- 3) Horizontal cooperative capability
- 4) Entrepreneurial orientation
- 5) Marketing capability
- 6) Production management capability
- 7) Physical production resources
- 8) Financial resources.

Competitive Positioning Tools

Several empirical studies have developed tools for the study of competitive strategies. In particular, there is a broad selection of competitive positioning scales. Dess and Davis (1984), for example, used 16 variables in identifying four distinct strategic factors: efficiency, service, product innovation, and brand/channel influence. On the basis of 27 variables, Davis (1986) revealed six strategic factors: production efficiency, differentiation, degree of specialty production, research intensity, geographic

concentration, and cost consciousness. In this study five positioning tool constructs were developed. They were derived from principal component analysis based on 11 items (see appendix) and were labelled as follows:

- 1) Product range and channel diversity
- 2) Input quality focus
- 3) Quality orientation
- 4) Close customer relations
- 5) Niche focus

Performance

A standard element of strategic management research is measuring the performance of the firm (Venkatraman and Ramanujam, 1986). Within the resource-based view, the interest is specifically on understanding performance differences between firms (Barney, 1991). Within this study, strategic performance is measured from two perspectives. The first measure is perceived financial performance. This was derived by a principal component analysis and consists of five items related to economic performance aspects. This measure gives a broad overview over the firm's financial result. The second measure is perceived customer satisfaction. This measure was also derived by a principal component analysis and is comprised of six items related to a wide variety of customer related issues. This measure gives an indication of the firm's potential for future economic success.

Analyses

The analyses of the data were conducted in several steps using SPSS (Version 10.0). First, descriptive analysis mapped the overall features of the firms' adaptation. To achieve a more aggregated and theory-related set of sub-strategy factors, the constructs were refined through principal component analysis (PCA). The principal components (hereafter 'factors') were independently derived from the items chosen for each of sub-strategy dimensions (Kim and Muller, 1978) through PCA with Varimax rotation. Secondly, to determine which factors were associated with firms' performances, correlation analyses and linear regression analyses were additionally carried out.

Validity

When developing the questionnaires, items and variables were selected to a large extent by utilizing earlier case studies with qualitative interviews of entrepreneurs. This ensured that the questions in the questionnaire were designed by using such a language that was well understood by the owner/managers of the firms. In addition, the variables used in previous studies within the field were also employed. Scholars within the research community additionally reviewed the questionnaires. Moreover, in Norway and Sweden, the questionnaire was tested through firm visits during which the owner/manager of the firm completed the questionnaire. In Finland, the questionnaire

was pre-tested as a mail survey. To improve content validity, multiple measures were employed in the questionnaires to reflect the nature of the complex constructs. In addition, certain indicators for measuring the key concepts were used. One should note that other sets of items could have been employed, which might have affected the results differently. When interpreting the results it is also important to note that subjective measures of performance were used instead of objective measures.

The final version of the questionnaire was mailed to the owner/managers of the firms since they can be thought of as the most significant strategic actors of small firms. Subsequent cross checking of the responses showed that the firms represented a broad cross-section of the industry's geographical and physical profile. Internal reliability tests performed on the developed factors showed fairly strong Chronbach's alphas, thus confirming the internal consistency of the factors. In the case of one factor, the value of alpha was relatively low but including it in the further analyzes was justified from the theoretical point of view.

Results

Relationships between resources, competitive strategy tools, and perceived performance were analysed by using correlation analysis and linear regression analysis. Table 1 shows correlations for all of the factors considered. The results of the correlation analysis indicate that there are statistically significant links between resources, competitive strategy tools, and perceived performance. The results emphasize the significance of entrepreneurial orientation and marketing capability as dynamic capabilities. They were both positively correlated with both perceived financial performance and perceived customer satisfaction. When it comes to competitive positioning tools, niche focus and quality orientation were positively related to both perceived financial performance and perceived customer satisfaction. Input quality focus and close customer relations were positively related to perceived customer satisfaction.

Table 1 - Correlation Analysis of Resources, Competitive Positioning Tools, and Perceived Performance.

	Management control capability	Product development capability	Product range and channel diversity	Input quality focus	Quality reputation	Close customer relations	Niche focus	Horizontal co-operative capability	Marketing capability (rev.)	Production management capability (rev.)	Physical production resources (rev.)	Financial resources (rev.)	Entrepreneurial orientation
Management control capability	1												
Product development capability	0.000	1											
Product range and channel diversity	0.044	0.158 ***	1										
Input quality focus	0.087	-0.060	0.000	1									
Quality reputation	0.196 ***	-0.033	0.000	0.000	1								
Close customer relations	0.019	0.037	0.000	0.000	0.000	1							
Niche focus	-0.123	0.021	0.000	0.000	0.000	0.000	1						
Horizontal cooperative capability	0.082	0.184 ***	0.010	0.068	0.061	-0.137 **	-0.079	1					
Marketing capability (rev.)	-0.166 ***	-0.044	0.043	-0.024	-0.056	-0.096 *	0.032	0.037	1				
Production management capability (rev.)	-0.057	-0.200 ***	-0.137 **	-0.069	0.352 ***	0.030	0.085	0.098 *	0.000	1			
Physical production resources (rev.)	-0.058	-0.067	0.004	0.064	-0.062	-0.040	0.004	0.097 *	0.000	0.000	1		
Financial resources (rev.)	0.024	0.041	0.096 *	0.120 *	0.055	-0.059	0.015	0.133 **	0.000	0.000	0.000	1	
Entrepreneurial orientation	0.100 *	-0.042	0.075	0.203 ***	0.151 **	-0.044	0.168 ***	-0.043	-0.150 **	0.032	0.104 *	0.024	1
Perceived financial performance	.071	-0.018	0.076	0.034	0.084 (*)	-0.072	0.100 *	-0.029	-0.197 **	-0.067	-0.055	-0.072	0.150 **
Perceived customer performance1)	.076	-0.096	-0.094	0.135 *	0.191	0.112 (*)	0.160 **	-0.061	-0.196 **	0.010	-0.005	0.010	0.216 **

Statistical significance level: (*) = $p < 0,10$; * = $p < 0,05$; ** = $p < 0,01$; 1) = No data from Sweden; Rev. = the reversed scale was used

Resources and Competitive Positioning Tools

The linkage between resources and competitive positioning tools was examined in more detailed through regression analysis. The results of the correlation analysis indicated that there are some statistically significant correlations between resources and competitive strategies. Moreover, certain resources seem to be linked to certain competitive tools. For example, production management control was strongly connected to input quality focus.

Table 2 - Regression Analysis: Resources and Competitive Strategy Related to Performance

Resources	Perceived financial performance		Customer satisfaction ¹	
	Beta	T	Beta	T
RESOURCES				
Management control capability	0,181	3,90**		
Product development capability	-0,102	-2,23*		
Horizontal cooperative capability				
Marketing capability (reversed)	-0,249	-5,34**	-0,141	2,08*
Production management capability (reversed)				
Physical production resources (reversed)				
Financial resources (reversed)	-0,360	-7,99**		
Entrepreneurial orientation	0,159	3,46**	0,136	1,92(*)
COMPETITIVE STRATEGIES				
Product range and channel diversity	0,114	2,46*		
Input quality focus				
Quality orientation			0,170	2,49*
Close customer relations	0,105	2,33*	0,159	2,39*
Niche focus			0,164	2,38*
Constant	-0,003	-0,054	0,003	0,39
Significance of model	F=22,64**		F=6,91**	
Adjusted R-square	0,305		0,122	

Statistical significance level: (*) = $p < 0,10$; * = $p < 0,05$; ** = $p < 0,01$

1= No data from Sweden

"Reversed" indicates that the item should be reverse coded

The results of the regression analysis in Table 2 demonstrate that entrepreneurial orientation (in the meaning of risk taking, experimental efforts to try out new solutions, and offensive attitude in the market) is the most important resource for developing a competitive strategy for a small firm in a mature industry. It was strongly connected to three types of competitive tools: niche focus, quality reputation, and input quality focus. This supports the claim that the small firm has to develop a capability for continuous improvements and renewal, especially when it comes to customer orientation and the creation of value added. Production management capability and management control

capability were strongly connected to quality reputation. These capabilities are critical for customer value creation. Through systematic control of the production process and general management control routines the small firm may keep the costs down and preferably reduce the unit costs without reducing quality at the same time. Product development capability was connected to product range and the channel diversity tools. In a mature industry with high negotiation power of the customers, the small firm has to be able to introduce new products on the basis of customer needs and continuously changing competitive environment. The small firm may also benefit from an ability to change between marketing channels and not being too dependent on a single channel.

Resources, Competitive Positioning Tools, and Performance

To investigate the relations between the different resources, competitive positioning tools, and performance in more detail, linear regression analysis were run for both performance dimensions. The results shown in Table 3 indicate that marketing and management control capabilities play an important role in achieving high perceived financial performance. This result supports the claim that a small firm in mature industry has to include resources that both support differentiation and cost leadership tools to survive. The results also revealed that entrepreneurial orientation strongly effects perceived financial performance. This indicates that the dynamic capability of the firm is important to secure continuous development and reconfiguration of competitive positioning tools. It is interesting to note that product development capability had a negative influence on perceived financial performance. This may be due to the fact that continuous product development is a costly activity. The firm has to be very careful about not spending too much of its financial resources on cost enhancing differentiation efforts. Instead frequent more incremental improvements in different parts of the concept may prove more applicable in this type of markets.

Table 3 - Regression Analysis: Resources Related to Competitive Strategies.

Resources	Product range and channels diversity		Close customer relations		Niche orientation		Quality reputation		Input quality focus	
	Beta	T	Beta	T	Beta	T	Beta	T	Beta	T
Management control capability	0.041	0.82	0.026	0.52	-0.123	-2.48 *	0.199	4.33 **	0.056	1.15
Product development capability	0.144	2.85 **	0.072	1.34	0.064	1.26	0.038	0.81	-0.088	-1.75 (*)
Horizontal cooperative capability	-0.021	-0.42	-0.151	-2.95 **	-0.086	-1.67 (*)	0.007	0.156	0.080	1.59
Marketing capability (reversed)	0.070	1.42	-0.093	-1.86 (*)	0.045	0.92	-0.003	-0.059	.008	0.16
Production management capability (reversed)	-0.107	-2.14 *	0.062	1.24	0.093	1.87 (*)	0.366	7.918 **	-0.098	-1.97 *
Physical production resources (reversed)	0.009	0.19	-0.013	-0.26	-0.010	-0.12	-0.062	-1.341	0.033	0.68
Financial resources (reversed)	0.090	1.85 (*)	-0.041	-.084	0.022	0.46	0.045	0.989	0.107	2.21 *
Entrepreneurial orientation	0.087	1.77 (*)	-0.064	-1.28	0.183	3.72 **	0.127	2.771 **	0.195	3.99 **
Constant	-1.454E-16	0.000	8.183E-17	0.000	2.603E-16	0.000	-1.312E-16	0.000	6.997E-17	0.000
Significance of model	F=3.076**		F=2.129*		F=3.438**		F=12.075***		F=4.20***	
Adjusted R-square	0.039		0.021		0.045		0.177		0.058	

Statistical significance level: (*) = $p < 0.10$; * = $p < 0.05$; ** = $p < 0.01$

When looking at competitive positioning tools, it was found that close customer relations, product range, and channels diversity were significantly related to financial perceived performance. Close customer relations may be beneficial for the small firm with more informal management and a flexible organization structure. However, close customer relations such as face-to-face contacts are also time consuming. Product range and channels diversity are also challenging as to production and distribution capability. The role that these competitive positioning tools play indicates that the smaller firm faces severe challenges in this type of environment, and have to be clever with cooperative efforts to increase the range of products.

Perceived customer satisfaction, quality orientation, niche focus, and close customer relations were as expected important competitive positioning tools. These tools are traditional small business instruments to avoid competition from their larger counterparts. However, one has to be aware that increasing customer value through niche specialization may increase risk and have negative effects on product range and channel diversity tools that are significantly related to financial performance.

Conclusions and Discussion

It has been shown in this paper the role that internal resources play for the development of competitive positioning tools and performance of small firms in a mature industry. Several resources that make it possible to direct actions towards more targeted competitive strategies were specifically identified. The results of the analyses demonstrate that there are significant links between resource platform, the capability for implementing a broad range of competitive tools, and performance. This is consistent with the resource-based logic.

The findings indicate that entrepreneurial orientation (including risk taking, experimentation, and an offensive attitude in the market) is strongly related to competitive positioning including niche focus, quality reputation, and input quality focus. This capability is also strongly related to perceived financial performance and perceived customer satisfaction. The result extends recent research on significant resource type in demanding industry settings.

When considering competitive positioning tools of small firms in a mature industry, niche focus seem to be strongly connected to perceived performance. Quality orientation, input quality focus, and close customer relations are positively related especially to perceived customer satisfaction. These results imply that tools improving the firms' downstream relations towards the end user are critical in small firms within a mature industry setting. Consequently, small firms should become more customer-oriented and put more effort on relationship marketing and reaching the customer through different and innovative marketing channels.

A surprising result is the indication of negative relations between product development capability and perceived financial performance. However, being too oriented towards the costly process of developing new products may reduce a firm's ability to create

“value for money”, take the focus away from the customer, and result in too much time spent on products that are not grounded in customers’ needs. In a mature industry, a small firm will not have much excess in resources for costly R&D and new product development processes; hence the products introduced have to be in line with customer needs from the very beginning. The study also shows that a lack of financial resources is a problem for small firms in a mature industry. This implies that imitation and improvement from existing product concepts may prove beneficial. Building upon an extended product concept and improvement of raw material quality may represent a basic resource approach better suited for a smaller firm. The negative effects of a lack of capital and the positive effect of management control capability underline this fact. The small firm may benefit from achieving both innovation and control because of the direct contact with the employees.

The results of the research also reveal that perceived customer satisfaction was mostly affected by the competitive tools related to quality differentiation. In addition, input quality focus and niche focus are connected to perceived customer satisfaction. What is of utmost importance is that the dynamic capability represented by entrepreneurial orientation is regarded as critical to the development of several competitive positioning tools, and is positively related to both perceived financial performance and customer satisfaction.

Implications for Further Research

While the paper examined a range of issues related to a mature industry, it did not look into the process of bundling the different resources according to the market challenges. The dynamic capabilities of small firms should therefore be further investigated. These types of resources are strongly related to the personal characteristics of the owner/managers, which indicate that the owner/manager should be given more emphasis in future research. In this context, one may ask whether there are specific tools that improve the dynamic capability of the firm, especially helping the small business owner/manager in becoming more entrepreneurial without losing his/her grip on the present activity.

A topic that requires more research is related to potential countermoves of large-scale firms. Success among small firms will also certainly draw attention from large-scale firms. By utilizing flexible specialization concepts with low costs the smaller firm may avoid the risk of severe rivalry from these firms. It seems especially relevant to highlight the importance of developing an adequate and cost-effective technology, and management control schemes that do not take away the entrepreneurial orientation of the employees. Moreover, distribution channel diversity may prove critical as a positioning tool. A small firm may improve flexibility through having more distribution channels to choose from (for example avoiding the threat of buyer’s negotiation power). The specific resources needed in the different channels and towards different parts of the value chain should be further investigated. A third aspect that should be considered in future research is a more careful positioning among special customer groups and geographical areas. With a product niche focus, customers may be scattered in a wider

area. The development of a diverse set of distribution channels and advanced communication technology may prove crucial.

Government support schemes for entrepreneurship and innovation efforts are available in most countries. The results from this study show that these schemes have to be adapted to industry characteristics. This study has shown that a lack of capital affected the economic performance in a negative way. This may be due to market imperfection at the capital supply side, motivating government intervention. Most firms have to spend a lot of time on developing their own products and testing them in the market. Firms may spend one-two years experimenting with production, product development, and marketing channels. To improve their performance, it is thus essential to increase the supply of R&D resources. Due to the firms' small size, their (often) rural location and their emerging character, there might be severe market imperfection as to investment capital. If growth in the underbrush of small producers is an objective, the government and local communities have to play a more active role. When contributing, it is vital that the financial support programs incorporate a broad perspective. Support programs have traditionally contributed financial support to tangible resources such as equipment and buildings. Such support may still be important. However, immaterial human resources at the managerial level appear even more critical at this point. As documented in this study, competence related to market and marketing capability is strongly related to performance. If market imperfections are present, it is vital that governmental support is allocated to projects focusing on dynamic capabilities such as entrepreneurial orientation and downstream marketing and distribution efforts, together with management and production control capabilities.

Finally, the cross-sectional research design employed in this study may limit the validity of the results. Accumulation of firm-specific resources and competences takes place over time. Therefore, to obtain a more detailed picture of the relationships between resources, competitive strategy and success, a longitudinal research design should be preferred in future studies.

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Appendix: Questionnaire Items

Strategy

1. Product range and channel diversity
 - the firm has a wide product range,
 - the firm emphasizes a way of selling
 - the firm emphasizes delivery reliability
2. Input quality focus
 - the firm uses no additives in its products
 - the firm uses organic raw materials
 - the firm emphasizes knowledge of product origin
3. Quality orientation
 - the firm follows special production methods
 - the firm uses high-quality raw materials only
4. Close customer relations
 - the firm emphasizes close relation with its customers
5. Niche focus
 - the firm emphasizes customer segments for home-made products
 - the firm emphasizes customer segments for traditional products

Resources

1. Management control capability
 - the firm has high educational level and experience within management control
2. Product development capability
 - the firm has high educational level and experience within production technology and product development
3. Horizontal cooperative capability
 - the firm has a high degree of cooperation with other firms with similar products
4. Entrepreneurial orientation
 - the firm emphasizes identifying new markets for its products
 - the firm focuses on developing new business ideas

5. Marketing capability

- the firm lacks marketing competence
- the firm lacks competence regarding selling
- the firm lacks competence regarding access to marketing channels
- the number of potential customers is low
- the firm has unfavourable location relative to customers
- the firm lacks ability to define a target market for its products
- the firm lacks ability to acquire information about customers and markets

6. Production management capability

- the firm lacks competence regarding production management
- the firm lacks competence regarding pricing

7. Physical production resources

- the firm lacks ability to find suitable suppliers
- the firm lacks ability to adopt new production technology

8. Financial resources.

- the firms lacks own financial capital
- the firm lacks liabilities

Strategic Renewal and its Effect on Small Firm Performance: Testing for Firm Size Effects Using Dutch Micro Data

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Abstract

This paper investigates the relationship between strategic renewal and the performance of smaller firms (less than 100 employees). A panel of micro data is used on about 1000 Dutch firms. The dataset contains information on aspects of strategic renewal, including process innovation and knowledge management. In the regression analyses, the variation in firm performance is explained and explicitly controlled for reversed causality, business cycle effects, sector effects, and firm age. Market research is found to be an active external network for knowledge acquisition and strategic efforts into the improvement of internal processes are positively related to turnover growth. Furthermore, codification of knowledge, cooperation with partner firms, and the provision of training to employees is found to be directly related to employment growth. The results emphasize the importance of both knowledge absorption and knowledge creation to the success of innovative efforts in small firms. It was also established that the impact of the various measures varies with firm size. One further notable finding is that the ownership of patents negatively impacts upon small firm performance, particularly for the smallest firms in our sample.

Key Words: *strategic renewal, growth of small firms, entrepreneurship, innovation, micro data*

Introduction

It is frequently argued that in the last quarter of the 20th century, competitive advantage moved from large, established enterprises to smaller, younger firms (e.g. Audretsch and Thurik, 2000, Baumol, 2003). In many sectors, new technologies have reduced the necessity of scale economies to arrive at competitive advantages (Meijaard, 2001). Developments like the IT-revolution and the increased role of knowledge in the production process have led to increased dynamics and uncertainty, and, in turn, these developments have created room for (groups of) small firms to act as agents of change (Audretsch and Thurik, 2000). The role of small firms in economic growth has become increasingly obvious, part-taking and frequently even dominating the evolutionary dynamics of the business sectors (in line with Nelson and Winter, 1982, Utterback, 1994).

Most academic scholars and policy makers would agree that the strategic renewal and innovation efforts by private firms positively affect overall economic growth (e.g. Romer, 1990; Aghion and Howitt, 1998; Baumol, 2003). There is relatively little empirical evidence, though, on the actual consequences of strategic renewal and innovation at the level of the individual firm, particularly for various types of firms, and, particularly for firms of different ages and sizes. The positive relationship between strategic renewal and innovation by incumbent, existing firms and the performance of these firms, both in the short and long run, is only a rather weak stylized fact. Furthermore, it is not clear which aspects are in fact most important for achieving firm growth (e.g. Klomp and Van Leeuwen, 2001, Janz et al, 2003). The latter insight is needed to arrive at practical and policy relevant insights. Policy-makers and entrepreneurs are in a relatively weak position in trusting that strategic renewal and innovation pay off, although the picture is somewhat clearer for select groups of technological, young, and knowledge-intensive firms (e.g. Oakey, 1995; Mairesse and Mohnen, 2001; Klette and Kortum, 2002; Lööf and Heshmati, 2004).

Previous studies do not consistently show the positive effect of efforts in strategic renewal and innovation on firm performance (e.g. turnover and employment growth). One reason for this lies in the relatively long period that is typically needed for strategic renewal and innovation activities to contribute to performance. In addition, a reversed causality problem may arise as a direct effect of firm performance on further renewal and innovation efforts. Kleinknecht and Mohnen (2002) provide an excellent survey on these topics. Tackling these reversed causality problems requires at least the use of panel data (see also, for instance, Cainelli et al, 2003). Numerous studies have pointed out that longitudinal research is essential to explore the exact relationship between innovation output and firm performance (Kleinknecht and Mohnen, 2002; Kemp et al., 2003). Such datasets are relatively scarce though. Most studies either use cross-sectional data, or use panel data with only a few years in it (Kleinknecht and Mohnen, 2002, current paper).

In this paper, the relationship between the performance of the firm and a variety of measures of strategic renewal and innovation is investigated where performance is measured in terms of the growth of employment and the growth of turnover of the firm concerned. The goal of the paper is twofold: firstly, to find out which aspects of strategic renewal are most important for firm performance; and secondly, to understand the specificity of the relationship relative to the size of the firms. Given the differences in organization, structure, and behavior of firms of various sizes, different effects of particular strategic renewal and innovation efforts are anticipated (both in timing and strength of the effects). Therefore, whether or not the impact of strategic renewal activities varies with firm size will be explicitly tested. A large sample of micro data on Dutch firms with less than 100 employees was used as part of the study. Data on several aspects of strategic renewal and innovation was employed (for example the introduction of new products or services, the codification of renewal activities, the occurrence of firm-provided training, and the use of an external network to exchange

knowledge). Reversed causality was controlled for independent business cycle effects, sector effects, and firm age effects.

The paper is structured as follows. In the next section, there is a brief discussion on the theory behind strategic renewal and innovation, and then a review of empirical research on the topic takes place. The third section describes the data sources, while in the fourth section the regression model is described and some methodological problems that have to be tackled are highlighted. In section five, the results of the empirical analysis are presented, and the paper concludes with a brief discussion of the implications of the results.

Theory and Earlier Empirical Findings

According to Nelson (1959) and Arrow (1962), a key topic in economic literature has been the need to understand the economics of knowledge generation through corporate investment. The firm has usually been treated as a 'black box', often focusing on the issues of inefficiency due to the (non-) appropriability of returns, although some additional firm and industry attributes have received attention (e.g. technology-push vs. market-pull - Schmookler 1966). A range of authors have provided excellent overviews regarding this matter (particularly Kamien and Schwartz, 1975; Dosi, 1988; Cohen and Levin, 1989; Cohen, 1995; and Freel, 2000) and many would agree with Mowery and Rosenberg (1989) that the potential contribution of economics to the development of better public and private innovation policies has been seriously hampered by the limitations of the theoretical frameworks used and the topics chosen. Authors like David (1985), Cohen and Levinthal (1989), Geroski (1995), Cohen and Klepper (1996), Freeman and Soete (1997) have gradually extended the playing field, which resulted in initiatives like the European CIS waves, in order to achieve a more detailed picture on innovation and its link with firm performance. In Table 1, the variables on strategic renewal and key references for the relation between each variable and firm performance are summarized. The literature on each of these variables is growing on a regular basis as the topic receives increased attention.

Table 1 - Some Recent Empirical Studies on Aspects of Strategic Renewal and Innovation

Variable	Examples of empirical studies focusing on the respective variable and link with business performance
1 New products or new services	Özçelik and Taymaz (2004), Stock et al (2002), De Bretani (2001), Heunks (1998), Souder et al. (1997)
2 Patents	Hall et al (2004), Hall and Bagchi-Sen (2002), Ernst (2001), Arundel (2001)
3 Improvement of internal processes	Rabinovich et al (2004), Mellor and Hyland (2004), Alvarez (2004)
4 Constant renewal part of strategy	Brown and Maylor (2004), Caloghirou et al (2004)
5 Codification of knowledge	Choi and Lee (2003), Nahm et al (2003), Koberg et al (1995)
6 External network for knowledge exchange	Caloghirou et al (2004), Sher and Yang (2004)
7 Market research	Hult et al (2004), Tuominen et al (2004), Calantone et al (1995)
8 Cooperation with other firms for renewal	Tuominen et al (2004), Quintana-García and Benavides-Velasco (2004), Soh (2003)
9 Workers involved in renewal activities	Sher and Yang (2004), Caloghirou et al (2004), Choi and Lee (2003)
10 Firm-provided training	Storey (2002), Ballot and Taymaz (2002), Ballot et al (2001)
11 Quality certificate	Prajogo and Sohal (2004a, 2004b), Mellor and Hyland (2004)

Recent studies by scholars like Malerba and Orsenigo (1995), Artz and Norman (2001), Mohnen and Therrien (2001), Mairesse and Mohnen (2001, 2002), Klette and Kortum (2002), Löf and Heshmati (2004) are increasingly successful in providing consistent answers and in improving the understanding of the link between innovation and firm performance. As stated earlier, a recurring problem is the lack of longitudinal data to tackle causality issues, and, at the same time, the inability to incorporate sufficiently detailed measures of innovation as a process. This study obviously does not end the desire for additional research but it does bring together earlier insights and extend the knowledge base in getting behind the complex link between innovation and firm performance. Particularly, the paper aimed to top the strand of empirical studies in the area of small business economics (Geroski and Machin, 1992, Brouwer et al, 1993, Storey, 1994, Freeman, 1994, Audretsch, 1995, Roper, 1997, Heunks, 1998, Freel, 2000). Additionally, the paper offers an inter-temporal analysis of the relationship between strategic renewal, innovation efforts, and economic performance. It is both the inter-temporal analysis of the link and the analysis of the size-effects that the study aims to add to the body of literature in this area.

Data Sources

Data from the so-called MKB-panel, which is operated by EIM, was used in the study for this paper. In the MKB trimesterly survey of firms with less than 100 employees, information on many aspects of running a business is gathered. By interviewing the

same set of firms for several years, a dataset has grown containing information on more than 3000 variables for 3000 firms from 1998 onwards. Two types of data are broadly used in this study: firm performance measures and strategic renewal measures. The dataset covers the period 1999-2003, and the annual growth in turnover and annual growth in employment are used as firm performance measures. These measures are used because they are both common indicators of firm performance and because they are easily available. Both variables are expressed in percentage changes. A specific set of questions concerning several aspects of strategic renewal and innovation is included yearly in the survey. This set of questions is called the Innovation Barometer and the information from the barometer forms the second main data source of this study (on strategic renewal efforts). The questions asked in the Innovation Barometer are listed in Table 2. The table also includes the labels that are used throughout the paper for the corresponding variables. All of the resulting variables from the Innovation Barometer are binary.

The data from the Innovation Barometer have been gathered yearly since 1999. The Innovation Barometer was developed to measure the degree to which SMEs in the Netherlands are exploring the boundaries of the firm's knowledge and the degree to which they are acting upon opportunities that arise (De Jong, 1999). As explained above, on many of the issues scholarly insight has evolved, nevertheless keeping the overall relevance intact (cf. Wolfe, 1994). In the course of years, on an incidental basis, some additional questions on innovation have been asked as well. Some of the information from these additional questions is also used in this paper, since they provide rather specific accounts of inputs and outputs related to strategic renewal. These include the percentage of employees in the firm involved in renewal activities, the percentage in turnover obtained from new products or services, and the degree to which actual R&D investments have been made. The first two variables are available for 1999. The R&D variable is included as a dummy for 1998. Finally, firm age and several dummy variables are used as additional control variables.

Table 2 - Sample Questions and Variable Labels Innovation Barometer

	Label	Question
1	New products or services	Did your company put new products or services on the market over the past three years?
2	Patents	Is your company in the possession of patents?
3	Improvement of internal processes	Did your company introduce improvements or renewal in internal company processes over the past three years?
4	Constant renewal part of strategy	Does constant renewal form part of your company strategy?
5	Codification of knowledge	If yes (on question 4), are these renewal efforts written down on paper?
6	External network for knowledge exchange ⁴	Does your company use an external network for the exchange of knowledge, for instance through universities, competitors, suppliers or advisers?
7	Market research	Did your company perform (or outsource) market research over the past three years?
8	Cooperation with other firms for renewal	Does your company cooperate with other companies or institutions to carry out renewal projects?
9	Workers involved in renewal activities	Are your employees (including unpaid family workers and owner/managers) involved in renewal activities?
10	Firm-provided training	Did your company in the past year finance any additional training of employees (including unpaid family workers and owner/managers)?
11	Quality certificate	Is your company in the possession of a formal quality certificate (for instance, ISO)?

Hypotheses, Methods, and Model

Hypotheses

In order to measure the impact of innovation on firm performance, a multiple regression analysis was undertaken with firm performance (turnover growth or employment growth) as the dependent variable, and the strategic renewal measures discussed earlier (i.e., the 11 binary variables corresponding to the questions in Table 2, and the three additional, continuous variables mentioned in Section 3) as independent variables. As regards model hypotheses, it is clear that all strategic renewal measures have expected positive relations with firm performance with size class differences in the relationships explicitly investigated. Therefore, both the intercepts and the estimates are allowed to vary by size class. As explained in section 2, a range of earlier studies point at the size dependence of determinants of firm performance, particularly in relation to strategic renewal and innovation efforts (e.g. Kemp et al, 2003; and Cohen and Levin, 1989). Table 3 summarizes the set of hypotheses to be investigated. In the extant literature on this topic, some contradictory results are found for several hypothesized effects. In particular, some of the size effects may only start to work at

⁴ We avoid using the word 'cluster' in our label, as that would imply a geographical concentration not referred to in the question. Wever and Stam (1999) show that for Dutch high technology SMEs (some 8% of all SMEs), 'regional clusters, characterized by innovation linkages with other firms and knowledge centres, hardly exist'. Instead, they find that most of the customers and suppliers which the interviewed high technology SMEs consider relevant for their innovative development are located outside their own (COROP or NUTS3 level) region.

larger sizes than analysed here. Previous studies have also shown non-linear size effects (e.g. Cohn and Levin, 1989; Lööf and Heshmati, 2004).

Table 3 - Hypotheses

Variable	Expected effect on business performance	Effect expected to be stronger, similar or weaker the larger the firm?
1 New products or services	+	+
2 Patents	+	+
3 Improvement of internal processes	+	+
4 Constant renewal part of strategy	+	+
5 Codification of knowledge	+	+
6 External network for knowledge exchange	+	-
7 Market research	+	+
8 Cooperation with other firms for renewal	+	-
9 Workers involved in renewal activities	+	-
10 Firm-provided training	+	+
11 Quality certificate	+	+

Methods

Before the impact of the various measures on performance can be established, a number of methodological problems must be considered. This involves the choice of control variables, the choice of lags for the independent variables, the estimation of missing data, the construction of the estimation sample, and the selection of the final model specification. Each of these topics will be elaborated upon below.

(1) Control Variables

To obtain unbiased estimators for the effects of the strategic renewal variables, it is important to include a sufficient number of control variables in the model. This study included six (groups of) control variables: (i) a lagged dependent variable, (ii) dummy variables for years, (iii) dummy variables for sectors, (iv) dummy variables for size classes, (v) firm age and (vi) lagged turnover growth . The rationale behind each of these controls is as follows:

- (i) The lagged dependent variable (turnover growth or employment growth in year $t-1$) helps to control for reversed causality (i.e. it controls for the effects of firm performance actually inducing innovation, since strong firm performance creates resources to invest in innovation). This reverse effect is not of primary interest and therefore there is no need to correct for it. The concept is known in the econometric literature as Granger-causality . In this model, if firm growth influences innovation (the 'reverse' effect) and firm growth also influences future firm growth (growth autocorrelation or path dependency), then the omission of the lagged dependent variable in analyses causes a bias. The estimation of the effect of innovation on firm performance would then be biased due to

the reverse effect (i.e. the positive correlation between past growth and innovation creates a 'spurious' effect if not corrected).

- (ii) The study included year dummies to allow for (economy-wide) business cycle effects. The years 2001 until 2003 are used in the sample.
- (iii) Sector dummies are included to allow for sector-specific effects, in particular sectors being in different stages of the business cycle in the period under investigation. The dummies can partly reflect differences in wage levels between sectors, affecting employment growth. The dummies used for the eight sectors are listed in Table 2.
- (iv) Size-class dummies are used to allow for structural growth differences between firms of different size classes. It is generally considered a 'stylized fact' that Gibrat's 'law of proportional effect' does not hold (Klomp et al, 2003) . Small firms grow at systematically higher rates than their larger counterparts. Even though the study removed observations with exceptionally high growth rates from the sample (which are mostly smaller firms), it is not unlikely that Gibrat's Law is still violated in the estimation sample. Therefore size-class dummies are included in the model (see Table 4).
- (v) It was also necessary to control for firm age. Literature on the effect of firm age on firm performance indicates that young firms grow faster than old firms (Verhoeven, 2004). However, as there is a significant correlation between firm age and firm size, for which the study also controls, firm age is used only to test the robustness of the model.

Table 4 - Distribution of Sample Observations Over Sectors and Size-Classes*

Sector	Observations
Manufacturing	75
Construction	98
Trade	99
Hotels and restaurants	56
Transport and communication	47
Business services	50
Financial services	43
Personal services	29
Total	497

Size-class	Observations
Micro firms (0-9 employees)	203
Small firms (10-49 employees)	177
Medium-sized firms (50-99 employees)	117
Total	497

**Estimation sample for turnover growth regression.*

- (vi) In the employment growth regressions, (lagged) turnover growth is included as an additional control variable. In labour market economics, it is common practice that employment is determined by production, instead of the other way around (e.g. Lever, 1996; and Van Stel, 1999). Therefore, following Kemp et al. (2003), (lagged) employment growth is

not used as a determinant of turnover growth, but (lagged) turnover growth is used as a determinant of employment growth.

(2) Lags

For the explanatory variables in the model that vary over time (the strategic renewal variables and the lagged dependents), autocorrelation exists. In order to avoid multicollinearity problems, only one lag of each explanatory variable is included. Ideally, it would be preferable to experiment with different lag lengths in the model to establish the exact lag structure of the impact of strategic renewal activities on firm performance (i.e. how long does it take before implementation of some activities actually influences performance?). However, the time period of the data panel is too short (1999-2003) to actually make inferences on the lag structure. Instead, based on the relationship with the dependent variable in auxiliary regressions (regarding significance), and considering the limited availability of data over time, a lag length of either one year or two years was chosen for each of the strategic renewal variables .

(3) Missing Data

For 2001, the strategic renewal data are missing. In such cases, the data for 2001 has been estimated as the average of 2000 and 2002. As the variables are all of the binary type, the variables for 2001 thus get the value 0 or 1 (if the occurrence of a certain innovation measure has not changed between 2000 and 2002), or 0.5. In the latter case, a certain renewal activity took place in 2000 but no longer in 2002, or vice versa . In such cases, it is considered that interpolation is a plausible estimation method and it implies that the change takes place gradually. For instance, if a firm does not have a formal quality certificate in 2000, but it does have one two years later, then it is likely that the firm already made preparations to qualify for such a certificate in the year in between. So, in a way, in that year, the firm already had obtained 'half' of the certificate. One might even argue that a value of 0.5 is more appropriate in such cases, even if the 'true' value would be 1 (if the firm actually received the certificate in the intermediate year). The change in work processes underlying the acquisition of a quality certificate is more incremental in nature than the radical change involving the moment of acquisition suggests. Similar arguments apply for the other innovation variables.

(4) Estimation Sample

When using micro data, there is always a danger of outlier observations disturbing the estimation. Some individual firms will deviate heavily from the 'average' firm in terms of strategic renewal activities or firm performance. Incidentally, typing errors may also be involved. Such outlier cases fall outside the scope of this model and should be removed from the estimation sample. The construction of the estimation sample for this paper is as follows: begin with the firms in the SME Panel that participated in all three surveys of the Innovation Barometer (1999, 2000 and 2002); there are 606 firms in total. Next, remove observations with extreme values for turnover or employment growth (or past growth). Annual growth rates of more than 100% or less than -50% are

defined as extreme . Using the remaining sample of observations, run a regression with all 11 strategic renewal variables (either with a one- or a two-year lag) and the control variables. However, the residuals of this regression are skewed, as appears from the large value of the Jarque-Bera test statistic. Thus, outlier observations disturb the estimation, creating a bias in the parameter estimates. Therefore, observations in the tails of the residuals were removed. In particular, those observations with an (absolute) standardized residual exceeding 2 were removed. This results in unbiased parameter estimates, as the Jarque-Bera test statistic then falls below the critical value (10% significance level) . Applying this procedure results in 497 observations for the turnover growth regressions, and 717 observations for the employment growth regressions (there is one extra year for employment growth, hence the higher number of observations). The estimation sample is cleaned of outliers, both in terms of variable values, and in terms of regression residuals. The use of individual firm data justifies the steps described above (although alternatively, similar methods might have been used).

To obtain an impression of the resulting sample, the distribution of the observations over sectors and size classes are presented in Table 4. Except for the primary sectors, firms from all sectors of economy are included in the dataset. Outliers also occurred quite evenly across sectors. In regard to size, three size-classes are distinguished: micro (0-9 employees), small (10-49 employees), and medium-sized (50-99 employees). The data set does not include larger medium-sized firms (100 or more employees). From Table 4 one can read that the observations are quite evenly spread over the different sectors and size-classes .

Final Model Specification

With much of the basic groundwork undertaken, final model specification could now be refined, enabling regressions to be run explaining turnover growth or employment growth from the strategic renewal variables of the Innovation Barometer, while taking account of control variables and possible size class differences in the effects of the explanatory variables. In order to allow for different effects per size-class, all innovation variables were multiplied by the three size-class dummies (micro, small, and medium-sized) . In the data set, there was some correlation between independent variables, potentially causing problems of multicollinearity. In interpreting regression results, there was little interest in estimates that are inefficient because some non-significant variables (which possibly correlate with other independent variables) are still included in the model. However, the correlation matrix (not in the paper) showed relatively high correlations for many pairs of independent variables. This makes it difficult to establish beforehand which variables should be removed in order to avoid multicollinearity. Therefore, it was determined to let the data speak for themselves by applying a selection procedure that exclusively left the significant variables, enabling interpretation of regression results, and to use liberal criteria for inclusion of variables so as to minimize the possibility of removing variables that might have a certain impact. The selection procedure therefore was as follows: using the 'cleaned' estimation samples, the process was started by running the regression explaining turnover (employment)

growth from the 33 innovation variables (11 innovation measures times 3 size-classes) and the mentioned control variables. In a second step, only the innovation variables were included, for which at least one size-class coefficient is significant at 10% level. Next, if in this second regression all (remaining) innovation variables still have at least one significant size class coefficient, this was used as the final specification. Otherwise, the non-significant variables are once more removed, until all variable coefficients are significant (at 10%, for at least one size-class). In this way the ‘dominating’ variables remain in the final model specification, and the extent of overestimation of standard errors due to multicollinearity is kept to a minimum.

Results

In this section the results of our empirical analysis are presented. Firstly, descriptive statistics for the variables in the data set are highlighted. In particular, the means and standard deviations for the estimation sample are offered. Subsequently, the results of the multiple regressions for both turnover growth and employment growth are presented. Special attention is paid to firm-size effects. Finally, the outcomes of various robustness tests are outlined. These tests include the use of the additional variables (other than the strategic renewal variables from the Innovation Barometer) and the inclusion of firm age.

Descriptive Statistics

The means and standard deviations of the variables in the data set are reported in Tables 5, 6 and 7. In reading these tables it is important to realize that outlier observations are excluded. As previously mentioned, firms with an implied turnover growth or employment growth of more than 100%, or a loss of more than 50% in one year, are defined as outlier observations. In the tables observations that are inconsistent (like %-shares in excess of 100) are also excluded.

Table 5 - Descriptive Statistics for Firm Performance Measures

		Total	Micro (0-9)	Small (10-49)	Medium-sized (50-99)
Turnover growth (%) *	Mean	4.6	5.9	4.5	2.4
	(Std. dev.)	(14.0)	(15.7)	(13.4)	(11.4)
	Observations	497	203	177	117
Employment growth (%) **	Mean	-0.4	-0.1	-0.7	-0.5
	(Std. dev.)	(10.2)	(10.2)	(11.0)	(8.7)
	Observations	717	268	265	184

* Estimation sample of turnover regression is used (see table 8).

** Estimation sample of employment regression is used (see table 9).

From Table 5, it can be seen that, on average for the sample period, the firms in the data set have achieved a small positive turnover growth, but employment has not

increased. Smaller firms have performed somewhat better than their larger counterparts, particularly in terms of turnover growth. The differences between size-classes are not significant though: the large standard deviations point at a large amount of variation in growth levels among the firms in the panel. From Table 6, it can be seen that about half of the firms claim to have introduced new products or services in the past three years. The percentage of firms with patents is small: only eight percent of all firms smaller than 100 employees. Some further interesting information from the table is that about half of the firms use an external network to exchange knowledge and three out of four firms provide some form of training to employees. Most innovation measures score higher in the subsample of small and medium-sized firms.

Table 6 - Descriptive Statistics for Variables from Innovation Barometer *

		Total	Micro (0-9)	Small (10-49)	Medium-sized (50-99)
New products or services	Mean	.47	.42	.52	.51
	(Std. dev.)	(.48)	(.47)	(.48)	(.48)
Patents	Mean	.08	.05	.07	.16
	(Std. dev.)	(.26)	(.21)	(.24)	(.35)
Improvement of internal processes	Mean	.82	.74	.88	.88
	(Std. dev.)	(.38)	(.44)	(.32)	(.33)
Constant renewal part of strategy	Mean	.70	.59	.75	.81
	(Std. dev.)	(.43)	(.49)	(.41)	(.36)
Codification of knowledge**	Mean	.41	.29	.46	.56
	(Std. dev.)	(.49)	(.45)	(.50)	(.50)
External network for knowledge exchange	Mean	.45	.35	.51	.55
	(Std. dev.)	(.46)	(.44)	(.46)	(.46)
Market research	Mean	.38	.27	.44	.50
	(Std. dev.)	(.49)	(.44)	(.50)	(.50)
Cooperation with other firms for renewal	Mean	.45	.36	.40	.68
	(Std. dev.)	(.50)	(.48)	(.49)	(.47)
Workers involved in renewal activities	Mean	.64	.51	.71	.75
	(Std. dev.)	(.45)	(.47)	(.42)	(.40)
Firm-provided training	Mean	.75	.53	.88	.93
	(Std. dev.)	(.43)	(.50)	(.33)	(.25)
Quality certificate	Mean	.36	.20	.37	.61
	(Std. dev.)	(.46)	(.38)	(.46)	(.48)
Observations		497	203	177	117

* Estimation sample, and lag lengths (one or two years), of turnover regression are used (see table 3).

** Percentage refers to whole sample (i.e., including those firms answering 'no' on question 4 of Innovation Barometer).

In Table 7, several interesting things can be interpreted. The percentage of employees involved in renewal activities is higher for smaller firms, while (see Table 6) the total number of firms with any employee involved in renewal activities is higher among larger

firms⁵. This could suggest that once strategic renewal is embraced by a microfirm, more employees within the firm are involved. To the contrary, for medium-sized firms, although strategic renewal activities by employees occur more often, only a small part of personnel is involved in these activities. This scale effect implies that larger firms class their strategic renewal activities under a small number of qualified employees (specialization). Most existing large firms have traditionally organized their innovation activities centrally, often within a separate R&D department (Klomp en Van Leeuwen, 1999). More micro firms tend to specialize in being innovative altogether. The high share of innovative personnel among small firms partly results from a denominator-effect as well⁶. For the percentage of new products or services in turnover, something similar can be noted. While the occurrence of new product introductions is somewhat higher for small and medium-sized firms (roughly 50%, versus 40% for micro firms), the percentage in turnover of new products is higher for micro firms: 28% versus 13% for medium-sized firms⁷. The lower occurrence among micro firms of the above two forms of activities can be explained by the existence of the financial risks associated with investing in small firms. These investments can be relatively expensive, while returns on these investments are uncertain. Small firms only have a few bets to play and they will suffer from lemons' problems in the market for capital (due to asymmetric information à la Akerlof, 1970). Larger firms have more resources to deal with or spread these financial risks internally. Furthermore, even when a small firm is willing to make investments in these renewal efforts, it is possible that financial institutions are not willing to supply the capital needed. The most important reason for this is the information asymmetry between suppliers of capital and small firms. The first often lack insight in the financial situation of firms to estimate the risks involved, while the second often do not know on which conditions financial institutions grant loans to smaller firms (e.g. Berger and Udell, 1995). For start-ups (mostly small firms) it is even harder to obtain loans, since they cannot show a track record. Finally, Table 7 shows that investments in actual R&D occur more often in larger firms (no significant difference with microfirms though). It can also be seen that larger firms are, on average, older.

⁵ This is not due to the different sample in table 7 (caused by missing values). For the 407 observations the pattern for the occurrence of innovative workers is similar to that in table 6 for the 497 observations: means are 0.58, 0.74 and 0.76 for micro, small and medium-sized firms, respectively.

⁶ The denominator effect implies that for smaller firms the occurrence of one extra innovative employee results in a higher increase of the share of innovative personnel than for larger firms.

⁷ Again, this is not due to the different sample in table 7.

Table 7 - Descriptive Statistics for Remaining Innovation Measures, and Firm Age

		Total	Micro (0-9)	Small (10-49)	Medium-sized (50-99)
% employees involved in renewal activities, 1999	Mean	29	45	27	12
	(Std. dev.)	(34)	(39)	(30)	(18)
	Observations	407	142	154	111
% new products or services in turnover, 1999	Mean	22	28	22	13
	(Std. dev.)	(18)	(21)	(15)	(11)
	Observations	314	118	116	80
dummy R&D investments, 1998	Mean	.36	.28	.42	.38
	(Std. dev.)	(.48)	(.45)	(.50)	(.49)
	Observations	317	109	117	91
Age of firm (in years)	Mean	26.1	17.4	28.5	37.5
	(Std. dev.)	(26.0)	(17.8)	(25.5)	(33.1)
	Observations	497	203	177	117

Multiple Regressions for Turnover Growth

The regression results for turnover growth are depicted in Table 8. In the first column, all 11 strategic renewal variables are included, with separate impacts for each size-class (through multiplication by the size class dummies). In the second column the insignificant variables are removed. This second regression serves as a 'benchmark' for the regressions in columns 3 to 5, which adds the variables from Table 7 to the model. Below, the results of the 'benchmark' regression are discussed.

Table 8 - Turnover Growth Regressions, Sample Years 2001-2002

		I	II benchmark	III	IV	V
Constant		9.0 ***	8.6 ***	7.5 **	8.1 **	4.5
New products or services, t-1	micro	1.2				
	small	1.1				
	med.	-2.7				
Patents, t-1	micro	-19.1 ***	-17.9 ***	-16.2 ***	-19.5 ***	-17.2 ***
	small	-9.1 **	-8.1 *	-9.7 **	-7.4 *	-9.2 **
	med.	-5.1	-6.9 *	-6.6 *	-5.2	-5.6
Improvement of internal processes, t-2	micro	.7	1.5	2.6	3.2	6.4 *
	small	7.8 **	8.0 **	7.8 *	2.1	9.1 **
	med.	1.0	2.5	1.2	2.3	3.7
Constant renewal part of strategy, t-1	micro	-6.6 **	-5.8 **	-3.4	-4.4	-6.4 *
	small	-4.0	-4.5	-1.0	-3.4	-10.7 **
	med.	-2.5	-3.1	-3.3	-4.5	-8.8 *

Codification of knowledge, t-2	micro	4.0				
	small	-.3				
	med.	.2				
External network for knowledge exchange, t-1	micro	.03	.8	-.3	-1.7	.5
	small	6.1 **	6.9 ***	4.8 *	8.4 ***	7.9 ***
	med.	.1	.3	.2	3.2	1.2
Market research, t-2	micro	5.8 **	6.2 ***	6.8 ***	9.1 ***	7.4 **
	small	-1.6	-2.1	-2.7	-.7	-.4
	med.	7.3 ***	8.0 ***	7.2 ***	8.5 **	8.7 ***
Cooperation with other firms for renewal, t-2	micro	.6				
	small	.04				
	med.	4.4				
Workers involved in renewal activities, t-1	micro	-1.9				
	small	.07				
	med.	-3.3				
Firm-provided training, t-2	micro	1.4				
	small	.9				
	med.	7.2				
Quality certificate, t-1	micro	-1.5				
	small	-3.7				
	med.	-1.1				
% employees involved in renewal activities, 1999	micro			-.04		
	small			-.04		
	med.			.03		
% new products or services in turnover, 1999	micro				.0009	
	small				-.09	
	med.				-.06	
dummy R&D investments, 1998	micro					.5
	small					1.4
	med.					-3.1
Turnover gr., t-1		-.09 ***	-.09 ***	-.05	-.11 ***	-.11 ***
Adjusted R2		.10	.12	.11	.16	.13
Observations		497	497	407	314	317

Coefficients for year, sector, and size-class dummies not reported.

, **, *: Significant at 10%, 5% or 1% level, respectively.*

According to Table 8, the possession of patents has a negative effect on turnover growth, contrary to expectations. This possibly reflects the process that firms shift their activities towards investing in product development and market introduction once a patent is obtained. The estimation results indicate that this effect is smaller for larger firms. Artz and Norman (2001) found a similar negative effect of holding patents on sales growth (while not differentiating between size classes). They state that patents give firms a unique position in the market and, as a result of this, they may price their product at a premium. This premium increases the profit margin, but as the selling price is higher, consumers turn to substitute products. This in turn has a negative impact on sales growth. On average, positive returns on patents are expected to be visible over a longer period than the one considered in this analysis. Possibly the effect remains for the smallest firms if they fail to grow. The result should be interpreted with caution

however, as the percentage of firms with patents in the data set is very low, especially for microfirms (see Table 6). The estimates are based on small numbers of observations and therefore less reliable on the population level.

The results indicate that attention to the improvement of internal processes leads to a higher turnover growth for small firms. Examples of such internal processes are reorganizations, routing schemes of products, or the human-research policy towards the selection of innovative personnel. Improvements of internal processes are associated with a more efficient innovation process, that is the transition from innovation input into innovation output. This improved efficiency has a significant positive effect on turnover growth. Part of the positive effect concerns firms that are entirely devoted to process innovation as a form of innovation output (as opposed to product innovation). The coefficient of constant renewal as part of the strategy is significantly negative for micro firms. Similar arguments for the effect of patents also hold: positive returns of this variable are to be expected in the long run, and the small innovative firm has to grow at some point to actually survive. Firms that incorporate constant renewal in their strategy are engaged in innovation on a structural basis (Brown and Maylor, 2004; Caloghirou et al, 2004). This involves gradual improvements in products or production processes, which have a negative effect on sales in the short run. This indicates that micro firms are often dependent on the turnover of a small number of products or product categories. If these are still under development or improvement, total sales will be lower in the short and medium run. A small firm has to trade in marketing and sales activities for these development efforts (Gifford, 1998).

The use of an external network has a significant positive effect on turnover growth for small firms. This network may include universities, competitors, partners, suppliers, and/or advisors. Firms that make use of such networks are able to exchange knowledge on the product level, but also information on market structure, trends, and developments could be shared. This raises the level of innovation input (information being one of the inputs). Furthermore, the knowledge diffusion accelerates the transition process of strategic inputs into actual output (Sher and Yang, 2004). The effect of conducting market research is positive (insignificantly for the middle group). Market research is an important tool for SMEs to explore consumer wants and to take these into account in product development. From a consumer perspective, market research can be used to collect consumer preferences with respect to products and services, and (lifestyle) trends may be identified. From this perspective, market research is used as a means to give direction to both the shape of the innovation output (new or improved products), as well as to the type and level of inputs (what is needed to accomplish the desired output). From a producer perspective, a firm can use market research to investigate the possible demand for a newly or improved product or service. This gives direction to the market introduction and/or promotion and distribution strategy towards the relevant targeted groups. The variable does not distinguish between these different perspectives, but altogether market research contributes to a higher turnover growth. It can be seen that the coefficient of turnover growth in the previous period (the lagged dependent) is highly significant, with a

negative sign. Apparently, some kind of 'error-correction' occurs: if firm performance is very good in a certain year, it is often a bit less good in the next year (for example, because the exceptional year was caused by some incidental revenues). It should be noted however that this alternating, error-correcting effect is only about 10%.

Regarding the non-reported dummy variables, the most notable results are as follows. No significant economy-wide business cycle effects for 2002 (reference year 2001) could be found. As regards to sectoral effects, no significant differences between sectors can be found, except for transport and communication which has grown structurally faster than the other sectors in 2001 and 2002. As regards size-class effects, it was found that the small and medium-sized firms grow at a structurally slower pace than the micro firms. This confirms the stylized fact of violation of Gibrat's Law, found in many empirical studies, although there may be a limited selection bias. There is no significant difference between small and medium-sized firms, though. Finally, as regards the adjusted R² values, it can be seen that this varies between 0.10 and 0.16. This is not too low, given that micro data are used, and given that only one specific type of variables was included in the model (i.e., variables related to strategic renewal). Of course other variables, such as the quality of human and physical capital within the firm, and market circumstances, impact upon performance as well. These phenomena are only captured by the model to an unknown extent through the lagged dependent variable. The level of explained variance is therefore plausible.

Firm-Size Effects for Turnover Growth

According to the above regression results, systematic firm-size effects occur. A firm-size effect is considered to exist if the impact of an explanatory variable monotonically increases or decreases with firm size, both in terms of magnitude and in terms of significance. Using this definition, firm-size effects can be found for the possession of patents and for the variable constant renewal part of strategy. As regards patents, the negative effects are clearest in the smallest class of firms, the micro firms. Considering that the moment when the patent is obtained is not known, this can be interpreted in two ways. Firstly, if the patent is just obtained, the negative coefficient reflects the relatively high cost of investment in innovation for micro firms, given their turnover levels. Secondly, if the patent was obtained some time previously, the negative effect reflects a failure of the successful commercialization of the patent. This implies that the costs of innovation cannot be earned back. This, in turn, indicates that small innovative firms actually have to grow in order to survive. The data set does not allow one to distinguish between these possibilities. For both cases, though, it is likely that larger firms have more financial resources through diversification, hence the smaller negative effect on turnover growth. The second firm-size effect concerns the systematic negative effect on turnover growth of constant renewal in the firm's strategy. The negative coefficient is significant only for the smallest class of firms. Again, this can be explained by the higher degree of diversification among larger firms, which reduces the relative cost of incorporating constant renewal in the firm's strategy.

Multiple Regressions for Employment Growth

The results for employment growth are depicted in Table 9. Compared to turnover growth, there is one sample year extra (2003) in these regressions. This is because employment (a stock variable) is measured in the first half of the calendar year. At the time of this study, employment data for 2003 was already secured, but not turnover data for 2003, as turnover is a flow variable measured over the calendar year. For the middle size-class, firms that have produced new products and/or services have a significant lower employment growth than firms that have not (at the 10% level). When innovation activities have resulted in new products or services, the market introduction follows. This may suggest that for small firms, introduction costs are relatively high, inhibiting employment growth in the short-run. Resources are allocated for the market introduction, leaving little room for hiring new personnel. Unfortunately, data restrictions do not allow us to determine the long-run effect. The coefficient for patents is significantly negative and more so the smaller the firms. This indicates that the possession of patents leads to a lower employment growth. As reported earlier, this variable also has a negative effect on turnover growth suggesting that patents do not immediately make life easier for small firms since there are likely to be problems in actually making the commercialization of the patented ideas work.

Table 9 - Employment Growth Regressions, Sample 2001-2002-2003

		I	II benchmark	III	IV	V
Constant		-5.8 ***	-5.5 ***	-5.2 **	-5.8 **	-6.2 ***
New products or services, t-1	micro	-1.3	-1.7	-1.1	-3.8 *	-1.6
	small	-3.4 **	-2.5 *	-2.8 *	-1.0	-3.4 *
	med.	-.6	.01	-.2	.1	1.0
Patents, t-2	micro	1.9	1.3	.9	-.3	2.2
	small	-5.3 **	-5.0 **	-4.8 **	-5.0 **	-5.1 **
	med.	2.5	1.7	1.7	1.0	1.7
Improvement of internal processes, t-2	micro	2.3				
	small	2.5				
	med.	1.2				
Constant renewal part of strategy, t-2	micro	-3.4 **				
	small	-1.4				
	med.	.8				
Codification of knowledge, t-1	micro	6.1 ***	5.7 ***	6.3 ***	6.7 ***	5.7 **
	small	-.4	-.1	-.3	-1.1	.9
	med.	-.8	-1.4	-1.7	-2.6	-3.3
External network for knowledge exchange, t-2	micro	-1.5	1.3	1.7	.5	-.4
	small	2.8 **	3.2 **	3.1 **	2.8 *	2.5
	med.	-.6	-.5	-.5	-.07	-1.9
Market research, t-2	micro	-.9				
	small	1.8				
	med.	1.5				

Cooperation with other firms for renewal, t-2	micro	-1.6	-1.7	-2.6	1.0	-1.7
	small	2.6 *	3.0 **	2.5	3.1 *	4.7 ***
	med.	2.6	3.2 *	2.9	2.8	5.3 **
Workers involved in renewal activities, t-2	micro	.9				
	small	2.3				
	med.	-.06				
Firm-provided training, t-1	micro	-1.0	-.8	-1.4	-.5	1.2
	small	3.3 **	3.5 **	3.4 *	4.7 **	3.2
	med.	1.5	1.2	1.4	2.8	2.5
Quality certificate, t-1	micro	.6				
	small	-.8				
	med.	-2.6				
% employees involved in renewal activities, 1999	micro			.0006		
	small			.03		
	med.			.005		
% new products or services in turnover, 1999	micro				.02	
	small				.02	
	med.				-.03	
dummy R&D investments, 1998	micro					-.1
	small					-.05
	med.					.9
Turnover gr., t-1		.09 ***	.08 ***	.12 ***	.09 ***	.09 ***
Empl. growth, t-1		-.08 ***	-.08 ***	-.10 ***	-.06 ***	-.08 ***
Adjusted R2		.17	.16	.18	.16	.17
Observations		717	717	598	458	473

Coefficients for year, sector, and size-class dummies not reported.

*, **, ***: Significant at 10%, 5% or 1% level, respectively.

For micro firms there is a direct positive effect of codification of knowledge. Firms that write down their renewal efforts perform better in terms of employment growth than firms that (wittingly or unwittingly) keep relying on using tacit (or implicit) knowledge. In part, this is an indication of the degree of professionalism in the small firm. From Table 6, it can be seen that only 29% of micro firms make an effort to codify their renewal activities. The codification process is not easy, and micro firms have less financial ability (or priority) to invest in knowledge codification processes. Furthermore, it clarifies the common goals of the firm, helping employees to focus on what is most important. Exchanging knowledge by means of external networks has a positive effect on employment growth for the middle class of small firms. As stated earlier, the use of a network can raise the level of innovation input, which in this case results in hiring new personnel. In particular, firms that are part of a network also directly have easier access to qualified employees to fill vacancies. Similar arguments apply for firms that cooperate with other firms. This variable also displays a significant positive value and has a direct effect of firm-provided training on employment growth. It is only (significantly) positive for the middle size class of small firms. The effect for small firms is considerably larger than for micro firms. This is probably related to the amount of training support provided as panel data on 173 Dutch firms (De Kok, 2002) showed that the amount of training support per working day has a positive influence on the benefits of training. He also showed that smaller firms provide, on average, less training support

than their larger counterparts. The combination of these phenomena implies that smaller firms benefit less from firm-provided training, compared to larger firms. However, the above argument does not explain the smaller effect for medium-sized firms (compared to small firms).

Similar to the turnover growth regressions, the lagged dependent variable is highly significant with a negative sign. Furthermore, the effect of lagged turnover growth is significantly positive, as expected. When turnover grows, there is more room (and need) to hire new employees. Regarding control dummies, the most important difference with the earlier results is that the dummy for 2002 is significantly positive. This implies that, unlike turnover, employment has grown structurally faster in 2002 than in 2001. The dummy for 2003 is also significantly positive. Again, adjusted R² values are plausible. They are somewhat higher compared to Table 8 and this is caused mainly by the additional independent variable turnover growth (next to the lagged dependent).

Firm-Size Effects for Employment Growth

For employment growth, there are firm-size effects of codification of knowledge and cooperation with other firms. The positive effect of knowledge codification is significant to micro firms only. A possible reason for this is the dependence on only one or two persons holding the tacit knowledge of the firm. Those micro firms that are able to write down their innovation intentions on paper are less vulnerable to the loss of one or two persons holding the tacit knowledge. For larger firms, knowledge codification does not discriminate between low and high performing firms (in terms of employment), since these firms usually are more professionally organized, compared to small firms. According to Table 9, the effect of cooperating with other firms increases with firm size. For the micro firms the effect is not significant, while the size of the effect for small and medium-sized firms is significant and approximately the same. This indicates that micro firms are not able to attract employees from contacts with other firms, as they often pay lower wages, and offer less career opportunities than larger firms do (De Kok, 2002).

Robustness Tests

In this section the impact of the additional explanatory variables from Table 7 are discussed. Using the 'benchmark' specifications in Tables 8 and 9, the three innovation measures to the model are added (separately): percentage of employees involved in renewal activities, percentage in turnover obtained from new products or services, and the dummy for R&D investments. The purpose of this exercise is twofold. The first and most obvious reason is to investigate the effects of these variables. Second, because the three variables have considerable numbers of missing values compared to the benchmark estimation samples, the regressions also act as a robustness test for the results found earlier, as the estimation sample becomes different (and smaller).

The results of these measures are in the last three columns of Tables 8 and 9. It can be seen that none of the variables are significant, not even at 10% level, suggesting

that these phenomena are not directly important for achieving firm growth. As regards the share of innovating employees and the share in turnover of new products, these results are perhaps not surprising as the corresponding occurrence variables from the Innovation Barometer are also not significant, at least not for turnover growth. Concerning the reliability of the 'benchmark' results, one might say that these are reasonably robust. Comparing specifications III, IV, and V with specification II, it can be seen that, although the magnitude of certain effects sometimes becomes somewhat different, the sign and significance of the effects remain the same for almost all variable/size-class combinations.

Finally, a separate check on the possible impact of firm age was also undertaken. As already seen in Table 7, the average firm age increases with size. Because the study already controlled for size in the model, it was not expected that firm age would make an additional contribution to explained variation of the dependent . However, as there is quite some variation in firm age in the panel, a test for the possible impact of age was run. The test included both age and the natural logarithm of age as additional variables in the regressions II until V. It was established that the natural logarithm performs somewhat better, but that the variable never becomes significant. For the turnover growth, regressions of the t-value of the log of age coefficients varies between -1.44 and -1.56 . This suggests that older firms seem to grow slower, even after controlling for size. As regards the other variables, the most important difference is in variant III, the effects of both the share of innovating employees (only for micro firms) and lagged turnover growth become significant at the 10% level. The coefficients of other independent variables are hardly affected by the inclusion of firm age. For the employment growth, regressions (including firm age) do not change results whatsoever: t-values of (the log of) firm age coefficients are low (below one). It can thus be concluded that the results are robust for the effect of firm age.

Conclusions and Discussion

In this paper, the relationship between strategic renewal activities and firm performance for small enterprises was investigated, allowing for variations in effects in three size classes. A range of specific strategic renewal and innovation efforts were linked to turnover growth and employment growth. The use of panel data allowed the study to account for several pitfalls that accompany such research. By including lagged (dependent) variables, it was possible to test the appropriate causal relationship (the effect of renewal on firm performance, instead of the other way round). Furthermore, various variables were added to the multiple regressions to control for sector, business cycles, and firm age. The estimated results indicated that knowledge creation and knowledge diffusion are important aspects of the strategic renewal process influencing the performance of small firms. Market research and the use of external networks for knowledge exchange were associated with higher turnover growth. In addition, a positive effect of the improvement of internal processes was found, indicating that process innovation created higher turnover growth. These effects were in line with the hypotheses. The direct effects of actual new products and services on turnover growth

were limited, as were the involvement and training of employees and the cooperation with other firms, while knowledge creation and diffusion effects were dominant. Of course this does not mean that the involvement and training of employees and cooperation with other firms are not important in the process of strategic renewal, nor in creating and adopting knowledge. The direct effects of the knowledge generation efforts are simply more important for turnover growth.

For employment growth, firms that used external networks for knowledge exchange and firms that cooperate with other firms experienced more growth than firms that do not. In addition, one might argue that being a player in networks shortens the process of finding qualified personnel to fill vacancies. Other positive effects regarded the codification of knowledge and firm provided training. Explicit innovation intention (constant renewal as a strategy) had a particularly strong impact on employment growth for micro firms. Once again, these effects were in line with the hypotheses. Meanwhile, renewals as a strategy and process innovation had unclear effects on employment growth. Balancing exploration and exploitation means that some firms grow while persisting in strategic renewal and process innovation, while others (temporarily) shrink while pursuing strategic renewal and process innovation (in line with previous results (e.g. Mohnen and Thierren, 2002)).

The study found clear firm-size effects for holding patents, for applying constant renewal as part of strategy (turnover growth), for codification of knowledge, and for cooperation with other firms (employment growth). Some additional scale effects arose from the descriptive statistics. For nearly all of the strategic renewal variables, the probability of performing the activity increased with size. In particular, a stylized scale effect concerning the incidence of renewal and the employees involved in renewal activities was found. Larger firms are more likely to bring new products or services on the market and to employ people for renewal activities compared to micro firms. Micro firms report a higher share of new activities in total turnover, and, a higher share of employees involved in renewal activities in total employment. This indicated that small firms first have to overcome particular “thresholds” in order to be innovative. The most obvious thresholds in this respect are financial risks and capital restrictions. While decreasing the financial risks involved with investment in strategic renewal remains somewhat difficult, policy makers might attempt to improve the possibilities of attracting financial capital for the smallest innovative and high-potential firms.

Based on the results of the study, policy makers interested in stimulating productivity and effective business innovation should stimulate knowledge creation and knowledge diffusion. Firms should be encouraged to participate in networks (universities, competitors, suppliers, advisors) and to cooperate with each other. For small firms in particular, the knowledge exchange is critical in the success of strategic renewal and innovation efforts. It should be a point of attention to the entrepreneurs. Small firms often lack the financial capacity to make full use of new methods and innovations developed by academic researchers. Likewise, universities have little incentives to share their (newly created) knowledge with small firms. Experiments with so-called ‘knowledge vouchers’ are appropriate. Small firms can exchange these vouchers at

universities to outsource (parts of) projects. In turn, universities cash the vouchers after delivering knowledge to the small firm. In this way, both small firms and universities are given additional incentives to cooperate with each other. It is also worthwhile to encourage university researchers to temporarily work at small innovative firms, so that employees and entrepreneurs can benefit from academic knowledge and integrate this knowledge in the business process (and to make future academic work more practice-oriented). It should be noted that there is more to effective strategic renewal and innovation than just sitting in at “innovation meetings” or visiting a university professor occasionally. The entrepreneurial spirit should be real for any such measures to be effective (as was true for earlier efforts in supporting the development of innovative regions and clusters around specific universities - Wever and Stam, 1999).

Further research is particularly useful in three directions. Firstly, based on this study one can expect knowledge management to be of critical importance to small business performance. The particular organization of such efforts has received relatively little attention, particularly for small and networked firms. Innovation intention and actual innovation performance are probably further apart than one would expect. Secondly, the complexity and structure of the internal and external environment for innovation have not been included in the analysis here. Including measures of the centrality and proximity of particular partners could improve one’s insight into the optimal timing and effective organization of strategic renewal for small businesses. Thirdly, the analysis has been limited to the assessment of a relatively short period of time. Continuity of data collection on strategic renewal and innovation will enable a further deepening of the understanding of business performance in the long run. In addition, the generalizability of the findings should be tested with respect to a trio of aspects. First, to which extent are the results affected by the fact that the strategic renewal data are binary instead of continuous? Second, are the results also valid for other countries than the Netherlands? Third, are the results also valid for firms with more than 100 employees? Again, further data collection is crucial for these questions to be answered.

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