Determinants of Small Firm Growth
An Investigation of The Role of Owner-Manager, Firm and Business Strategy Characteristics

Determinants of Small Firm Growth – An Investigation of The Role of Owner-Manager, Firm and Business Strategy Characteristics

Thesis submitted for the Degree of Doctor of Philosophy

By

Briga Hynes, BBS (Hons) MBS

Department of Management and Marketing
Kemmy Business School
University of Limerick
Ireland

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Abstract

This thesis is an investigation of the internal determinants of small firm growth in Ireland. This research study contributes to the understanding of small firm growth from two perspectives. Firstly, it assesses the contribution that the small firm sector made to the Irish economy during the period 1994 to 2005. Secondly, against this background it identifies the relative importance of the internal determinants of small firm growth in a sample of small firms. A variety of owner-manager characteristics, firm characteristics and strategic factors were investigated with a view to identifying if common characteristics were distinguishable amongst high-growth firms. Three measures were used to assess firm growth - employment, turnover and turnover per employee.

The research approach incorporated a quantitative study (face-face interviews) with 80 owner-managers in the Mid-West region of Ireland.

The results of the empirical study suggest that firm size, age, industry sector are important when seeking to understand high-growth firms. In addition owner-manager age and educational levels were found to be important predictors of high firm growth. Other findings revealed that some of the accepted concepts such as motivation, career history and strategic focus need to be re-examined in their use as predictors of higher small firm growth.

Ultimately, it is difficult to define a precise set of internal determinants of small firm growth, due to the unpredictability of the concept and the heterogeneity of the small firm sector. That said, with the profile of high-growth firms presented in the study government agencies can become more familiar with what to look for in screening potential high-growth firms, and thus be better informed to develop appropriate supports to achieve sustainable firm growth.

It is vital that government policy adopt a more holistic approach, which, inter alia, focuses on the development of established small firms and focus attention on productivity, developing greater export activity, and building the competencies and skills of owner-managers for strategy development. The significance of the role of education on firm growth should be acknowledged in third level educational policy.

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To my family for their encouragement.

Declaration

I confirm that this thesis is my own work and is not copied or plagiarised from other sources.

Signed: [illegible] 29 Aupt 2010

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Chapter One: Thesis Introduction

1.1 Introduction

The general performance of the Irish economy improved dramatically during the 1990s, resulting in the phrase 'Celtic Tiger' in reference to the remarkable economic transformation experienced in Ireland between the years 1994 and 2005. This period of rapid economic growth was largely attributable to the role of FDI and to a lesser degree to the contribution of small and medium indigenous firms. This is despite the fact that over 97 per cent of businesses operating in Ireland employ fewer than 50 people (The Small Business Forum 2006; CSO 2008). This translates into a quarter of a million small businesses in Ireland, accounting for 54 per cent of private sector employment (Small Business Forum 2006). Additionally, small businesses in Ireland account for over 70 per cent of gross value added (GVA) in Construction (around €7.2 billion), over 40 per cent in Services (€15 billion – excluding financial services), and 34 per cent in Manufacturing (€2.1 billion) (Small Business Forum 2006). Furthermore, small firms are an important part of the supply chain activities and the support infrastructure needed to attract and retain foreign direct investment (FDI) in Ireland (Small Business Forum Report 2006). Despite the apparent importance of this sector a review of policy documents revealed a lack of discussion on their contribution as a driver of the economic growth in Ireland since 1994. Therefore, the objective of the thesis is to address a research topic hitherto overlooked in Ireland from two perspectives:

- Firstly, to evaluate the contribution the small business sector has made to the Irish economy during the period 1994 to 2005 by assessing the change in the number of firms, their role in employment creation, industry sector contribution, export performance and their regional distribution.

- Secondly, the research will investigate the internal determinants of small firm growth focusing on how a variety of owner-manager characteristics, firm characteristics and the strategic focus of the business impact on small firm growth. This will identify if it is possible to devise a set of internal characteristics that are common amongst the higher growth firms.

Consequently, the findings of this research study will provide an improved understanding of how small firms contributed to the Irish economy post 1994 and will signal areas that small firm policy must concentrate on. Additionally, the identification of the internal determinants of small firm growth will guide the development of appropriate government policy to facilitate small firm growth and will build on the scarcity of empirical research on the internal determinants of small firm growth in the Irish context. In Ireland small firms are broadly defined into three size classifications to include micro firms (less than 10 employees); small enterprises who employ less than 50 people and medium enterprises (50 or more employees), and are collectively referred to as the SME sector. The rationale for the choice of these two objectives is further expanded upon in the next section.

1.2 An Assessment of the Contribution of the Small Firm Sector to the Irish Economy (1994 to 2005)

In the mid 1990s the importance of the established small business sector to the Irish economy has been acknowledged in a number of research studies (Kinsella *et al.* 1994; Gudgin *et al.* 1995; Hart and Hanvey 1995; Barkham *et al.* 1996). According to Gudgin *et al.* (1995) a "plateau effect" was evident in the behaviour of FDI firms, where there was no real increase in either the numbers of new inward investment firms setting up in Ireland or in the contribution of existing FDI firms to employment generation. Likewise, Barkham *et al.* (1996) suggested that small firms showed a number of advantages which should be developed at a time when there was a reduction in the contribution of FDI firms to employment generation in Ireland. For example, small firms provided an important source of employment for regions with low levels of foreign direct investment; were not as constrained in their operations as larger multinational firms and were more stable in times of economic volatility due to their ability to operate in niche markets (Barkham *et al.* 1996). During the 1990s attracting FDI to Ireland and retaining existing FDI became more challenging for Government due to a number of factors. For instance, Ireland was not viewed as a cost competitive location to operate in due to the rising costs of conducting business and an increase in the number of alternative low cost production locations in Eastern European, India and China (O'Sullivan 2000). Despite these trends and endorsements in a number of academic studies on the importance of nurturing a small firm sector, government was slow to devote specific attention to identifying the needs of this sector. The publication of the Task Force Report on Small Business (1994) was the main document examining the needs of the small firm sector during the Celtic Tiger period. It was not until early 2000 that government publications produced by Enterprise Ireland (2004) and The Small Business Forum (2006) highlighted the need to develop more targeted support interventions (financial and non-financial) to assist owner-managers achieve firm growth in a changing national and international marketplace. Further, the Small Business Forum called for the need to develop more comprehensive and reliable profile data and information on the economic activity of the small business sector in order to devise relevant interventions.

Despite the necessity for this type of information, collecting such data is challenging for a number of reasons including the lack of quantitative baseline data on the numbers of small firms in Ireland, their employment contribution and export growth performance (Hogan and Foley 1996; Garavan *et al.* 1997; O'Sullivan 2000; Callanan and Cuddy 2004). Callanan and Cuddy (2004) argued that much of the data available on the SME sector in Ireland was purely statistical based on crude measures such as the number of firms in operation at one period of time and lacked sufficient detail to extract changes by firm size, industry sector or regional distribution. Government publications produced by The Small Business Forum (2006) and the Central Statistics Office (2008) attempted to compile such data when profiling the small firm sector in Ireland. That said, it is difficult to compare the findings of these reports or derive a consensus on the overall economic contribution that small firms have made to the Irish economy. This is due to the variations in the definitions of a small firm applied in the publications, in the base year used for the collection of data and a lack of clarity regarding how the data was compiled or analysed. These issues impact on the devising of a comprehensive profile of the economic activity of the small firm sector in Ireland and render it difficult to compare variations in the population of small firms by size, age, and industry sector characteristics. Information of this nature is necessary to guide the development of relevant evidence based government policy. This research will present for the first time a comprehensive overview of the contribution that the overall SME sector has made to the Irish economy between 1994 and 2005. This assessment will extend beyond an examination of its employment contribution to include trends in the growth in the number of SMEs, their significance in the industry, services and construction sectors, an examination of their participation in export activity and their regional distribution. This information is presented in Chapter Two of this thesis.

Perhaps related to the lacuna of this aforementioned data, is a lack of any clear explanation in the government publications (referred to above) as to why changes in the contribution of the small firm sector exist. Moreover, an understanding of why variations occur in the performance of small firms will address their heterogeneity and will identify what characteristics are linked with higher growth small firms. Such information will inform the design of small firm policy and result in the more effective allocation of government resources.

1.3 An Investigation of the Determinants of Small Firm Growth – the Role of Internal Factors

To facilitate owner-managers achieve small firm growth it is important to establish what factors impact on such firm growth. Small firms operate within a set of internal micro, and external macro environmental conditions which impact on the growth decisions made by the owner-manager. The relative significance of internal versus external factors on small firm growth is widely debated in the literature. While the role of external (economic, political, societal/demographic, technological and regulatory factors) is acknowledged, the review of the general research studies on small firm growth suggested that the growth effects of these external environment dimensions are less well established (Davidsson 1991; Wiklund 1999; Dobbs and Hamilton 2007).

While the external forces are largely uncontrollable by the owner-manager, knowledge of their possible impact on the strategic direction of the small business is necessary. How these external factors are accommodated for is managed internally by the owner-manager. Conversely, the evidence on the impact of the role of internal factors is more compelling (Storey 1994; Kinsella *et al.* 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Delmar and Davidsson 1999; Dennis and Solomon 2001; O'Gorman 2001; Wiklund 2001; Delmar and Wiklund 2003; Wiklund and Shepherd 2003; Baum and Locke 2004; Wiklund and Shepherd 2005; Greve 2008; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009; Littunen and Niittykangas 2010). Therefore, examining internal factors as determinants of small firm growth gives consideration to the heterogeneity of small firm growth and will highlight those internal factors causing growth differences between firms.

As the owner-manager is viewed as a central influence on small firm growth, where independent of the actual growth potential of the business itself most business founders have modest growth aspirations (Storey 1994; Kinsella *et al.* 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; North *et al* 2001; Chaganti *et al.* 2002; Human and Matthews 2004; Kirkwood 2009) further provides a rationale for the focus on internal factors when examining small firm growth. Donohoe and Wyer (2005) advocated that while research studies on small firm growth had increased, there was a need to continue to conduct investigative studies to address how internal factors and in particular the characteristics of the owner-manager impacted on firm growth.

A review of the literature on small firm growth found that very few recent studies had been conducted in Ireland on this topic, the most notable by Kinsella *et al.* (1994) which drew attention to the need for developing a similar study in a changed economic Irish context – the Celtic Tiger era. This study is positioned within the internal determinants of growth framework and more particularly is guided by the Kinsella *et al.* (1994) Irish study. In addition to the Kinsella *et al.* (1994) study a number of other conceptual and academic studies undertaken during that period were reviewed to direct this study.

The conceptual study by Storey (1994) is deemed as an important reference point to guide the review of the literature on this topic. A number of studies (Barkham *et al.*1996; Roper 1998; Davidsson and Wiklund 2000; O'Gorman 2001; Liao *et al.* 2001; Poutziouris 2003; Donohoe and Wyer 2005; Greve 2008; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009; Littunen and Niittykangas 2010) were reflected on regarding how certain internal factors were associated with small firm growth.

The following summarises the studies most frequently drawn upon for this research with an insight into the range of factors investigated and the research method adopted.

Table 1.1: Factors Influencing Small Firm Growth- A synthesis of the Evidence

Author	**Study Description**	**Research Methodology**
Storey (1994)	A review of studies which examined how three sets of internal factors- owner-manager; firm specific and business strategy factors influenced small firm growth.	Review of 18 studies completed on this topic
Kinsella *et al.* (1994)	An examination of the characteristics of fast growth firms with an emphasis on owner-manager characteristics such as their age, education, work experience, ownership in another business, and their managerial practices	Quantitative study-personal interviews
Barkham *et al.* (1996)	An investigation of how the nature of firm, owner-manager characteristics and business development strategies determined small firm growth.	Quantitative study-personal interviews
Smallbone et. *al.* (1995)	An examination of relationship between the choice of objectives for business growth, the strategy devised and the influence of the owner-manager in the choice of strategy adopted.	Quantitative study-personal interviews
Roper (1998)	An evaluation of the linkages between strategic actions of the owner-manager and small firm growth, with specific emphasis on the process of strategy development and how the owner-manager characteristics influenced the management of growth in the small firm.	Quantitative study-interviews and telephone interviews
Glancey (1998)	An investigation of the relationship between characteristics of the firm such as the size, age location, and industry group of the firm and resultant small firm growth.	Analysis of firm data from existing data bases
Davidson and Wiklund (2000)	An examination of the influence of owner-manager factors such as their experience profile and the type of strategy adopted on small firm growth	Qualitative study – personal interviews
O'Gorman (2001)	A review of how both internal and external factors influence small firm growth with an emphasis on the role of strategy development and its relationship with small firm growth	Qualitative- case studies
Liao *et al.* (2001)	An examination of how the motivation by the owner-manager to start a business and other behavioural related management practices influenced small firm growth	Quantitative study - personal interviews
Poutziouris (2003)	A determination of the influence of firm age, size, industry sector and region on small firm growth.	Quantitative study – personal interviews

The studies completed by Kinsella *et al.* (1994), Storey (1994) and Barkham *et al.* (1996) are most frequently used in the development of the literature review and for the design of the empirical research for this study. Kinsella *et al.* (1994) conducted a quantitative study which examined the characteristics of fast growth firms with an emphasis on owner-manager characteristics and strategic practices. The study sampled small firms located in Northern Ireland and the Republic of Ireland. Barkham *et al.* (1996) conducted their study in four regions in the United Kingdom and Ireland and again adopted the quantitative research approach via face-to-face interviews. Some common findings emerged as follows: owner-manager characteristics such as the age of the owner-manager, the type of prior work experience and experience gained in the ownership of another small firm were important determinants of small firm growth. Additionally, a consensus emerged in these studies that younger firms displayed higher levels of firm growth.

The conceptual study conducted by Storey (1994) analysed a sample of 18 research studies undertaken mainly in the United Kingdom and the US. Storey (1994) concluded that small firm growth was determined by the integration of three sets of internal factors including the characteristics of the owner-manager, those of the firm and the type of strategies adopted by the owner-manager.

In essence, a consensus existed between these three primary studies as to the importance of internal factors as determinants of firm growth, however variations occurred in relation to which ones were most significantly associated with higher firm growth. Each category consisted of a range of individual factors which are now briefly discussed. These studies are reviewed with a view to identifying which set of internal factors are deemed most appropriate for inclusion in an Irish study.

1.3.1 Owner-Manager Characteristics and Small Firm Growth

General research studies suggested that an investigation of the range of internal factors on small firm growth should start by examining why the owner-manager started the business (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Donohoe and Wyer 2005; Kirkwood 2009).

Those who started their business for positive or 'pull' factors had higher firm growth than businesses started for negative 'push' factors (Kinsella *et al.* 1994; Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Hamilton and Lawrence 2001; Reynolds *et al.* 2001; Wiklund and Shepherd 2003; Acs 2006; Hessels *et al.* 2008; Delmar and Wiklund 2008). The positive or pull factors were associated primarily with the identification of a market opportunity and secondly, the desire to work on their own. The motivation to start the business can impact on decisions taken for the subsequent growth of the firm and is therefore included in this research study.

The more commonly researched owner-manager characteristics in the literature on the internal determinants of small firm growth focused on the age of the owner-manager, their education and work experience. Regarding the impact of the owner-manager's age on small firm growth, the majority of the research findings suggested that higher levels of firm growth were associated with firms managed by younger owner-managers (Davidsson 1991; Storey 1994; Barkham *et al.* 1996; Autere and Autio 2000; Orser *et al.* 2000; Welter 2001; Davidsson *et al.* 2002; Bullock *et al.* 2004). In general the research argues that the age of the owner-manager reflects aspects of the human capital of the individual such as the accumulated work experience and the educational experience of the owner-manager which may in turn impact on small firm growth. For instance, older owner-managers will generally have more work experience and established contacts and business networks. That said, older owner-managers may be risk adverse and cautious about growing their business. Equally, a lack of accumulated work experience in the younger owner-manager could be compensated for by a greater enthusiasm to take risks to achieve higher levels of growth. Given these assertions, research on how the owner-managers age, education and work background impact on growth should be examined in this research study.

A key aspect of the human capital of the owner-manager relates to their educational experience. In relation to the impact of the educational level of the owner-manager a number of research studies found that the higher educated owner-managers were more likely to manage a faster growing business (Kinsella *et al.* 1994; Storey 1994; Wiklund and Shepherd 2003; Barringer and Jones 2004). Such positive relationships were not obvious in research findings by Turok (1991); Barkham *et al.* (1996); Roper (1998) and Bullock *et al.* (2004). The education variable in these studies included membership by respondents in professional organisations as they were viewed as important informal learning and networking opportunities for the owner-manager which facilitated small firm growth. These findings highlight the importance of collecting more descriptive detail on the educational experience of the owner-manager beyond the level of their educational award. This study aims to find information on how the level of the educational award and the subject area of the award are linked with firm growth.

The third factor consistently examined in the research studies emphasised the positive impact of the career history of the owner-manager on firm growth (Kinsella *et al.* 1994; Barkham *et al.* 1996; Perren 1999; Shane 2000; Shepherd *et al.* 2000; Aldrich and Martinez 2001; Klepper 2001; O'Gorman 2001; Bellamy *et al.* 2003; Delmar and Shane 2006). Essentially, these research studies found that work experience in the same industry as their current small firm provided the owner-manager with the knowledge of markets, customers and the technological requirements of the business. This assisted the owner-manager in growing their business and resulted in higher levels of small firm growth. As was the case with the other owner-manager characteristics described to date there was not a consensus as to the impact of same industry experience on firm growth (Turok 1991; Storey 1994; Gartner *et al.* 1999; Hamilton and Lawrence 2001; Frankish *et al.* 2007). A second aspect of the experience profile of the owner-manager commonly linked with higher firm growth was that gained at a managerial level (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Roper 1998). An examination of the impact of these two aspects of the work experience of the owner-manager on small firm growth will identify their relative significance on small firm growth.

Finally, in relation to the work experience of the owner-manager, research found that it was not limited to that gained in paid employment, but quite often in the ownership of another small firm (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Roper 1998). This was deemed to have a positive impact on small firm growth (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Barringer and Jones 2004; Cooney and Malien 2004). Additionally, Barkham *et al.* (1996) found that ownership in a second small business which was related to the first business resulted in synergies between the businesses and small firm growth. These findings suggest the benefits of investigating if the owner-manager is involved in the ownership of another small business.

This brief review of the literature highlights a range of owner-manager characteristics for inclusion in this investigation of small firm growth. Specifically, this study will address the influence of the following factors on small firm growth:

- the motivation to establish the business (push or pull factors),
- the age of the owner-manager,
- their educational experience and,
- the nature of prior work experience gained either as an employee or as an owner-manager.

1.3.2 Firm Characteristics and Small Firm Growth

Reviewing the literature highlighted the recurrence of three characteristics of the firm, namely the size of the firm (employment numbers), its age and ownership structure as determinants of small firm growth. Smaller firms generally achieved greater firm growth as they were more flexible in their operations and could quickly identify and respond to market demands (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Davidson and Delmar 1997; Orser *et al.* 2000; Davidsson and Wiklund 2000; Audretsch *et al.* 2004; Bullock *et al.* 2004).

With regard to the age of the firm, the findings in the literature indicated that younger firms displayed faster rates of growth than older firms (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Glancey 1998; Orser *et al.* 2000; Robson and Bennett 2000; Poutziouris 2003; Bullock *et al.* 2004; Geroski and Gugler 2004). This was due to the need for the newer firms to grow quickly to gain a market presence and obtain economies of scale as quickly as possible.

Research pertaining to ownership structure and small firm growth found that multiple owner-managed firms displayed higher levels of small firm growth (Kinsella *et al.* 1994; Barkham *et al.* 1996; Barringer and Jones 2004; Cooney and Malien 2004). It was viewed that a number of owner-managers would bring a range of complementary skills, knowledge and work experience which would result in higher firm growth.

Finally a number of studies examined the role of the industry sector of the firm as a determinant of small firm growth. It was commonly found that firms operating in high technology industries performed better than those in the traditional manufacturing or general service sectors (Kinsella *et al.* 1994; Audretsch 1995; Almus and Nerlinger 1999; Weinzimmer 2000; Peneder 2008; Wiklund *et al.* 2009). In this study four industry sectors, combining high technology and traditional manufacturing sectors are investigated to determine industry sector impact on small firm growth.

The primary firm characteristics researched in this study include:

- the size of firm,
- the age of firm,
- the ownership structure of the business and,
- industry sector of the business.

1.3.3 Strategic Focus of the Business and Small Firm Growth

The third relevant category of internal determinants of small firm growth relate to the evidence of strategic planning and the type of growth strategies adopted by the owner-manager which are described as the strategic focus of the business. An overview of the literature found that a vast range of factors were researched within the broad strategic focus category.

Based on a review of the most pertinent studies and keeping in mind the objective of this quantitative study a number of key strategic issues were identified. These included objectives for firm growth, the existence of a strategic plan, the type of strategy adopted, their customer profile, involvement in export activity and the use of external advice with strategy development. The examination of the particular objectives driving firm growth would provide an important foundation on which to understand subsequent strategic decisions made by the owner-manager. Additionally, where a strategic plan existed there was greater firm growth as the existence of such a plan was viewed to provide a better sense of direction to the business, improved allocation of resources and reduced uncertainty for the owner-manager (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Roper 1998; Beaver and Ross 2000; Poutziouris 2003). In relation to the type of strategies adopted for firm growth, it was difficult to arrive at a consensus on a common range of strategies adopted. The Miles and Snow (1978) strategic typology was applied as a relevant framework to classify the type of strategies adopted by the small firm and to capture the general focus of the strategy of the small firm. The firm's strategy is contingent upon having an understanding of their customer as the number of customers and their size may influence the choice of strategy adopted by the owner-manager (Bridge *et al.* 2003; Mazzarol 2005). Extending the focus beyond the strategy type, the review of the research showed an increasing need to ascertain how involvement in exporting increased firm growth. From a policy context, increasing the level of export activity in Irish small and medium firms is a central policy priority. Therefore, the research investigates if small firms are involved in exporting, and if so, does it result in higher small firm growth?. Finally, the research on the strategic activity of small firm will capture how using external assistance with strategy development is related to small firm growth.

In summary, in ascertaining the influence of the strategic activity of the owner-manager on firm growth, this study will investigate the following:

- the type of objectives for growth,
- the existence of a strategic plan,
- the type of strategy adopted,
- the customer profile,
- involvement in export activity and,
- if external advice was used for strategy development.

To date a brief preview is provided of the range of individual internal factors deemed relevant for further analysis in order to devise a comprehensive range of research hypotheses for investigation in this research study of Irish small firms. This review of the literature highlights that despite the increase in the number of studies on the internal determinants of small firm growth, there is still a lack of consensus as to which one or set of internal factors are most commonly viewed to impact on this growth. The findings of the various research studies are examined in more detail and the internal determinants identified for inclusion in the empirical study are presented in a framework in Chapter Three.

Fundamental to understanding the impact of the various internal factors on small firm growth is an awareness of how growth is measured in the studies. This is also important to identify when comparing the results of research studies. Variations existed in the levels of detail available on the measures applied to gauge the level of firm growth in small firms making comparisons across studies difficult. Therefore, it is important that the measures of growth adopted and the basis of their analysis is clearly identified in research studies on small firm growth.

1.4 Measuring Small Business Growth

Small firm growth takes different forms, albeit not necessarily all at the same time, where growth may occur in areas such as employment, revenue, market share product development and market development (national and international markets), (Kinsella *et al.* 1994; Storey 1994; Westhead and Birley 1995; Barkham *et al.* 1996; Pope 2002; Cremins 2006). A review of the studies suggested that growth in the small firm is multifaceted, making it difficult to define one single set of established measures (Barkham *et al.* 1996; Roper 1998; Delmar *et al.* 2003; Freel and Robson 2004; Davidsson *et al.* 2006; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). According to Daily *et al.* (2002) and Haber and Reichel (2005) this led to a general absence of detail on the measures used to assess firm growth and a lack of clarity as to how the various measures were interpreted and compared in some of the research studies. However, a number of studies (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996 Davidsson *et al.* 2006; Kirkwood 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010) did engage with an explanation of the range of measures of growth. These studies promoted the use of *a number of measures, financial and non-financial to include measures of* sales, turnover, profits, employment numbers and market share growth. The adoption of multiple measures captured the impact of different internal factors on firm growth and allowed for the potential identification of how growth measures are connected in the business. A combination of financial and non-financial measures was deemed most suitable for this study of growth in Irish small firms. Turnover growth was the financial measure adopted. The non-financial measures included employment numbers and turnover per employee (proxy for labour productivity). The rationale for the choice of these measures is discussed in greater detail in Chapter Three. This preliminary review of the various government publications, academic and conceptual studies assisted in the refinement of the two primary objectives and the development of a number of specific research questions.

1.5 Research Aim and Objectives

The overall aim of this thesis is to investigate the internal determinants of firm growth in a sample of Irish small firms with a view to identifying if there are common ones evident amongst the higher growth firms. The following objectives drive this research:

- To undertake an assessment of the contribution that the SME sector has made to the Irish economy during the period between 1994 and 2005. This will assess the change in the number of small firms, their employment generation, their industry sector contribution, their export performance and spatial distribution.
- To identify how a range of internal factors impact on small firm growth with a specific focus on the following:

- A selection of owner-manager characteristics (age, education and prior work experience).

- A range of firm characteristics (firm age, firm size and industry sector).

- The strategic focus of the business (the objectives for growth, the existence of a strategic plan, the type of strategy adopted, the customer profile, level of export activity and if external assistance was obtained with strategy development).

Focusing on the above objectives will provide a comprehensive understanding of the profile of small firm which has contributed most to the dynamic of the Celtic Tiger period. The results of the empirical study will additionally highlight if the higher growth small firms have a set of common determinants which should be addressed in government policy. These objectives are further developed into a range of hypotheses which are discussed in Chapter Four.

1.6 Research Approach

The empirical research studies conducted by Kinsella *et al.* (1994); Barkham *et al.* (1996); Roper (1998); Liao *et al.* (2001); Poutziouris (2003) adopted a quantitative research approach with the majority of studies incorporating face-to-face interviews as the primary means of collecting the data. The review of the conceptual studies completed by Storey (1994) and Dobbs and Hamilton (2007) and Blackburn *et al.* (2009) included an assessment of studies which also predominantly applied the quantitative approach to data collection. The present study broadly replicates the methodology of the quantitative data collection method and uses a similar methodology to that adopted by Kinsella *et al.* (1994). These plus a number of other benefits associated with the quantitative approach (as discussed in Chapter Four) resulted in the choice of in-depth face-to-face interviews as the primary means of data collection The interviews were carried out with eighty owner-managers in the Mid-West region of Ireland. The location of this study is concentrated to one region – the Mid-West region of Ireland. This region consists of counties Limerick, Clare and North Tipperary. It is one of Ireland's eight statutory regions comprising of approximately 10 per cent of the national population in 2002 (IBEC 2003). The focus on one region will capture the external conditions which are common to all small firms in that region and provide a context to understand the market and competitor conditions within which small firms operate. Furthermore, this is the first such regional study undertaken in Southern Ireland post 1994.

1.7 Significance of the Research

The findings from this research will make a number of important contributions to the policy and research domain. Firstly, the assessment of the contribution of the small firm sector to the Irish economy addresses the call for such data in the Small Business Forum Report (2006) and one not addressed to date in policy documents. Furthermore, this assessment identifies the industry sectors which have contributed the most to the Irish economy in terms of the number of firms, employment generation and export performance between 1994 and 2005. This identifies issues which require attention by policy makers in order to address those sectors showing a declining performance and those which have contributed most positively and show potential to contribute in a changing Irish economy. Secondly, the examination of the export performance of the small firm sector addresses a high priority issue of government policy (Building Ireland's Smart Economy Framework 2008) and draws attention to the grave lack of data on how many, or, the type of small firm most active in international business activities. Thirdly, an investigation into how a range of internal factors influence the achievement of higher firm growth provides important evidence based information on why differences in firm growth exist across the small firm sector. It further provides empirical data which is not currently available in Ireland post the Kinsella *et al.* (1994) study. Finally, in a broader context the research will serve as a useful benchmarking study. It provides a foundation on which to develop further research studies on the determinants of small firm growth in Irish small firms and provides recommendations on opportunities for future research.

1.8 Thesis Structure

The thesis is presented in two parts. Part One "Introduction, Literature Review and Research Methodology" is concerned with the theoretical aspects of the research topic and presents the research approach. Part Two "The Research Findings" includes a detailed presentation and discussion on the findings of the empirical study. The overriding conclusions, the significance of the findings and areas for future research are presented.

This chapter, Chapter One introduces the research topic and the two primary objectives driving the research. The rationale for the proposed research study is provided. The academic and conceptual studies underpinning the study are introduced. The chapter proceeds to explain the research objectives and the research approach adopted for the collection of the information to address the research objectives. The significance of this research from a policy and research perspective is discussed. The chapter concludes by outlining the structure of the thesis.

Chapter Two examines the contribution of the small firm sector to the Irish economy from 1994 to 2005. The chapter commences with a review of the definitions applied to the SME sector to arrive at a definition which is adopted in this study. Following from this, data is presented to reflect the change in the contribution of the SME sector in Ireland between 1994 and 2005. The contribution is examined by the number of SMEs in Ireland; the size distribution of small firms; their distribution by industry sector; their contribution to export performance and their regional distribution. To conclude the chapter identifies the industry sectors experiencing a decline and the implications for policy. It also discusses a number of issues in relation to the availability of data on the SME sector in Ireland.

Chapter Three provides a comprehensive review of the relevant literature on the determinants of small firm growth. An assessment of the various measures of small firm growth highlights the importance of adopting multiple measures of firm growth. The chapter reviews the academic and conceptual research studies regarding the determinants of small fim growth and specifically the role of internal factors. The internal factors are classified into three categories; the characteristics of the owner-manager; the characteristics of the firm and the strategic focus of the business. This chapter highlights the pertinent themes common in the literature and identifies a range of internal factors for investigation in the empirical research study in the Mid-West region of Ireland.

Chapter Four describes the research approach adopted for the study. It discusses the data collection method (in-depth interviews) and the main topics examined in it, and the selection of the sample. It describes the data analysis method applied as appropriate for the study. An overview of the profile of respondents is presented. The results in relation to the level of growth achieved by respondents in the three measures of growth are discussed as is the relationship between the three measures of growth. The findings presented provide a foundation on which the subsequent more detailed statistical analysis is conducted in Chapters Five, Six and Seven.

Part Two of the thesis, Chapters Five Six, Seven and Eight presents the findings from the empirical study. Chapter Five presents and discusses the research findings in relation to how the characteristics of the firm (age, size, industry sector and ownership structure) impacted on employment, turnover and turnover per employee growth (dependent variables).

Chapter Six analyses how a range of owner-manager characteristics (motivation to start the business, age, education, work history and ownership in another small business) were linked to small firm growth for the three dependent variables.

Chapter Seven presents the findings on how the strategic focus of the business (business objectives, strategic plan, type of strategy, involvement in international markets and use of external assistance) influenced employment, turnover, and turnover per employee growth.

A synthesis of the combined impact of the range of internal determinants (firm, owner-manager, and strategic focus) is presented in Chapter Eight by profiling the highest performing firms. The highest growth firms are selected according to the criteria applied by OECD (2008). A profile of the higher growth firms is compared to establish if it is possible to arrive at a common set of characteristics shared amongst these firms. This information is examined to establish how the findings compare with those of the Kinsella *et al.* (1994) study.

Chapter Nine provides a concluding discussion which summarises the key findings of the research and how they relate to the literature in terms of the internal determinants of small firm growth. The chapter proceeds to identify the theoretical and empirical contributions of the research and their implications for policy. The chapter concludes by highlighting opportunities for future research and identifying the limitations of the research. A final concluding statement is then given.

Chapter Two: A Profile of SME Activity in Ireland between 1994 and 2005

2.1 Introduction

The Irish economy experienced a remarkable economic transformation between the years 1994 and 2005, where its extraordinary growth trajectory attracted international acclaim (Sapir *et al.* 2003; Andreosso O'Callaghan and Lenihan 2006; Bailey *et al.* 2007). It was characterised by GDP growth that averaged 8.5 per cent per annum, a substantially improved budgetary position, with the debt/GDP ratio declining from 93 per cent in 1993 to 30 per cent in 2003 and high levels of employment growth (Harris 2005). This period, although specifically dated by different authors in different ways, was known as the "Celtic Tiger" - a phrase coined to describe the rapid growth in the Irish economy. The Celtic Tiger's momentum slowed sharply in 2002 in tandem with a global economic downturn. The global slowdown became more pronounced with the crisis in the US financial markets and with a reduced growth rate in most EU countries which impacted negatively on the Irish economy, and in particular on Irish export activity (Honohan and Leddin 2005). The rate of annual inflation escalated to 5.6 per cent in 2000, fuelled by the rise of the US dollar and sterling against the euro (Honohan and Leddin 2005). The currency movements had a larger effect on Ireland than on any other EMU country because of Irelands relatively close trade and investment links with the EU (Honohan and Lane 2003). Additionally, the sharp depreciation in sterling affected the volume and prices of trade flows between Ireland and the UK which was Ireland's major trading partner and the strength of the sterling to the euro lowered the prices of UK imported goods in Ireland (Honohan and Lane 2003).

During the Celtic Tiger era, from an industrial policy perspective, most attention focused on the role of foreign direct investment (FDI) and only to a lesser extent on the significance of the small firm sector as a driver of economic growth. This is despite the fact that over 97 per cent of firms in Ireland are classified as small (Small Business Forum 2006). The establishment of the Task Force on Small Business was one of the few significant developments during this period where the government recognised the importance of the small firm sector as a key contributor to economic growth and employment generation. The Task Force on Small Business (1994), as well as defining and quantifying the sector, provided a set of recommendations for policy development to ensure the sector's survival and growth. It also provides a useful foundation on which to develop a study that examines the contribution the small and medium enterprise (SME) sector has made to the Irish economy during the period 1994 to 2005. The examination of the role of this sector during this Celtic Tiger period will establish if the profile of the SME sector as a whole or its constituent parts changed during this period of rapid economic growth and will also identify the general characteristics of higher performing SMEs and those in decline.

Suggestions are put forward on how policy can address the needs of the sector post the Celtic Tiger period to ensure it is capable of playing a positive economic role in the recovery of the Irish economy. The chapter begins with a discussion on how SMEs are typically described in the Irish context. This provides a basis for the definition which is applied in this research study.

2.2 Defining SMEs in Ireland

The European Union's (EU) description of a SME, proposed in 1996 and updated in 2006, applies three criteria, namely staff headcount, annual turnover and annual balance sheet details as the basis for differentiating between micro, small and medium and large firms, as described in Table 2.1.

Table 2.1: EU Definitions of SMEs

Enterprise Category	**No. of Employees**	**Turnover**	**Balance Sheet Total**
Micro	< 10	< € 2 million	< €2 million
Small	< 50	< €10 million	< € 10 million
Medium	< 250	< € 50 million	< € 43 million

Source: European Commission DG Enterprise (2006).

In addition, the EU definition requires that management have complete control over at least 75 per cent of the firm (European Commission DG Enterprise 2006). The EU definition is helpful in describing a small firm across a number of important criteria and provides flexibility for its use in different country contexts. This definition is widely adopted as the basis on which SMEs are classified by Irish government organisations responsible for the development of policy to stimulate growth in the sector and those involved in the collection of statistical data on these firms. Table 2.2 presents a summary of the definitions adopted in Ireland.

Table 2.2: Definitions of SMEs in Ireland - A Comparison

Institution	**Definition**	**Turnover**
Task Force on Small Business (1994)	Micro firm (<10 employees) Small firm (< 50 employees) Medium (50 - 249 employees)	Annual revenue of less than €3.81 million
Enterprise Ireland	High Potential Start Up Firm (HPSU) - upper employee threshold of 250	Annual turnover not exceeding €50m
Shannon Development Co.	High Potential Start Up Firm (HPSU) - employ between 10 and 50	A turnover of €1.3 million within 2 years of operation
City and County Enterprise Boards	Micro firm - employing less than 10 Persons	N/A
Central Statistics Office (CSO)	Micro firm (up to 9 employees) Small firm (10 - 49 employees) Medium firm (50 - 249 employees)	N/A

Sources: CSO (2008); DKM Economic Consultants (2006); Task Force on Small Business (1994).

The Task Force on Small Business (1994) applied the number of employees as the primary criteria for defining the SME. It also defined three classifications of firm size – the micro, small and medium firm – with large enterprises defined as those employing 250 or more. In comparison, Enterprise Ireland, the government development agency charged with fostering the establishment and development of fast growth, knowledge-based and internationally-traded service firms, mainly High Potential Start Up Firms (HPSUs), applies a broader set of employment criteria and places a greater focus on turnover. The SME also has to be independently operated (not a subsidiary of a larger operation) and must not have an ownership share of more than 25 per cent in any other enterprise.

Similar to Enterprise Ireland, Shannon Development, the government regional development agency for the Mid-West region of Ireland, focuses on the development of High Potential Start Up Firms (HPSUs), but applies lower employment and turnover thresholds (up to 50 employees and a turnover of €1.3 million). Shannon Development also provides assistance to SMEs operating in the general manufacturing and service industry sectors and the agency applies the Task Force on Small Business (1994) definition to define this latter category of client. A central finding emanating from the Task Force Report on Small Business was that the micro firm was a significant constituent of the SME sector in Ireland. In response, the government established the City and County Enterprise Boards (CCEB) in 1994 (32 in total). The Enterprise Boards are located in each county in Ireland and a number in the larger urban areas. They adopt the definition for the micro firm promoted by the Task Force on Small Business (1994) given the CCEB remit to support the start up and the micro firm.

The Central Statistics Office (CSO), the primary producer of firm level data in Ireland classifies SMEs into three employment size thresholds: 0-9 employees; 10-49 employees; 50-249 employees. The CSO provides data on the number of manufacturing firms (via the Census of Industrial Production (CIP)), on the number of service firms (via the Annual Services Inquiry (ASI)) and on construction firms (via the Census of Building and Construction (CBC)) for each of the three employment size categories of firm.

Throughout these varied definitions, employment numbers take precedence over financial criteria and can be more easily compared over time and between industry sectors. The phrase 'small firm' is frequently used in government publications in a broad manner to include the micro firm (Task Force Report 1994; Small Business Forum Report 2006). The CSO data makes a clearer distinction between micro, small and medium firms. However, they use the term medium firm to describe those with 50 plus employees, without any cut off point to distinguish between medium and large firms, thus giving rise to difficulties in determining what portion of this category constitute medium versus larger firms. These issues pose challenges to researchers when analysing and interpreting SME data to arrive at a depiction of their collective numbers and contribution and to isolate the relative contribution of the micro, small and medium firm.

Given consideration to these challenges, the analysis of the data for this study details the contribution of the SME sector by disaggregating where possible the role of the micro firm (less than 10 employees), the small firm (less than 50 employees) and the medium firm (less than 250 employees) as part of the overall SME sector. In this chapter, all three sizes of firms will collectively be referred to as SMEs, as this definition provides an important starting point on which to collect, analyse and compare data sources profiling the contribution of the SME sector to the Irish economy. The information presented in the remainder of this Chapter relies primarily on the data sourced from the Task Force Report on Small Business (1994), a number of publications produced by the Central Statistics Office (CIP:ASI:CBC) and the Report of the Small Business Forum (2006).

2.3 The Celtic Tiger Era - the Growth of the SME Sector

In Ireland the period 1994 to 1999 saw the most positive economic results with GNP growing rapidly by 8 per cent each year extending into 2001 (Harris 2005). This growth was transmitted to the labour market where the numbers at work increased at an annual average rate of 2.1 per cent, and the unemployment decreased from a rate of 15 per cent in 1994 to 4 per cent in 2000 with a slight increase to 4.7 per cent in 2003 (Harris 2005).

Following the high growth period of the 1990s, Ireland's economy settled down into a more steady growth phase from 2000 onwards. The impact of the economic slowdown in the US and in a number of EU economies on Ireland's economy became noticeable in the early 2000s, resulting in a sharp decline in the momentum of the Celtic Tiger (Harris 2005). The nature of the Celtic Tiger changed somewhat in the new millennium, where the primary source of economic growth moved from the traditional manufacturing sectors to domestic construction and consumer service sectors (Harris 2005). However, by 2005, the construction market began to fall back from its unsustainable high growth levels and could no longer be relied upon for prolonged employment growth.

From an industrial policy perspective, the factors that contributed to the success of the Celtic Tiger included the importance of FDI inflows (Gray 1997; Barry 1999; Ruane and Görg 1999; World Investment Bank Report 1999; Harris 2005; Acs *et al.* 2007) and to a lesser extent, the performance of an indigenous stock of firms, which, in Ireland, comprises mostly SMEs. In the 1990s, the provision of subsidies and investment capital by such Irish state development agencies as IDA Ireland encouraged high-profile companies like Dell and Intel to locate in Ireland. These companies were attracted by the country's relatively low wages, government grants and low corporate tax rates. These monetary incentives in addition to EU membership, the availability of a skilled English speaking workforce and a stable economic environment provided further inducements to attract FDI firms to locate here (Hannigan 1998; Görg and Ruane 2000; Görg and Strobyl 2000; Buckley 2001). In addition to the direct employment generated by FDI firms they were viewed as important 'incubators' for new firms in added-value and higher-return industry sectors (e.g., software and Information Communication Technologies (ICT)) which were underdeveloped at that time in Ireland (Barry 1999; Buckley 2001).

From the mid and late 1990s changes in the level and impact of FDI activity were notable in Ireland. For instance, a number of FDI firms operating in the electronics and engineering sectors ceased trading resulting in large scale unemployment (O'Sullivan 2000). Additionally, the profits made by FDI firms were transferred back to parent firms and did not benefit the local economy

(Gudgin *et al.* 1995; O'Sullivan 2000). Other concerns were highlighted by Gudgin *et al.* (1995) who suggested that a 'plateau effect' was evident in foreign investment firms whereby there was no real increase in their contribution to employment or in the number of new FDI firms locating in Ireland during the early 1990s. Furthermore, much of the FDI activity in Ireland was positioned at a relatively low point in the value chain. Functions such as research and development and marketing were not for the most part located in the Irish operations, thus no long term investment was allocated to the development of this type of expertise in Ireland.

Moreover, with the continuation of these trends and increased competition from lower-cost economies for existing jobs and investments significant parts of the foreign-owned sector remained at risk in Ireland (Forfás 2003). These features of FDI firm behaviour resulted in the loss of both direct and indirect employment and uncertainty for smaller indigenous firms who were part of the supply chain activities of these FDI firms. This continued in the context of declining economic growth, increased wage rates rising above EU levels and higher inflation rates (Forfás 2003). In addition, Ireland was perceived as a high cost location in which to do business and the accession of ten new EU members in 2004 made it more difficult to retain and attract FDI investment here. As a result, a renewed focus emerged on how the indigenous sector, and in particular SMEs could be developed as a source of employment creation.

The recommendations of the Task Force on Small Business (1994), which suggested the need for more proactive, targeted government policy to develop a sustainable small firm sector in Ireland were overlooked during the Celtic Tiger period. A sustainable established small firm sector was important for the Irish economy as small firms were more committed to local regions than FDI firms, were deemed an important source of employment creation in regions where FDI would not locate and were not constrained by a parent firm as were the majority of FDI firms (Kinsella *et al.* 1994; Gudgin *et al.* 1995; Barkham *et al.* 1996).

The importance of the SME sector during this period was captured by Barry and Milner (2002: 319) who stated that 'the strong presence of small and medium sized enterprises (SMEs) is a key feature of the Irish economy. The sector is considered to be a crucial factor in the nation's competitive development'. Barry and Milner (2002) suggested the contribution of the SME was multifaceted, with small firms seen as contributing positively to job creation, as innovators of products and services and as catalysts for FDI.

Despite this emphasis on the importance of the SME sector, it was not until 2005 that government dedicated resources specifically to examine the contribution and the needs of this sector through the establishment of the Small Business Forum. This Forum was given the objectives of assessing the profile of the SME sector and evaluating the needs of this sector. The Small Business Forum (2006) presented details on the number of SMEs and put forward a set of recommendations to advise government on the appropriateness of public policy initiatives and supports for the SME sector. While this publication and that published by the CSO (2008) sketch the numbers of SMEs in operation (their contribution to employment, their regional distribution and export activity), difficulties exist in establishing a clear description of how SMEs as a cohort and its constituent micro, small and medium subsets have performed during the Celtic Tiger period. That said, what is known about how the SME sector has contributed to the Irish economy during the period 1994 to 2005 is presented to produce for the first time a holistic perspective of the SME contribution to the Irish economy. This analysis begins by describing the overall change in the number of SMEs in Ireland during the period.

2.3.1 The Number of Small Firms in Ireland (1994 to 2005)

The Task Force on Small Business (1994) produced the first in-depth report on the profile and contribution of the small firm sector in Ireland. This seminal study which focussed primarily on the small firm, estimated that there were in excess of 160,000 non-farm small businesses (less than 50 employees) operating in Ireland in 1994. Furthermore, 98 per cent of these firms employed less than 50 persons and over 85 per cent employed fewer than 10 people. This compares to a figure of 220,000 businesses with less than 50 persons in 2000 and a figure of 250,000 such businesses in 2005 (CSO 2008). Similar to 1994, in 2005, the vast majority (97 per cent) of the 250,000 firms employed less than 50 persons (CSO 2008). This data is reflected in Figure 2.1 below.

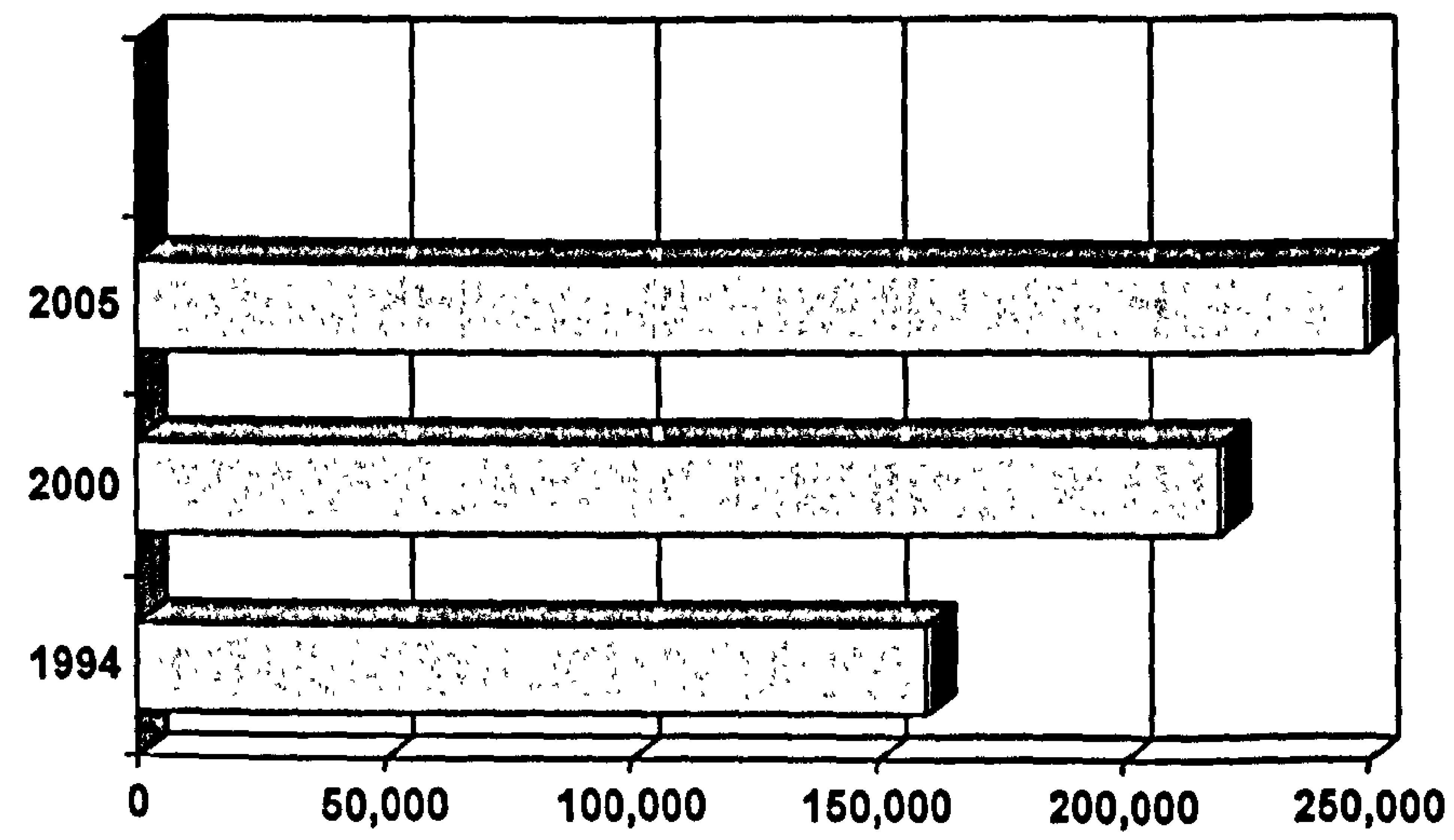

Figure 2.1: Small Firms in Ireland (1994, 2000 and 2005)

Source: CSO (2008).

The data published in the Small Business Forum Report (2006) emphasised the contribution of small firms, those employing less than 50 persons. This report indicated that there were just under 250,000 such firms in Ireland in 2005, which represented a growth of 38 per cent in their numbers between 1995 and 2000, or a 6.6 per cent increase per annum. From 2000 onwards to 2005 there was a slowdown in this growth, where the overall growth rate in the number of these small firms was 14 per cent, or 2.6 per annum (Small Business Forum 2006).

2.3.2 Employment Contribution of Small Firms (1994 to 2005)

Similar growth patterns were evident in the contribution SMEs made to employment during the period 1994 to 2005. In 1994, the 160,000 small firms (less than 50 employees) employed 435,000 people or just over one-third of the private sector workforce (Task Force on Small Business 1994). In 2005, employment by small firms (the number of which had now risen to 250,000) had risen to 54 per cent (equal to 770,000 employees) of the total private sector workforce (CSO 2007). This corresponded to an impressive 79 per cent increase in the number of persons employed in small firms since 1994. The greatest increase in employment in the sector was evident for the years 1994 to 2000. During this period, growth averaged 8.8 per cent per annum in the numbers employed in small firms, compared to a 3.2 per cent per annum growth between 2000 and 2005.

These statistics sketch the performance of the total number of small firms in Ireland, but do not describe the size of firm or the business sector that has performed best over the period. The chapter now turns to presenting data on the three sectors detailed in CSO publications: the industrial sector, the service sector and the construction sector. Each sector is analysed to identify the pattern of change in the number of small firms and comparable data for medium firms as well as their relative contribution to employment during the period 1994 and 2005.

2.3.3 SME Activity and Employment in the Industrial Sector

Data published by the CSO in the Census of Industrial Production (CIP) provides the most comprehensive detail on the number and size of industrial firms with three or more persons employed. The CSO adopt the NACE (Nomenclature générale des Activités économiques dans les Communautés Européennes) classification, which provides the framework for collecting and presenting a large range of statistical data according to economic activity (e.g., production, employment and national accounts). The classification for industrial production includes manufacturing businesses operating in the mining, quarrying, manufacturing, electricity, gas and water supply sectors (NACE 10 - 40).

Unfortunately, the CSO presents CIP data relating to medium and large enterprises in one category, as those with 50 or more employees. This broad classification creates issues in the inability to draw out the medium (part of the SME category) versus large firms (not part of the SME category) or to determine what proportion of each contributes most to employment creation. In addition, as noted above the CSO's CIP data do not provide information on industrial firms that employ less than 3 persons, which makes it difficult to obtain a complete insight into the contribution of the SMEs in industrial employment. With these cautions in mind, Table 2.3 below presents the CSO's data in a way that allows some commentary on the role of SMEs in the industrial sector over the 1994 to 2005 period.

Table 2.3: Change in the Number of Industrial Firms in Ireland (1994 to 2005)

Year	**Firms of 3-9 employees (micro firms excluding those with under 3 employees)**	**Firms of 10-49 employees (small firms)**	**Firms of 50+ Employees includes medium sized together with (larger firms)**	**Total firms**
1994	1,549	1,917	911	4,377
1995	1,448	1,928	975	4,351
1996	1,444	1,931	1,001	4,376
1997	1,483	2,004	1,029	4,516
1998	1,438	2,016	1,037	4,491
1999	1,527	2,063	1,009	4,599
2000	1,780	2,099	995	4,874
2001	1,843	2,034	993	4,870
2002	1,964	2,082	952	4,998
2003	1,988	2,094	913	4,995
2004	1,867	1,968	849	4,684
2005	1,737	1,838	843	4,418
% change 1994 to 2005	12.4%	- 4.1%	-7.4%	.95%

Source: (CSO 2008).

The number of industrial firms increased in the region of only 1 per cent between 1994 and 2005. This apparent stability in the overall figure disguises much change within the period. Growth was strongest in the micro firm (this excludes micro-firms with fewer than three employees) category (12.4 per cent). There was a decrease in the number of firms with between 10-49 employees (-4.1 per cent) as was the case with firms employing more than 50 persons (-7.4 per cent).

There were also differences within the 1994 to 2005 period. In the early years (1994-2000) the number of micro firms recorded in the CIP actually shrank, despite the overall increase from 1994 to 2005. Medium size and larger firms exhibited an almost opposite pattern with their numbers growing in the early years, peaking in 1999 before declining rapidly to below their 1994 level by 2005. There was a reduction in the number of industrial firms across all firm size classifications post 2003 which continued up to 2005. The declining contribution of this sector is further emphasised when an examination of its contribution to employment is undertaken (see Table 2.4).

Table 2.4: Changes in the Contribution of Industrial Firms to Employment Between 1994 and 2005

Year	Numbers employed in firms of 3-9 employees	Numbers employed in firms of 10-49 employees	Numbers employed in firms of 50+ employees	Total numbers employed
1994	8,658	42,735	171,655	223,048
1995	8,037	43,326	184,639	236,002
1996	8,117	43,741	189,535	241,393
1997	8,444	45,455	201,135	255,034
1998	8,255	46,140	203,334	257,729
1999	8,682	47,420	206,954	263,056
2000	9,889	47,370	211,375	268,634
2001	9,563	46,697	207,938	264,198
2002	10,636	47,024	196,183	253,842
2003	10,464	46,237	187,536	244,237
2004	9,845	43,351	182,293	235,489
2005	9,029	40,837	181,118	230,984
% change 1994 to 2005	4.1 %	4.44%	5.5%	3.5%

Source: (CSO 2008).

In 1994, the 4,377 industrial firms employed 223,048 persons (CSO 2008). In 2005, the 4,418 firms employed 230,984 persons, representing a 3.5 per cent increase in numbers employed between 1994 and 2005.

As with the discussion of Table 2.3, on the number of SMEs, Table 2.4 shows some interesting differences between the various firm size categories and at different times. CIP counted micro firms increased employment numbers by 4.1 per cent during the period under review which compared favourably with industrial firms that had in excess of 50 employees that showed employment growth of 5.5 per cent. The data shows that employment in the small and medium/large firms peaked in 2000, whereas growth in the micro segment continued and reached its peak in 2002.

Employment growth across all sizes of industrial firms declined after 2002 and that decline continued up to 2005. Going behind the figures of Table 2.4, the most notable decline occurred in the traditional manufacturing sectors (e.g., textiles, clothing, leather, electronics, paper and printing) (Forfás 2004). In contrast, during this period there was an increase in employment in the added-value export oriented sectors, such as the food/drinks, medical devices and medical equipment sectors (DKM Economic Consultants 2006). Overall, while there was a decline in the contribution of industrial SMEs for the period of the study, of note is the significance of the small and particularly the micro firm as key components of employment generation until 2002. Despite the continued decline in their employment contribution since 2002 no information was produced by the CSO to provide an explanation for the decline in industrial SMEs. Surely, information on the reasons behind this decline would provide invaluable insights on the key business challenges which need to be addressed in SME policy.

2.3.4 SME Activity and Employment in the Service Sector

The CSO's Annual Services Inquiry (ASI) produces data on the number of firms operating in the service sector. Data is produced for all enterprises in the retail, wholesale, real estate, renting and business services and other selected sectors (NACE 45-96). As with the CIP data used in discussing the industrial sector above, the presentation of the ASI too combines the figures for medium-sized with those for larger firms. ASI does however collect information on all micro firms employing one person or more. Since ASI data is only available from 2000 onwards, it is not possible to make a comparison with how this sector performed relative to the industrial sector prior to 2000. As medium-sized firms are conflated with larger firms in the presentation of the ASI data, it is difficult to plot the pattern of SME change within the service sector. However, we can see that the micro and small subset of the SME category in the service sector demonstrated substantial growth between the years 2000 and 2005, which is highlighted in Table 2. 5.

Table 2.5: Changes in the Number of Firms in the Service Sector between 2000 and 2005.

Year	Micro firms 1-9 employees	Small firms of 10-19 employees	Small Firms of 20 -49 employees	Total of Micro and Small firms (1-49 employees)	Firms of 50+employees (Medium-sized and large firms)	Total firms
2000	55,600	2,653	2,204	60,496	1,205	61,700
2001	61,885	3,082	2,555	67,552	1,437	68,958
2002	67,026	4,662	3,053	74,741	1,572	76,313
2003	72,077	6,531	2,898	81,506	1,771	83,277
2004	73,215	7,175	3,108	83,498	1,786	85,284
2005	73,600	5,634	2,901	82,100	1,888	83,988
% change 1994 to 2005	32.3%	112.1%	31.6%	35.7%	56.6%	36.1%

Source: CSO (2008).

As can be seen from Table 2.5 there were 61,700 service firms in 2000, of which the vast majority (98 per cent) employed fewer than 50 persons and 87.5 per cent constituted micro firms On the whole, across all size categories, there was a 36 per cent increase in the number of service firms between the years 2000 and 2005 with the greatest level of growth evident in service firms employing between 10 to 19 persons.

The significance of the service sector during the years 2000 to 2005 is further reinforced through an analysis of its contribution to employment. Table 2.6 compares the contribution to employment of the different size service firms between 2000 and 2005.

Table 2.6: Employment Contribution of Service Firms (2000 to 2005)

Year	Firms of 1-9 employees	Firms of 10-19 employees	Firms of 20-49 employees	Firms of Total 1-49 employees	Firms of 50+employees	Total numbers employed
2000	174,925	45,718	69,939	290,582	263,168	553,751
2001	188,493	51,663	76,168	316,324	292,296	608,621
2002	199,949	66,316	89,336	355,601	313,275	668,876
2003	210,012	91,937	82,619	384,568	328,549	713,117
2004	210,868	98,645	93,096	402,609	334,359	736,969
2005	210,077	81,955	88,172	380,204	360,216	740,419
% change 1994 - 2005	20.9%	79.2%	26.0%	30.8%	36.8%	33.7%

Source: CSO (2008).

Table 2.6 shows that 290,582 persons were employed in service firms with less than 50 employees, accounting for 52.5 per cent of total employment in all service firms. By 2005, this number employed had risen to 380,204 people showing an increase of 30.8 per cent. Service firms with less that 50 employees accounted for 51.3 per cent of total employment in all service firms (CSO 2008). Alas, whether or not the growth in firms with 50 or more employees was dominated by medium-sized or by larger firms is not discernible from the way the data is presented.

The service sector is dominated by consumer services (ASI 2003) which expanded with the increase in consumer spending, changing lifestyle and increased discretionary income during the Celtic Tiger period. However, during an economic downturn these services are susceptible to economic shocks and owner-managers need to identify opportunities for expansion or diversification from their current business activity to ensure sustainability in a changed business environment.

2.3.5 SME Activity and Employment in the Construction Sector

Concurrent with the growth in the service sector was the unprecedented activity in the construction sector. Statistics pertaining to the number of SMEs in the construction sector are compiled in the CSO's Census of Building and Construction (CBC), an annual inquiry of firms in the building, construction and civil engineering sectors employing twenty or more people (NACE 41-43). A number of points are noted about the deficiency of data pertaining to SMEs in the construction sector. Similar to the service sector, the most comprehensive statistics available for the construction sector are from 2000 onwards which does not allow for comparison of the data with the industrial sector. Further, the lack of pre 2000 statistics does not permit discussion on the pace of growth in a sector which emerged as a central tenant of the Celtic Tiger period. Finally, data is not produced on the number of construction firms who employ less than 20 persons, which undervalues the real contribution of this sector as a whole. In 1995 there were approximately 297 construction firms with 20 or more employees. The vast majority, 73 per cent, had fewer than 50 employees (DKM Economic Consultants 2006). Table 2.7 shows the change in the number of construction firms between 2000 and 2005.

Table 2.7: Changes in the Number of Construction Firms in Ireland (2000 and 2005)

Year	Firms of 20-49 employees	Firms of 50+ employees	Total firms
2000	355	169	524
2001	367	179	546
2002	439	207	646
2003	488	194	682
2004	512	224	736
2005	497	231	728
% change 1994 - 2005	40%	36.6%	38.9%

Source: CSO (2008).

In 2005, 68 per cent of the 728 construction firm employed 20 and 49 persons. Between the years 2000 and 2005, there was an increase of 38.9 per cent in the overall number of construction firms with the highest increase of 40 per cent in firms employing between 20 and 49 persons. This compared with a 36.6 per cent increase in construction firms employing in excess of 50 persons (CSO 2008). In 2005 there was a slight decline in the overall number of construction firms. However, larger construction firms (with over 50 employees) showed a slight increase in numbers, whilst the smaller firms (20-49 employees) showed a small reduction. There were almost 67,000 persons engaged in construction enterprises (20+ employees) in 2005 (CSO 2008) which represented an increase of over 48 per cent since 2000. Table 2.8 presents the detail for employment in construction firms between 2000 and 2005.

Table 2.8: Changes in the Contribution of Construction Firms to Employment between 2000 and 2005

Year	Firms of 20-49 employees	Firms of 50+ employees	Total numbers employed
2000	9,950	35,015	44,965
2001	9,840	36,531	46,371
2002	10,780	40,958	51,738
2003	11,124	45,432	56,556
2004	16,254	48,770	65,024
2005	19,942	49,747	66,689
% change 1994 - 2005	100.0%	42.07%	48.3%

Source: CSO (2008).

Overall, the construction firms with more than 20 employees increased employment numbers by 48.3 per cent between the years 2000 and 2005. The most substantial growth was evident in firms with between 20 and 49 persons, which effectively doubled their employment numbers. This compared to a 42 per cent increase in employment by firms with 50+ employees. Furthermore, construction firms employing 20-49 persons accounted for over one quarter of all persons engaged in construction enterprises in 2005. The growth in employment in this sector slowed significantly from 2003 onwards. Of concern is how the firms operating in this sector will adapt to declining construction demand and the lack of alternative diversification options for construction firms in the current economic climate.

2.3.6 SME Export Activity

A characteristic of the business environment in Ireland between 1994 and 2005 was an increasing emphasis on the need for Irish firms, irrespective of size, to consider international markets as a means of firm growth (Enterprise Strategy Group 2004). Despite this, little detailed data exists on the pattern of export behaviour of SMEs in Ireland (Lawless 2007). Data on export activity for the period 1994 to 2005 is primarily confined to FDI firms that in many instances used Ireland as an export base. This data did not highlight the specific contribution of the micro, small or medium or large firms rendering it difficult to isolate their relative contribution to exporting. Additionally, the level of export activity undertaken by indigenous firms between 1990 and 2002 was described as 'negligible' (The Enterprise Strategy Group 2004). Moreover, export data for service and construction firms is sketchy for the period of the study.

Information on the export performance of SMEs is presented on the monetary value of their gross output exported and is mostly available from 2000 onwards (CSO 2008). Data for medium firms incorporates all firms with in excess of 50 employees therefore, it is impossible to separate medium firm export data from the larger firm data to ascertain their specific contribution to export performance. This data is presented in Table 2.9 and shows the change in export activity by firm size between the years 2000 and 2005 denoted in the current value of their gross output exported (in billions of euro).

Table 2.9: Gross Output Exported by Industrial Firms by Employment Size

Year	Firms of 3 -9 employees	Firms of 10- 49 employees	Total 3-49 employees	Firms of 50+ employees	Total Firms
2000	184.5	2,491.2	2,675.6	69,049.8	71,725.4
2001	204.4	2,798.7	3,003.1	73,585.9	76,589.0
2002	184.5	2,491.2	2,675.6	69,049.8	78,788.4
2003	303.5	2,242.9	2,546.3	74,520.3	79,629.6
2004	292.4	1,828.9	2,121.2	77,508.4	77,066.6
2005	264.7	1,663.7	1,928.4	83,169.1	85,097.5

Source: (CSO 2008).

In 2000, firms with less than 50 persons exported €2.6 billion of their output relative to €69.8 billion by firms with more than 50 persons. In 2005, small industrial enterprises (less than 50 employees) exported over €1.9 billion of their gross output compared to €83.2 billion by firms with more than 50 employees. Exports in smaller firms (10-49 employees) declined from 2002 onwards, which was contrary to the performance of firms with more than 50 persons. With regard to the micro firm, export activity peaked in 2003 and declined for the two subsequent years. These trends are worrying at a time when government policy was encouraging greater levels of export activity in SMEs. Disappointingly, the CSO (2008) publication did not provide any explanation as to why this was the case, for instance whether it might be related to increased domestic demand for SME product and services; currency fluctuations and poorer exchange rates; demand changes in host markets or internal management issues. The lack of detail on the profile of SME exporting, their industry sector and markets exported into further compound the difficulties in isolating rationale for the aforementioned decline in export activity. The dearth of information on the export activity of service SMEs renders it impossible to determine their contribution. Moreover, data for the export performance of SMEs in the construction sector could not be obtained.

In summary, export performance was dominated by firms employing in excess of 50 persons in the industrial sector. An understanding of the number and type of SMEs that export is a fundamental prerequisite for informing appropriate policies and support interventions to encourage exporting activity. The lack of firm size and industry sector export data hinders the development of such policies. The deficiency of export data is disappointing given that small firms constitute 97 per cent of enterprises in Ireland (Small Business Forum 2006). As a country with a relatively limited domestic market for both products and services, it is imperative that Irish SMEs that wish to expand continue to seek opportunities to grow through exporting to an increasingly globalised world. In order to achieve the focus of government policy (Enterprise Ireland Strategy Group 2004; Forfás 2007; Building Ireland's Smart Economy Framework 2008) which recommends that Irish SMEs become more international, it is essential to strengthen the international growth achieving ability of Irish SMEs. In particular, SMEs operating in high growth, value-added sectors (ICT, biotechnology, food, financial services) need to be encouraged to avail of growth opportunities in international markets.

2.3.7 Regional Distribution of SMEs in Ireland

Data detailing the regional distribution of the SME sector was sourced primarily from the Central Statistics Office publications (ASI 2006; CIP 2006; CSO 2007) and the DKM (2006) report. The CIP data for industrial firms divides Ireland into the Border, Midland and Western (BMW) and the Southern and Eastern (S&E) region. Information on the regional distribution of the service sector is found in the ASI survey. This provides data at a more aggregated level than the CIP sources distinguishing only between the BMW and S&E regions. While it was not possible to draw a comparison between the two sets of data an overview is presented on what statistical information is available on the overall regional distribution of SMEs in Ireland.

The importance of the small industrial firm sector was biased towards the Southern and Eastern regions where in 1995, 72 per cent of small industrial firms were located in the South and Eastern region, while 28 per cent were located in the BMW region. The Mid-East region accounted for 9.4 per cent and in the Mid-West region small industrial firms accounted for 6.6 per cent of firms. With regard to their contribution to overall employment, 25 per cent of industrial employment was in small firms; this varied from 20 per cent in the Mid-West to 31 per cent in the Border region whereas in Dublin the figure was 28 per cent (DKM 2006). This trend continued for 2004 in the Border, Midland and Western (BMW) and the Southern and Eastern (SE) regions, where 82 per cent of industrial firms were small firms (i.e. up to 49 persons engaged) with the largest concentration in the greater Dublin region. The Mid-West region, the region chosen for this study is incorporated into the Border, Midland and Western (BMW) region. Information is only available for the overall region and is not extrapolated for specific counties, which causes difficulties in isolating the spatial distribution of SMEs within the Mid-West region. During the period of the study the Mid-West's industrial base was predominantly supported by significant numbers of foreign owned firms mainly in the general manufacturing and engineering and electronic sectors (CSO 2008). However, employment in this sector decreased between 1998 and 2002 by 7.3 per cent which was higher than the national average of 0.8 per cent (IBEC 2003).

In relation to firms in the service sector, the data is vague and provides more general information on their spatial contribution than for industrial firms. While the majority of such firms in both regions were small, the proportion was slightly higher in the BMW region. In 2005, the 20,000 service enterprises with less than 50 employees in the Border, Midland and Western (BMW) region accounted for 65 per cent of total employment in the services sector. In comparison the 62,000 such enterprises in the Southern and Eastern (S&E) region accounted 48 per cent of employment (CSO 2007).

The data on the spatial contribution is vague and non comparable due to the different regional categorisations adopted in the CSO publications. It was not possible to disaggregate data on SMEs specific to the Mid-West region, as is the case for the other seven statutory regions of Ireland. This aggregate data masks differences in the profile of SMEs between and within regions and further points to the limitations in current SME profile data resulting in an inability to identify variations that occur in the composition of SMEs within and across regions in Ireland.

2.4 Contribution of the SME Sector to the Irish Economy 1994-2005 – Key Insights

In conclusion, it is clear that SMEs were indeed an important growth dynamic to the Irish economy and a primary source of employment creation. Notwithstanding this, some overriding issues emerge that are worthy of consideration in preparing government policy:

- In 2005, firms with less than 49 persons accounted for almost 22 per cent of employment in the industrial sector. Moreover firms with between 1-49 persons accounted for more than half of total employment in the services sector and construction firms with 20-49 persons accounted for over one quarter of all persons engaged in construction enterprises in 2005.
- In 2005, the highest concentration (98 per cent) of micro and small enterprises was in the service sector (CSO 2008). In comparison, industrial firms with fewer than 50 employees accounted for almost 81 per cent of all industrial enterprises (CSO 2008). Finally, in the construction sector over 68 per cent of all enterprises employed between 20-49 persons (CSO 2008). The decline in growth in the number of firms in all sectors employing in excess of 50 persons is notable, which would suggest that micro firms are not growing into this larger cohort of firms. Of particular note is the considerable decline experienced in the construction sector. However, the underlying reasons behind the demise of these sectors are not forthcoming from the data.
- It was impossible to comment with any degree of confidence as to the export activity of Irish micro and small and medium sized firms given the lack of available data. Of concern is the lacuna of data on the pattern of export performance of Irish micro and small firms. Overall, data on the export

performance of the SME sector is limited between 1994 and 2000 and the relatively more detailed data that exists from 2000 onwards relates primarily to the industrial sector. Export data for service and construction firms is vague. Understanding the number and type of small firms that export is a fundamental prerequisite for developing appropriate policies to encourage export activity.

Overall, much of the data available on the SME sector in Ireland is purely statistical and based on crude measures, such as, the number of firms in operation at one period of time and lacks any explanation underpinning the statistics on established SMEs. Moreover, issues arise with the adoption of different size thresholds in the compilation of data by government agencies and the CSO, which, coupled with a lack of data on certain sizes of firm within the industry and construction sectors renders it difficult to obtain a holistic perspective of the SME sector in Ireland. The absence of commentary on the reasons why the contribution of the SME sector has declined, or on the issues associated with the low participation in export activity leaves a number of gaps in our knowledge on the complete contribution of the Irish SME sector. This detail is imperative to inform relevant and practical policy for SMEs.

2.5 Concluding Remarks

A key constituent of the Irish economy during the Celtic Tiger era was the SME sector. Given the decline in the number of SMEs in operation post 2003 and their reduction in employment numbers, this sector requires attention to ensure it continues to play a significant role in what is a very changed economic (national and international) landscape. While the Irish economy benefited in the 1990s from a combination of favourable national and international trends, post Celtic

Tiger Ireland faces challenges presented by a confluence of less favourable international economic conditions. These have resulted in more challenging and uncertain conditions for Irish SMEs. Moreover, a decline in the level of FDI in Ireland creates a greater need to develop a sustainable SME sector. The development of government policy is contingent on having a good understanding of the SME sector in Ireland. From the analysis of the available data it is clear that there are still omissions in our understanding of the role that SMEs play in the Irish economy. Fundamental to understanding the SME sector is a clearer marking out of the micro, small and medium firms as part of the SME sector. The adoption of a common set of criteria to define SMEs by government agencies will facilitate more equitable comparison of information and improve the ability to arrive at an agreed consensus on the significant contribution that the SME sector makes to the Irish economy. In a related context and of importance for small firm policy development, is the necessity to build on the scarcity of empirical evidence-based information on the factors which impact on small business growth. These factors, with a particular focus on how a range of internal factors impact on small firm growth are discussed in Chapter Three.

Chapter Three: The Determinants of Small Firm Growth – The Influence of Internal Factors

3.1 Introduction

The previous chapter established that the SME sector was an important driver of the economic growth in Ireland during the period 1994 and 2005. Despite the importance of this sector very little documented evidence is available to explain why differences occur in the growth performance of Irish small firms. Hence, an understanding of the determinants of firm growth has significant implications for the design of relevant and targeted Irish small firm policy (Kinsella *et al.* 1994; Barkham *et al.* 1996; O'Gorman 2001).

The focus of this chapter is to review the contributions of the literature relating to how a range of internal factors influence small firm growth. External macro-environmental and internal factors impact on the business growth decisions made by the owner-manager (Davidsson 1991; Wiklund 1999; Dobbs and Hamilton 2007). The external factors contain a range of economic, political, societal/demographic, technological and regulatory aspects which are largely outside the control of the owner-manager. It is important that the owner-manager is aware of how these will impact on business growth strategies. The internal factors are within the control of the owner-manager and will therefore greatly determine the level and type of firm growth achieved (Kinsella *et al.* 1994; Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Glancey 1998; Roper 1998; Smallbone and Wyer 2000; Greenbank 2001; O'Gorman 2001; Donohoe and Wyer 2005; Dobbs and Hamilton 2007; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009).

Owner-managers may be exposed to the same external challenges in achieving growth, but given the heterogeneity of small firms differences will occur in how these challenges are managed by the owner-manager. Examining internal factors as determinants of small firm growth will highlight those causing growth differences between firms and will assist in the isolation of the characteristics of higher growth achieving small firms.

That said which one or combination of internal factors is the central prevailing determinant remains largely unanswered in the literature and is thus a subject of ongoing research. For this reason the impact of internal factors on small growth are of most interest to this study. In particular three sets of internal factors, the characteristics of the owner-manager, the features of the firm and the strategic focus of the business will be investigated.

The first section of the chapter provides an overview of the concept of firm growth and examines what constitutes growth in the small firm. An assessment of the various measures of firm growth emphasise the importance of adopting multiple measures to accommodate the multifaceted nature of small firm growth. Since the conceptual framework was developed for the thesis (and locked as the data primarily relates to that) a number of the more recent studies debating the topic of small firm growth are briefly appraised in the literature review. The chapter then evaluates the academic and conceptual research studies which are deemed most relevant for the development of this Irish study and will identify if there are a common set of internal characteristics common across the higher growth firms. The chapter concludes by presenting an assortment of internal determinants and their expected impact on the three measures of firm growth adopted for the study (employment, turnover and turnover per employee). These form the basis of the research hypotheses which will be tested in the empirical research on a sample of SMEs in the Mid-West region of Ireland.

3.2 Small Firm Growth

Small firm growth is an increasingly investigated phenomenon and is a subject of ongoing research in the general small firm research stream (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Sexton and Semilor 2000; Andersson 2003; Delmar *et al.* 2003; Philipsen *et al.* 2003; Wiklund and Shepherd 2003; Massey *et al.* 2006; Davidsson, *et al.* 2006; Dobbs and Hamilton 2007; Greve 2008; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009; Leitch *et al.* 2010; Littunen and Niittykangas 2010). Heterogeneity of firm growth was promoted in seminal research on organisation development completed by Penrose (1959). She emphasised the importance of differentiating between large and small firms and suggested that the theories of firm growth applied to the large firm were not applicable. Furthermore, Storey (1994) concluded from his analysis of 18 research studies on small firm growth that the internal organisations of small and large firms were fundamentally different where the development of a theory of firm growth based solely on the change in the size of the firm was not practical in the small firm context. Barkham *et al.* (1996) extended the findings of Penrose (1959) where they viewed the small firm as a collection of individuals whose knowledge, skills and abilities influenced the direction and level of growth. In particular they found as did Storey (1994) and Kinsella *et al.* (1996) that the owner-manager was the primary determinant of growth in the small firm. These findings suggested that understanding the type of objectives for firm growth were an important precursor when examining overall growth.

Similarly, the objectives for growth, if any were viewed as a fundamental starting point in researching small firm growth (Kinsella *et al.* 1994; Barkham *et al.* 1996; Beaver and Ross 2000; Delmar *et al.* 2003; Dobbs and Hamilton 2007 Kirkwood *et al.* 2009). The assumption that all small firms wish to grow their business was debated in a number of research studies (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Gibb 2000; Smallbone and Wyer 2000; Wiklund *et al.* 2003; Wiklund and Shepherd 2003; Donohoe and Wyer 2005; Gilbert *et al.* 2006; Dobbs and Hamilton 2007; Delmar and Wiklund 2008; Andersson and Tell 2009; Leitch *et al.* 2010). In summary, these studies suggested that it was incorrect to assume that all firms irrespective of their size wished to grow their business or indeed experienced the same challenges in the achievement of growth, thus reinforcing the diversity of small firm growth.

Despite a large number of research studies on the area (see Gibb and Davies 1990; Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Ardishvilli *et al.*1998; Glancey 1998; Roper 1998; Davidsson and Wiklund 2000; Gibb 2000; Orser *et al.* 2000; Smallbone and Wyer 2000; Philipsen *et al.* 2003; Dobbs and Hamilton 2007; Greve 2008; Andersson and Tell 2009; Kirkwood 2009; Littunen and Niittykangas 2010) it is difficult to extract a single comprehensive perspective of the phenomenon. More recent reviews completed of the extant literature on the determinants of small firm growth suggested the research produced a disparate rather than a comprehensive understanding of what is a complex concept (Hugo and Garnsey 2005; Garnsey *et al.* 2006; Koeller and

Lechler 2006; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010; Leitch *et al.* 2010). Additionally, these studies found that difficulties existed in arriving at a consensus of what constitutes small firm growth due to variations in the methodologies employed by such studies rendering it difficult to make comparisons between results and making generalisations and prediction problematic. Furthermore, the utilisation of the dichotomy of growth distinguishing only between 'growing' and 'declining' firms failed to adequately deal with the fact of most firms do not grow continuously (Smallbone *et al.* 1995; Blackburn *et al.* 2009).

Consequently, despite the extensive research on this topic, variations in the type of growth objectives; differences in how growth is measured; disparity in the time frame of the research studies and a variation in the number of internal variables investigated result in a lack of coherence regarding a predictive set of internal determinants of small firm growth or the emergence of a single theory to describe small firm growth.

Given that different and multiple objectives for growth can exist in the small firm, which may result in different growth outcomes, it is important that the choice of growth measures adopted in researching growth take cognisance of the multidimensional aspects of firm growth (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Davidsson and Wiklund 2000; Delmar *et al.* 2003; Pasanen 2006; Dobbs and Hamilton 2007; Morrison *et al.* 2008; Shepherd and Wiklund 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). Essentially, the choice of the most appropriate growth measure(s) to apply should consider that the different aspects of firm growth may have different determinants.

3.3 Measuring Small Firm Growth

In a broad sense, Brush and Vanderwerf (1992) suggested that growth was a descriptor of the performance of small firms, where performance was gauged by different measures applied by the various firm stakeholders both internal and external. The main internal stakeholder is the owner-manager. External stakeholders can constitute funding agencies, government organisations, customers and suppliers who have different demands from the small firm. As firm growth may take different forms and is assessed by a range of stakeholders a number of measures should be applied to comprehensively capture the dynamics of small firm growth (Kinsella *et al.* 1994; Storey 1994; Westhead and Birley 1995; Barkham *et al.* 1996; Roper 1998; Davidsson *et al.* 2006; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). There are many measures available to assess the level of small firm growth ranging from key financial indicators such as turnover and profit and the commonly used non-financial measure of employment growth (Storey 1994; Westhead and Birley 1995; Barkham *et al.* 1996; Glancey 1998; O'Gorman 2001; Delmar *et al.* 2003; Freel and Robson 2004; Blackburn *et al.* 2009; Kirkwood *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010).

Financial turnover is a useful output measure for assessing small firm performance with respect to aggregate sales and market share. According to Barkham *et al.* (1996) turnover is the main indicator small firm owner-managers use in assessing the performance of their firm. In addition Barkham *et al.* (1996) found that turnover was the least problematic of the financial variables to use as it was easy to measure, record and was more readily obtained from the owner-manager relative to profit figures. Moreover, in a cross-industry study turnover growth provides a useful means for benchmarking the findings of research studies (Barkham *et al.* 1996; Ardishvilli *et al.* 1998; Liao *et al.* 2001). However, it is important to consider how the turnover figure is presented and identify any assumptions underpinning the data as these may impact when comparing the findings of research studies.

The second financial measure less frequently applied in an assessment of firm growth is the level of profit achieved. Research evidence on the association between small firm growth and profitability is weak (Barkham *et al.* 1996; Glancey 1998; Roper 1999; Hamilton and Lawrence 2001; Dobbs and Hamilton 2007; Shepherd and Wiklund 2009). This challenged the idea that where firms did not achieve profit, small firm growth did not occur; or alternatively; that the achievement of profit did not necessarily result in growth in other aspects of the business (Barkham *et al.* 1996; Glancey 1998; Roper 1999; Dobbs and Hamilton 2007). The fact that the profit figure of a firm may not reflect the real financial position of the firm and may be inversely related to firm growth limits its use in a research study (Storey 1994; Barkham *et al.* 1996; Glancey 1998; Roper 1999; Hamilton and Lawrence 2001). Further, as profit figures can change due to internal investments which absorb cash flow and may not result in immediate financial gains, it may present an inaccurate financial perspective of the business (Storey 1994; Barkham *et al.* 1996).

Finally, as the profit figure determines the tax liability for the firm there may be some manipulation of the data to reduce tax liabilities and hence, it may not reflect the actual performance of the firm. The limitations associated with the use of profit as a sole means of gauging small firm growth outweighed the benefits associated with it in this study, since the primary focus is on guiding government policy where employment is a primary concern.

The restrictions of a financial measure as the only measure of small firm growth was further heightened in studies (Barkham *et al.* 1996; Roper 1998; Liao *et al.* 2001; Kirkwood *et al.* 2009; McKelvie and Wiklund 2010). Barkham *et al.* (1996) indicated the need to differentiate between firm growth and financial performance, as firm growth reflected a broader application which encompassed growth in areas such as employment, market share and product development. This directed consideration of appropriate non-financial measures to augment the limitations of the financial measures of either turnover or profit. The most frequently used non-financial measure of small firm growth encountered in the literature was on employment numbers. Employment growth is a popular measure adopted for research with a public sector orientation as job creation is an important focal point for government policy (Kinsella *et al.* 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Davidsson and Wiklund 2000; Cassar 2007; Moreno and Casillas 2007; Kirkwood 2009). This indicator is often applied as this information is easily collected, is not affected by inflation and is beneficial for cross-comparative purposes. That said, there are a number of issues which require consideration. Firstly, there is a changing pattern and composition of employees in the small firm towards part-time, temporary or sub-contract staff (see for example, SFA 2003). If small firms outsource aspects of employment, then employment growth will not always be highly correlated with sales growth (Barkham *et al.* 1996; Delmar *et al.* 2003: Dobbs and Hamilton 2007). Information on employment numbers beyond full time staff to reflect part-time employment should be sought.

Secondly, the employment profile of the small firm may vary by industry sector and requires consideration when adopting the employment growth measure in research studies across multiple industry sectors. Thirdly, employment growth may not automatically result in the financial growth of the firm or indeed the converse may not be automatic in the small firm which may affect the results of research findings. For instance, an increase in the number of employees may result in a strain on the cash flow of the firm for a period of time, thus negatively affecting the financial growth of the firm, or small firms may experience financial growth in turnover or profits but may not increase employment numbers. This may be the case in certain industry sectors where the need for increased staff is less due to greater use of technology in conducting business operations. These issues can be accommodated by incorporating a financial measure such as turnover and identifying if a relationship exists between the turnover and employment measures of firm growth.

In addition to a focus on employment generation, government policy is also concerned with the cost competitiveness of small firms (Small Business Forum Report 2006; Building Ireland's Smart Economy Framework 2008). The productivity of a firm is an important indicator for individual enterprises as well as for policy. For the individual firm labour productivity or turnover per employee is a primary barometer of the their return on staff and of the performance of the firm, while from a policy perspective aggregate productivity is a key determinant of economic growth (Lindsay 2004; Brouwer *et al.* 2005). Productivity is concerned with the ratio of inputs and outputs in the production process, or how much production is generated with the available production factors (labour or all other production factors) (Brouwer *et al.* 2005). This study focuses on labour productivity or turnover per employee growth. Irish government acknowledge the importance of improving productivity levels in Irish SMEs as a basis of greater cost competitiveness nationally and internationally (Small Business Forum 2006). Therefore, cost management is a key challenge impacting on their competitiveness. Given that the cost of employing staff is a primary input cost for the small firm (SFA 2003; Small Business Forum 2006) it is imperative that owner-managers can assess the return on investment employees provide.

Research conducted by Taymaz (2002) and Jensen *et al.* (2001) suggested that turnover per employee growth rates are connected to firm age and size. These suggested that new firms would show higher levels of productivity growth where after a number of year's productivity declined. It was also found that industry sector characteristics impact on productivity growth in the small firm (Taymaz 2002). The collection of this type of data provides an important means of benchmarking firm performance in a multiple industry sector study. The assumption that the more productive firms will grow while the least productive will achieve lower levels of firm growth was discounted by Coad (2007). This was also debated in studies by Disney *et al.* (2003) and Bailey and Farrell (2006) where it was suggested that some firms increase productivity through expansion while it occurs in other firms through downsizing. Additionally, lower business growth in higher productive firms may be attributable to the fact that owner-managers may not have the desire to grow their business or may not have the internal capabilities to avail of growth opportunities (Bailey and Farrell 2006; Coad 2007) thus, bringing to the fore the importance of investigating how internal factors can impact on this aspect of firm growth to obtain a more composite perspective of firm growth. As no single measure, financial or non-financial on their own will accurately capture the multifaceted nature of firm growth, where growing in one dimension does not necessarily result in growth in the others, thus a combination of measures should be applied in this research study.

The use of multiple measures was recommended in a number of the research studies reviewed (Kinsella *et al.* 1994: Storey 1994; Barkham *et al.* 1996; Roper 1998: Davidsson and Wiklund 2000; Hart and McGuinness 2003; O'Gorman 2001; Dobbs and Hamilton 2007; Gilbert *et al.* 2006; Kirkwood 2009; Shepherd and Wiklund 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). In summary, these studies recommended that multiple measures capture the different types of firm growth (financial and non-financial) they also identify how measures relate to a range of internal factors and examine the relationship between the growth measures themselves. While it is sensible that a number of measures should be used to assess small firm growth, a consensus on what measures or how many to adopt was difficult to achieve from the literature. As firm growth has been measured in a number of ways in the various studies comparing different research results is a challenging task (Brush and Vanderwerf 1992; Glancey 1998; Hamilton and Lawrence 2001; Daily *et al.*

2002; Harber and Reichel 2005; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010).

In a related manner, the time span over which firm growth is analysed in the literature varies considerably. In relation to the regularity of firm growth research suggests a need to incorporate measures to capture how firm growth changed over a time period (Robinson and Gallagher 1993; Storey 1994; Barkham *et al.* 1996; Deakins and Freel 1998; Hamilton and Lawrence 2001; Delmar *et al.* 2003; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; McKelvie and Wiklund 2010). This can be achieved by comparing the data between two or more time periods (Barkham *et al.* 1996; Hamilton and Lawrence 2001; Dobbs and Hamilton 2007) or over periods of time that are sufficiently long to allow for growth patterns to become apparent (Barkham *et al.* 1996; Dobbs and Hamilton 2007; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). Such approaches would help to verify whether those variables associated with one period of growth are present and contributing to the sustained growth beyond that period, thus in some way accommodating the regularity/irregularity of small firm growth. In summary, as no single measure accurately captures the multidimensional nature of firm growth a combination of financial and non-financial measures are applied in this study investigating the determinants of small firm growth. This will also allow for some level of comparability with the existing growth studies. The financial measure applied is turnover growth and the non-financial measures include employment growth and turnover per employee (proxy for labour productivity). Further, growth is measured to capture the change in firm growth over a period of time (1996 to

2000). Just as the measures of growth vary, so do the independent variables or determinants that have been suggested to influence small firm growth.

3.4 Determinants of small firm growth – the Influence of Internal Factors

The role of internal factors as determinants of firm growth was emphasised in seminal research on organisation growth and development by Penrose (1959). She argued that firm growth was a function of the resource capabilities of the firm and the expectations of the owner-manager, where the sourcing and utilisation of these resources by the owner-manager determined the nature of small firm growth. This emphasis on the pivotal role of internal factors, most notably the characteristics of the owner-manager was reiterated in a number of academic and conceptual studies (Kinsella *et al.* 1994; Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Glancey 1998; Roper 1998; Smallbone and Wyer 2000; Baum *et al.* 2001; Greenbank 2001; O'Gorman 2001; Blackburn *et al.* 2003; Hart and McGuinness 2003; Poutziouris 2003; Wiklund *et al.* 2003; Barringer *et al.* 2005; Donohoe and Wyer 2005; Dobbs and Hamilton 2007; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009). The review of the literature has extensively discussed the determinants of small firm growth with an emphasis on three dimensions, namely owner-manager characteristics, firm characteristics and strategic activities, which form the core of this study. The most commonly researched factors investigated in the studies are outlined in Figure 3.1 below.

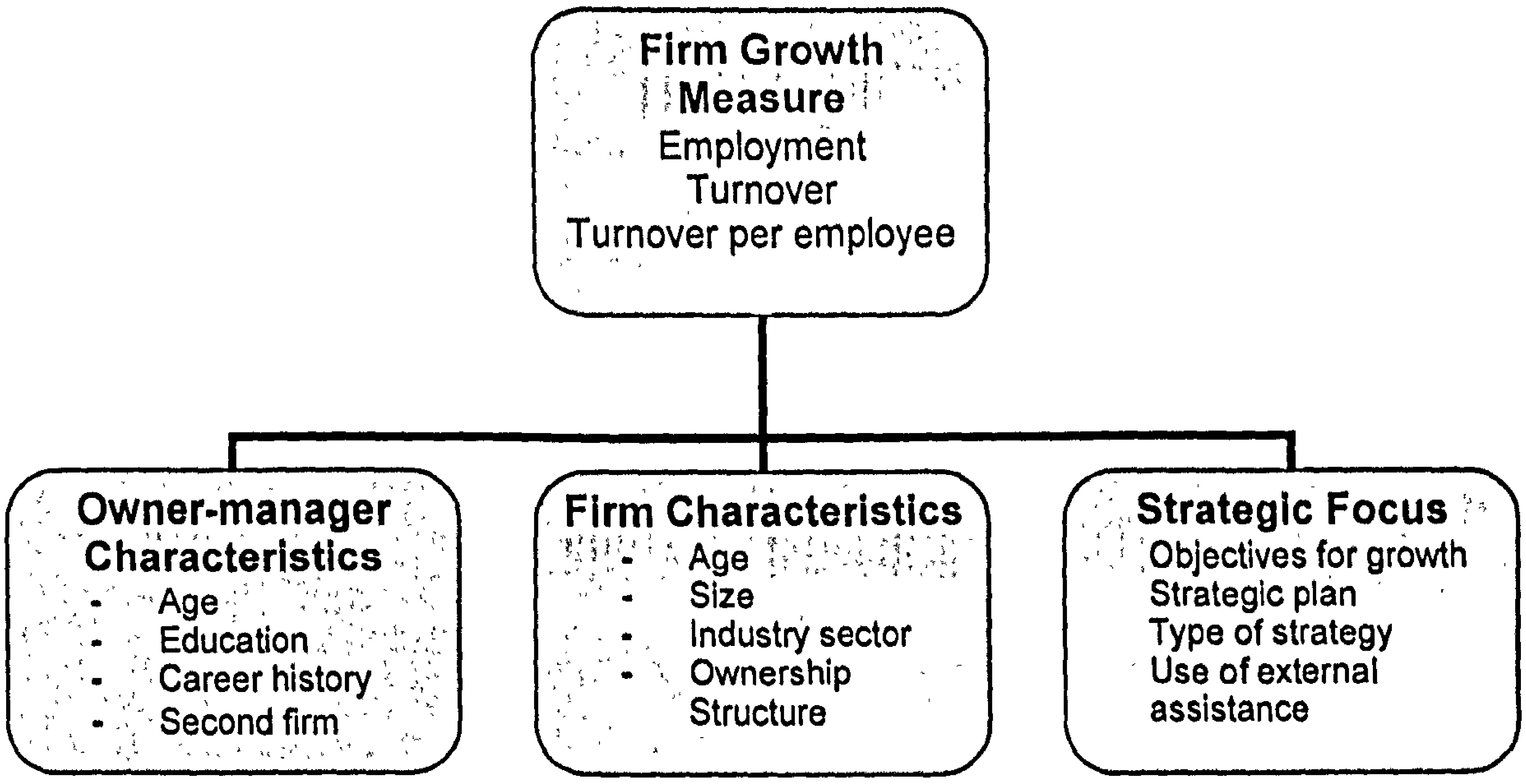

Figure 3.1: Internal Determinants of Small Firm Growth

Overall, the research framework for this study is that of the internal determinants of small firm growth and the academic study conducted by Kinsella *et al.* (1994) is the primary study drawn upon to direct this study. Secondly, the academic study conducted by Barkham *et al.* (1996) was deemed relevant as it addressed a comprehensive range of internal factors and adopted a similar research approach to that of Kinsella *et al.* (1994). The conceptual review completed by Storey (1994) was evaluated for its relevance as it provided an important insight and direction to subsequent studies on the internal determinants of small firm growth. Although primarily cushioned within these aforementioned studies the review of the literature engages with a number of the more recent studies and debates on small firm growth (Roper 1998; Davidsson and Wiklund 2000; Hamilton and Lawrence 2001; Liao *et al.* 2001; O'Gorman 2001; Poutziouris 2003; Wiklund *et al.* 2003; Donohoe and Wyer 2005; Gilbert *et al.* 2006; Wilkund *et al.* 2007; Kirkwood 2009; Shepherd and Wiklund 2009; Achtenhagen *et al.* 2010; Leitch *et al.* 2010; McKelvie and Wiklund 2010).

The conceptual study completed by Storey (1994) provided a starting point for reviewing the literature on small firm growth. This study comprised of an evaluation of 18 studies on small firm growth which were completed mainly in the United Kingdom and United States from the late 1980s and early 1990s. In summary, Storey (1994) found that a positive connection existed with three categories of internal factors as follows: personal characteristics of the owner-manager (such as the motivation for starting the business, their age, education and work experience either in paid employment or in self employment); the characteristics of the firm (such as firm age, size, industry sector and location of the business); and the strategic focus of the owner-manager, which incorporated the type of strategies pursued for firm growth and the use of external advice in strategy development. Table 3.1 details the extensive range of factors identified by Storey in his review of the various research studies.

Table 3.1: Factors Influencing Growth in the Small Firm

Entrepreneur/ Resources	**The Firm**	**Strategy**
☐ Motivation	☐ Age	☐ Workforce
☐ Unemployment	☐ Sector	☐ Management training
☐ Education	☐ Legal Form	☐ External equity
☐ Management Experience	☐ Location	☐ Technological sophistication
☐ 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		

Storey (1994)

In summary, Storey (1994) concluded that higher growth firms were operated by owner-managers who were motivated by the identification of positive market opportunities, were relatively well educated and held previous managerial positions. With regard to the features of the firm, the evidence suggested that firm age, size, industry sector, legal form and location were positively related to small firm growth. Finally, more specific relationships emerged between the type of business strategies adopted and small firm growth. Storey found that growth was linked with firms where equity was sought with external organisations, those who had a strong management structure in place and firms that implemented market positioning and new product development strategies. While the majority of studies he reviewed were in agreement as to the positive impact of the aforementioned internal factors, a number of studies found contradictory results, further highlighting the heterogeneity of firm growth. Storey's (1994) categorisation of the internal factors influencing small firm growth provides a useful inventory or listing of relevant determinants for analysis in research studies. However, these findings were not combined into an integrated model rendering it difficult to ascertain how the factors related with each other in the explanation of small firm growth. Additionally, Cooney and Malien (2004) commented that while there was a great depth of singularity was associated with the discussion on each of the determinants there was a lack of evidence to support or arrive at a consensus on the exact nature or significance of their effect on firm growth or how they interacted with each other to determine small firm growth.

The conclusions put forward by Storey (1994) were arrived at by comparing the findings of a broad range of studies which were predominately cross sectional and adopted a number of definitions of firm growth. Further, difficulties arose when comparing the research findings across the studies due to discrepancies in the number of factors examined, in the sample sizes, the time frame of the studies and in the choice of growth measures applied.

In essence, Storey (1994) did acknowledge the limitations of the comparative study and concluded that since all three sets of factors impacted on each other in the achievement of firm growth he recommended to investigate how these internal factors were related and interacted with each other to more comprehensively explain the dynamics of small firm growth. That said, his findings provide a useful context on which to review small firm growth research and the study is significant as it heightened the importance of continuing research on the internal determinants of small firm growth.

In Southern and Northern Ireland, the first comprehensive study on this topic was completed by Kinsella *et al.* (1994). The primary focus of this cross border quantitative study (in-depth interviews) was to examine the characteristics of faster growing small firms in Northern Ireland and the Republic of Ireland. This was achieved by comparing the performance of a sample of firms defined as fast growth and matched firms. In total 80 firms were surveyed where 20 firms were fast growth and 20 matched firms were interviewed in each jurisdiction. The criteria used for selection of the higher growth firms were profitability and return on assets. Correspondingly, the matched firms were identified from the same industry sectors and possessed similar ownership structure and age profiles. The survey broadly replicated the range of factors investigated and the methodology adopted in an earlier study conducted by Storey *et al.* (1989) on fast growing firms in North East England. The Kinsella *et al.* (1994) empirical study examined how three sets of internal factors, owner-manager characteristics, firm characteristics and the choice of strategy were associated with small firm growth in both jurisdictions.

With regard to owner-manager characteristics, factors such as the education levels, prior work experience and management experience were tested. Research on how the characteristics of the firm were associated with small firm growth included the product/service range, the firm's industry sector, firm size and the age of the firm. Finally, the research examined how management practices and business strategies were connected with small firm growth.

In summary, Kinsella *et al.* (1994) found that the owner-managers who achieved higher firm growth established their firm for positive reasons, the majority had third level formal education, with a tendency towards technical rather than business qualifications. The faster growth firms in this survey had a greater awareness of their competitors and had a close relationship with their customers. Strategies which focused on new product and international market development were characteristic of higher growth firms in the research completed by Kinsella *et al.* (1994).

Kinsella *et al.* (1994) concluded that due to the lack of a common collection of factors specifically associated with the faster growth firms, it was impossible to devise a 'blueprint of fast growth firms' as some of the characteristics associated with the faster growth firms were shared with matched lower growth firms. Rather what emerged was that the faster growth firms showed evidence of possessing more of these factors from the onset of their business. Based on these findings, from a policy perspective the Kinsella *et al.* (1994) study raised important issues to inform government policy on small firm growth which was lacking at the point in Ireland and was timely given the publication of the Task Force Report (1994). The recommendations emphasised the importance of greater selectivity in relation to the provision of government polices aiming to generate sustainable growth in small firms. This selectivity would additionally assist those start-up firms which exhibited the characteristics of faster growth firms to increase their probability of continued business growth.

In drawing comparisons between Kinsella *et al.* (1994) study with the findings of the conceptual study by Storey (1994) due recognition must be given to the variations in the methodologies adopted and the different economic and small firm industrial policy contexts of the jurisdictions of the studies. That said, common themes emerge between both studies as to the importance of owner-manager characteristics (motivation to start the business, age, education and prior same industry experience) as determinants of small firm growth. The Kinsella *et al.* (1994) was the primary empirical study in the Irish context and a similar one has not been undertaken since. Thus, it provides a very useful template on which to update much needed empirical research on the determinants of growth in Irish small firms.

The second primary academic research study drawn upon to guide this research study was conducted by Barkham *et al.* (1996). Their primary objective was to analyse the determinants of small firm growth with a particular focus on the relationship between the growth of the firm and the characteristics of the owner-manager. In addition Barkham *et al.* (1996) included how firm growth was impacted by the characteristics of the firm and the choice of business strategy. Barkham *et al.* (1996) obtained detailed feedback from 171 owner-managers in four regions (Northern Ireland, Leicestershire, Hertfordshire and Wearside) for the period 1986 to 1990. The focus of the study was on manufacturing firms as it was deemed this sector was critical to the achievement of long term economic growth in local and regional economies. Turnover growth was adopted as the main measure of growth. Employment growth was applied as a second measure where the sample of firms was divided into three categories of employment growth. The first, defined fast growth firms as those who experienced 100 per cent or greater employment growth, the second category comprised of medium/slow growth firms who showed between 1-99 per cent employment growth and the third category were the static/declining firms who had zero or negative employment gain over the period.

The Barkham *et al.* (1996) study examined how characteristics such as the gender, age, education, career history and involvement by the owner-manager in another business impacted on small firm growth. It also examined firm specific factors such as how firm age, size, location, and legal structure influenced it. The third group of internal factors researched how business planning, product and process development strategies, marketing activities and the use of external advice with strategy development impacted on firm growth. The firms that displayed the highest level of growth were operated by the younger owners who owned more than one small business. Formal academic or vocational qualifications of owner-managers were found to have little direct impact on firm growth except in the case of owner-managers who were members of professional organisations. Regarding the type of business strategy, there was evidence that a strategy of incremental product improvement resulted in higher levels of firm growth. Finally, respondent owner-managers who sourced external capital grew faster.

While the range of internal factors researched in the Kinsella *et al.* (1994) and Barkham *et al.* (1996) studies were similar, the latter study included a broader range of factors with a larger sample size of firms and engaged with more comprehensive quantitative statistical analysis of their findings. Furthermore, the recommendations emanating from that study contained more comprehensive insights for policy development and identified topics worthy of further research to enhance the understanding of the internal determinants of small firm growth. Recommendations emerged on how an understanding of the internal characteristics of higher growth firms facilitated more effective design and targeting of government policies. Common findings emerged from the Kinsella *et al.* (1994) and the Barkham *et al.* (1996) studies with respect to the positive impact of certain owner-manager characteristics (age and prior work experience at managerial level). In addition the two studies suggested that ownership in a second small firm, the existence of a strategic plan and engagement in activities such as market research, direct marketing and sales were characteristic of higher growth firms.

Similar to Storey's conclusion Barkham *et al.* (1996) further argued for the development of an explanatory framework which incorporated how a range of owner-manager characteristics were linked to influence small firm growth.

Notwithstanding the variations in the economic contexts, the range of internal determinants examined and in the methodological approaches between the Storey (1994); Kinsella *et al.* (1994) and the Barkham *et al.* (1996) studies, ultimately they were unanimous in relation to the necessity of understanding how internal factors impacted on firm growth as a precursor for more effective and relevant government policy to stimulate sustained small firm growth. Essentially, the findings in these studies emphasised three internal areas of convergence; owner-manager characteristics, characteristics of the firm and the strategic focus of the business as key determinants of small firm growth. Each one comprises of a number of components which are now discussed in terms of their association with small firm growth.

3.4.1 Owner-Manager Characteristics and Small Firm Growth

A distinguishing characteristic of small businesses is that ownership and management are typically combined and subsequently the owner-manager of a small business has a strong influence on the functioning and direction of the firm (Kinsella *et al.* 1994; Barkham *et al.* 1996; Storey 1996; Baum *et al.* 2001; North *et al.* 2001; Wiklund *et al.* 2003; Barringer and Jones 2004; Barringer *et al.* 2005; Wijewardena *et al.* 2008; Kirkwood 2009). The desire to grow the small firm is not an automatic objective for the owner-manager irrespective of the growth potential of the business (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Delmar and Davidsson 1998; Glancey 1998; O'Gorman 2001; Poutziouris 2003; Gilbert *et al.* 2006; Dobbs and Hamilton 2007; Andersson and Tell 2009; Blackburn *et al.* 2009; Leitch *et al.* 2010). These studies further suggested that many business founders may only have modest growth aspirations for their firm with just the minority wishing to achieve rapid firm growth. These findings reinforce the key role of the owner-manager as the precursor of firm growth which can be further explained when the reasons for establishing the business are examined. Why the small business was established was a starting point in a number of research studies investigating the determinants of small firm growth (Kinsella *et al.* 1994; Barkham *et al.*1996; Hamilton and Lawrence 2001; Reynolds *et al.* 2001; Donohoe and Wyer 2005). The motivation to start the business may have implications for the decisions the owner-manager makes for the subsequent growth of the firm.

3.4.1.1 Motivation to Start the Business

Individuals start a new business for reasons which are classified as either 'opportunity' or 'necessity' driven (Reynolds *et al.* 2001; Davidsson and Wiklund 2000; Wiklund and Shepherd 2003; Acs 2006; Hessels *et al.* 2008; Delmar and Wiklund 2008; Littunen and Niittykangas 2010) a classification parallel to 'pull' and 'push' factors. Opportunity entrepreneurship reflected a positive perception and attitude to self employment by the entrepreneur, whereas necessity entrepreneurship emerged where individuals started a new business due to negative reasons, mainly the absence of employment opportunities. A number of studies investigated variances across individual motivations for starting a business and their impact on the growth of the business. Agreement existed within the majority of research that owner-managers who started their business for positive 'pull' factors such as to exploit an opportunity in the market achieved higher levels of firm growth compared to a business for which the primary reasons were negative 'push' factors such as unemployment, dissatisfaction with present employment (Kinsella *et al.* 1994; Storey 1994; Smallbone *et al.*1995; Smallbone and Wyer 2000; Hamilton and Lawrence 2001; Reynolds *et al.* 2001; Delmar and Wiklund 2008; Littunen and Niittykangas 2010).

While the majority of faster growth firms were started for positive reasons in the study conducted by Kinsella *et al.* (1994) twenty per cent of firms who had achieved higher growth had started their business for a negative reason - dissatisfaction with their previous job. Additionally, three of the seven relevant studies reviewed by Storey (1994) were unable to identify a direct association between positive motivations and subsequent firm growth.

The lack of supportive evidence for motivation as a predictor of small firm growth was also endorsed in a number of studies (Liao *et al.* 2001; Papadaki and Chami 2002; Dobbs and Hamilton 2007). These studies did not support the hypothesis that individuals who started a business because they were 'pushed' by unemployment would achieve less success in growing their business. Liao *et al.* (2000) commented that the studies investigating the impact of motivation on small firm growth were difficult to compare due to different research approaches and varying interpretations applied to the term motivation, thus, presenting difficulties in obtaining a clear consensus on its association with firm growth. A review of a range of studies on small firm growth by Dobbs and Hamilton (2007) confirmed that while the motivation to start the business might be a strong indicator of firm growth it may not necessarily convert into actual growth. These varied results indicate the need to continue to research this topic to identify its importance as a determinant of small firm growth where a question is posed in this study of established small firms on how the reason behind why the business was established (positive or negative motivation) impacts on the subsequent growth of the business?.

3.4.1.2 The Age of the Owner-Manager

A number of studies which found a significantly negative relationship between the age of the owner-manager and small firm growth argue that this negative relationship may be due to the owner-managers initial goal for growth, or due to a higher energy level and willingness of younger owner-managers to assume business risks compared to older owner-managers (Davidsson 1991; Storey 1994; Barkham *et al.* 1996; Autere and Autio 2000; Orser *et al.* 2000; Welter 2001; Davidsson *et al.* 2002; Bullock *et al.* 2004).

However, Storey (1994) found that throughout six studies no clear relationship existed between the age of the owner-manager and small firm growth. Barkham *et al.* (1996) found that while the highest level of firm growth were associated with the younger owner-managers, positive levels of firm growth was also achieved by the oldest age cohort of respondents. They found that the younger owner-managers in their study (31-40 year age category) achieved the highest rate of small firm growth. The research also found that while growth declined in firms managed by the middle age group (41-50 years) it increased in the oldest age category (61years plus). The analysis suggested that younger owner-managers were more interested in growth and were more likely to adopt focused growth business strategies. Similarly, research by Kinsella *et al.* (1994) revealed that faster growth firms were owned by the middle aged group of respondents who were aged between 35 and 44 years, with the second highest level of firm growth associated with the older owner-managers, those aged between 45 and 54 years.

Given the variations in the research findings on this area a number of issues should be considered for this study. For instance it is important to have common age categories to allow for comparison of data findings between the research studies, which is lacking in the majority of studies. The age thresholds adopted for this study align with those applied in the Kinsella *et al.* (1994) study and should thus facilitate a level of comparison. Given the fact that individuals are starting a business at a younger age in Ireland (see Global Entrepreneurship Monitor Reports 2006; 2007) owner-managers in younger firms will have less accumulated work experience when starting a new business, but will more likely possess higher levels of education. These characteristics, in addition to the consensus in the findings in a number of studies (Davidsson 1991; Storey 1994; Barkham *et al.* 1996; Autere and Autio 2000; Orser *et al.* 2000; Welter 2001; Bullock *et al.* 2004) would suggest that younger owner-managers should achieve higher firm growth.

3.4.1.3 The Educational Profile of the Owner-Manager

According to Garavan *et al.* (1997) education encourages enterprising behaviour as it provides individuals with a sense of autonomy, independence and self-confidence, qualities which were perceived important when starting and managing a new firm. Wiklund and Shepherd (2003) further suggested that education formed an important part of the human capital of the business which would determine the type and quality of decisions made by the owner-manager to grow their business.

Additionally, knowledge-intensive education should provide specialist knowledge and expertise in subject areas which can benefit if the business is established in that specific area (Kinsella *et al.* 1994; Smallbone and Wyer 2000; Barringer and Jones 2004). In eight of the studies reviewed by Storey

(1994) he found that higher educated owner-managers were more likely to establish a faster growing business. A positive relationship between the educational level of the owner-manager and firm growth was also endorsed in other studies (Roper 1998; Kangasharju 2000; Smallbone and Wyer 2000; Wiklund and Shepherd 2003). That said empirical evidence on the effects of education on firm performance is mixed. Roper (1998) suggested, as did Barkham *et al.* (1996) that the educational variable had an indirect impact on growth as it impacted the type of business strategies adopted, which in turn impacted on the level of small firm growth achieved.

The relationship between the formal educational award of the owner-manager and small firm growth was not obvious in other research studies reviewed. For instance, Turok (1991); Barkham *et al.* (1996) and Bullock *et al.* (2004) found no significant relationship between small firm growth and the academic or vocational education level of the owner-manager. Similarly, Storey (1994) found in the remaining eight studies which examined the role of education that there was no identifiable influence of the educational level of the owner-manager on small firm growth. These mixed results arise due to how education is defined or measured in the various research studies. The educational variable was generally referred to as the educational award obtained where there was not always a clear description of the level or subject area of the award.

Lastly, in researching the educational profile of the owner-manager one should consider the level of education of the general population of owner-managers and how this may have changed over the last decade in Ireland. Findings in the Global Entrepreneurship Monitor Report Ireland (2006; 2007) reported that 83 per cent of new firm owner-managers had Leaving Certificate (the final examination in the Irish secondary school system) or post leaving certificate levels of education and a lower percentage (5 per cent) had a post-graduate qualification. High levels of education were also evident in UK owner-managers (Blackburn *et al.* 2003). Thus, as the younger owner-manager will possess higher levels of education, most likely third level qualifications, it is important to account for this when comparing results of research studies comprising of firms who are in operation for a number of years.

Thus, investigating the educational profile of the owner-manager should gather detail on the type of educational programme completed and the subject area studied. Doing so, as will be the case in this study will distinguish if individual components of the educational experience of the owner-manager influence firm growth, where it is expected that the more educated owner-managers will be evident in the higher growth small firms. This type of detail can be used to identify if certain types of educational programmes, or if different subject areas of knowledge have a more positive influence on the achievement of firm growth. The educational status of the owner-manager is an important indicator of their human capital and may direct the early career choice of the individual and the type and level of work experience gained.

3.4.1.4 Owner-Manager Career History

Venkataraman (1997) suggested that the work experience gained by the owner-manager provided them with knowledge and skills either in a technical or business discipline which benefits the operations of their new business and thus complementing the human capital of the business. Similarly, Shane (2000) indicated that the work experience provided a repository of tacit knowledge, competencies and access to networks which could be transferred into new work situations and the development of a new business. Other studies examined how work experience in the same industry sector and experience gained at managerial level impacted on small firm growth (Kinsella *et al.*1994; Barkham *et al.* 1996; Roper 1998; Klepper 2001; O'Gorman 2001; Bellamy *et al.* 2003; Wiklund and Shepherd 2003; Dobbs and Hamilton 2007; Peneder 2008; Beaudry and Swann 2009; Wiklund *et al.* 2009; Littunen and Niittykangas 2010).

Experience gained in a similar industry sector was found to have a positive impact on the growth of the small firm (Kinsella *et al.* 1994; Venkataraman 1997; Perren 1999; Shane 2000; Shepherd *et al.* 2000; Aldrich and Martinez 2001; Klepper 2001; O'Gorman 2001; Bellamy *et al.* 2003; Delmar and Shane 2006; Peneder 2008; Wiklund *et al.* 2009; Littunen and Niittykangas 2010). These studies suggested that work experience provided knowledge of markets, customers and necessary technological requirements which assisted the individual in managing a new business. Work experience and knowledge of the industry sector of the new business were viewed as important in reducing the 'liability of newness' associated with managing a new business and developing new business relationships with customers, suppliers and other external stakeholders (Barkham *et al.* 1996; O'Gorman 2001; Wiklund and Shepherd 2003; Delmar and Shane 2006; Littunen and Niittykangas 2010) and thus enhanced the growth achieving abilities of the firm. While in agreement with this aforementioned proposition, Storey (1994) found it difficult to establish a link with higher firm growth and prior experience in a similar industry sector in nine of the studies he reviewed. In developing the debate on this determinant, Storey (1994) promoted two divergent propositions as explanations for the varied results. The first suggested that experience gained in a similar industry sector provided relevant knowledge and experience regarding the practices and dynamics of that sector which could result in enhanced firm growth. The second proposition suggested that the impact of the prior experience was dependant on the ability of the owner-manager to adopt the learning from the experience to their small business context.

In a similar mode research by Gartner *et al.* (1999) and Frankish *et al.* (2007) found no evidence of a significant positive effect of prior industry experience on small business growth. Frankish *et al.* (2007) suggested that was based on the premise that 'no two business situations are identical', therefore the test of the relevance of the experience was dependant on the ability to transfer this experience in a relevant manner to grow the business. The belief that same industry experience was advantageous to higher small firm growth was also queried by Turok (1991); Hamilton and Lawrence (2001); Papadaki and Chami (2002) who suggested that the benefits of the experience were dependent on the owner-manager and how the experience gained in one firm was representative of industry norms and practices especially in large diversified industry sectors. Given the above, the relationship between prior work experience and small firm growth remains ambiguous, therefore it is of consequence to determine if the results of the Kinsella *et al.* (1994) study hold true in this study despite the departure in the results of the more recent studies referred to. Further, an understanding of how the prior work experience adds to the human capital and learning of the owner-manager and higher firm growth has consequences for the design of owner-manager training and development programmes. The results will also point to the relative importance of the prior work experience and the educational human capital dimension of the owner-manager on firm growth.

As was the case with industry sector experience, differences occurred amongst research studies as to the impact of previous managerial experience on small firm growth. Managerial experience should provide an insight into the functional areas of the business and skills in people and resource management which are important for managing a small business. Four of the studies reviewed by Storey (1994) showed a positive relationship, while six studies found no impact of managerial experience and higher small firm growth. The lack of a significant relationship was associated with the nature of the previous managerial role, for instance, the level of autonomy and responsibility and the size of the organisation where the experience was gained could impact on its suitability to a small firm scenario (Storey 1994). Kinsella *et al.* (1994) found only marginal higher levels of firm growth in firms where owner-managers had gained prior work experience at managerial level. Therefore, managerial experience is likely to have a positive impact on small firm growth where the nature of the experience can be applied in a relevant manner to a small firm scenario.

Given the variations in the studies as to the connection between same industry sector experience and experience at managerial level an important line of enquiry for this research is to ascertain which one aspect of the overall work experience of the owner-manager is most commonly linked to small firm growth. The findings on how small firm growth is impacted upon by prior same industry experience and managerial experience will provide useful detail for the design of training and development programmes to accommodate for the knowledge and skills attained in previous work experience.

In addressing the broader concept of work experience a number of studies (see, Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Roper 1998; Barringer and Jones 2004) indicated that the work experience of the owner-manager may not be exclusive to paid employment but that currently gained in the management of another small business.

3.4.1.5 Ownership in a Second Small Business

Ownership of a second small business provides the owner-manager with specific knowledge and skills pertaining to running a small business, managing people, autonomy in decision-making and relationship building with customers and suppliers. Thus, experience gained from multiple-business ownership should benefit in the management of the various businesses irrespective of the sector (Storey 1994; Kinsella *et al.* 1994; Barkham *et al.* 1996; Roper 1998; Barringer and Jones 2004). In many cases the new business was considered a natural extension of the current business or resulted from the identification of a new business opportunity. These findings were consistent with those of Kinsella *et al.* (1994) who found that the majority of owner-managers in fast growth firms were involved in either full or part time ownership of another small business. This suggests that this multiple business ownership enhanced both the existing and new business venture due to increased learning and the commercial synergies between both businesses. Barkham *et al.* (1996) examined ownership of another business from two perspectives firstly, ownership in another business which was related to and offered business advantages to the current business and secondly, ownership in another business which did not offer any such benefits. In both situations Barkham *et al.* (1996) indicated there was a positive relationship with the growth of the business, where the most positive relationship was gained from the business less related to the current business. The experiences gained in both scenarios provided greater learning which would enhance overall business growth of one or both businesses. The aforementioned arguments suggest that multiple ownership has a positive impact on firm growth and is thus investigated to determine if this argument holds true in this study.

In summary, the owner-manager characteristics deemed important to investigate in this research study are:

- their motivation to start the business,
- their age,
- educational profile (level and subject discipline of the award),
- work experience (the industry sector and level of their experience),
- experience gained as an owner of a second small business.

These factors will further extend into decisions on how the firm is organised by the owner-manager.

3.4.2 Firm Characteristics and Small Firm Growth

The conventional firm attributes such as firm age and firm size the most commonly investigated in the studies reviewed.

3.4.2.1 The Age of the Firm

The majority of the research studies reviewed suggested that younger firms displayed faster rates of firm growth than older firm (Kinsella *et al.*1994; Storey 1994; Barkham *et al.* 1996; Glancey 1998; Davidsson and Wiklund 2000; Orser *et al.* 2000; Robson and Bennett 2000; Smallbone and Wyer 2000; Bullock *et al.* 2004; Geroski and Gugler 2004; Heinonen *et al.* 2004). A frequent reason cited was the need for the businesses to achieve a minimum efficient scale as soon as possible after business formation. As resource constraints such as finance decrease the start up firm will achieve scale efficiencies which will result in temporary fast growth (Barkham *et al.* 1996; Orser *et al.* 2000; Smallbone and Wyer 2000; Rutherford *et al.* 2001). Once this is achieved businesses tend to grow less rapidly. Additionally, there may be a period of firm development where the owner-manager may be reluctant to assume the extra levels of risk associated with growing the business or to delegate responsibility to others in the firm (Smallbone and Wyer 2000), thus, one possibility explaining why older small firms achieve lower firm growth.

Furthermore, six of the studies reviewed by Storey (1994) did not show a positive relationship. He indicated that the higher growth associated with the older firms was due to economies of scale, greater efficiencies in their operations and more experienced staff which collectively resulted in greater levels of growth. This was also referred to in research by Glancey (1998) who suggested that the potential for firm growth among the more mature firms should not be underestimated due to an accumulated repository of knowledge and experience which was held with staff and the existence of strong external networks. The difficulties at arriving at a consensus as to the impact of firm age as a sole determinant of firm growth was based on the fact that firm age is not a continuous or sustained process (Storey 1994; Barkham *et al.* 1996; Orser *et al.* 2000; O'Gorman 2001; Dobbs and Hamilton 2007; Blackburn *et al.* 2009).

While there is strong evidence in the literature to support a positive relationship between younger firms and firm growth, the findings require deliberation. How firm age is classified or defined must allow for comparison between research studies. Since a broad range of firm ages were included in the studies investigated it was difficult to arrive at conclusions relating to the optimum age of firm most associated with the higher levels of firm growth.

The age of the firm should be qualified and defined in the context of the industry sector the firm operates in. For example, the average age of a firm will vary by industry sector (firms in the ICT sector will have a greater number of younger firms compared to the food/drinks or the engineering/electronics) industry sectors. In this multi-sector empirical study it is important to ascertain the impact of how the age of the firm reflects the levels of firm growth where it is expected that the younger firms in the study will achieve higher firm growth. This will also investigate how the findings concur with the majority of the studies promoting the significance of younger firms as the higher growth firms.

3.4.2.2 The Size of the Firm

Relatedly, the relationship between the size of the firm and firm growth has been frequently investigated in studies. Firm size is generally measured by the number of employees. It is presupposed that in the smaller firm the owner-manager will have closer control over activities. In this instance it should be easier to isolate the impact of the owner-manager on small firm growth than with the larger firm. The discussion on the relationship between firm size and firm growth has its origin in Gibrat's law which proposed that the rate of growth of a firm is independent from its size at inception, where all firms have the same probability to grow independently of their size within the same industry (Gibrat 1931).

Barkham *et al.* (1996) found that smaller firms achieved higher growth rates as they were more flexible in their strategic actions due to the dominance of the owner-manager as the primary decision maker in the firm. They also suggested that smaller firms grew faster as many firms tended to operate in niche markets where they had a distinct competitive advantage which allowed them to achieve growth for a period of time. Once this advantage was diminished firm growth slowed while firms invested to develop the business. This investment which can occur in the technical, people or process aspects of the business will incur costs which may not be recovered for a period of time and not result in firm growth. Another explanation by Barkham *et al.* (1996) as to why smaller firms overall displayed higher growth was due to the survivor bias where in any cohort of firms a number will fail and may not be recorded in datasets resulting in inflated mean growth data for surviving firms.

These findings were consistent with findings in other studies (see for example Smallbone *et al.* 1995; Davidsson and Delmar 1997; Orser *et al.* 2000; Rutherford *et al.* 2001; Audretsch *et al.* 2004; Bullock *et al.* 2004; Moreno and Casillas 2007). The primary assertion for these findings was on the assumption that as smaller firms operated closer to their customer and supplier base which afforded them an opportunity to develop personal relationships, thus providing the firm with a competitive advantage and hence greater likelihood of achieving firm growth. The majority of studies (12) reviewed by Storey (1994) also found a positive association between smaller firms and firm growth.

Despite this, Glancey (1998) found that smaller firms in his research did not grow as fast as larger firms. Reasons put forward related to the management capabilities and the type of objectives for growth they devised. He suggested that larger firms were associated with higher growth where they were managed by more experienced managers who had a broader range of networks and may also have more managerial systems in place. The remaining six studies reviewed by Storey (1994) did not support the fact that smaller firms grew faster. These findings were resonated in studies completed by Marsili (2001) and Lotti *et al.* (2003). Finally, Kinsella *et al.* (1994) indicated that the faster growth firms in their survey were the larger ones and attributed their findings to the existence of more developed management systems and practices in the larger firm. Thus, research would suggest that Gibrat's law of size independence may only hold for firms above a certain size threshold – however a consensus on the size threshold was not clear from the studies reviewed.

These assorted results and the difficulties in making direct comparisons by firm size renders it difficult to determine what is the optimal size of small firm most associated with the higher levels of firm growth. As was highlighted in Chapter Two, the micro firm and secondly the small firm (less than 50 persons) are primary constituents of the overall stock of SMEs in Ireland. Hence, it was important to capture the levels of growth achieved by both groups to investigate if they are capable of achieving higher levels of firm growth relative to medium and larger firms. This will assist to clarify if there is an optimum size(s) of Irish SME that is more likely to achieve higher firm growth with the expectation that micro firms would exhibit the higher levels of firm growth. To facilitate this analysis the sample of firms was divided into three size categories comprising micro (less than 10 employees), small (11-50 employees) and medium firms (51+ employees).

In addition to firm age and size, Kinsella *et al.* (1994); Storey (1994) and Barkham *et al.* (1996) examined how the location of the firm impacted on firm growth. These findings were consistent with the main ones emerging from the studies reviewed by Storey (1994). The use of location as a determinant of small firm growth is assessed from the specific location to extend into the broader regional context of the firm where its impact is debated. For instance Deakins and Freel (2006) concluded that the link between the location of the firm and firm growth has failed to reach a consensus as the actual physical location itself does not directly influence growth; rather cognisance need to be taken of the broader infrastructural context within which the firm operates, notably the physical infrastructural and support interventions and resources such as the availability and cost of skilled labour, technology etc which more directly impact on firm growth.

The examination of location in the studies by Kinsella *et al.* (1994) and Barkham *et al.* (1996) was investigated within a regional perspective. Research by Barkham *et al.* (1996) focused on a number of regions in different countries and compared regional influences on firm growth. Kinsella *et al.* (1994)

undertook their study in the Southern and Northern regions of Ireland where the economic and policy infrastructural issues were considered when comparing the levels of firm growth between respondents in the two jurisdictions. As was the case in the Kinsella *et al.* (1994) and the Barkham *et al.* (1996) studies a regional perspective is applied to this study.

The regional milieu establishes a context of the macro-environmental and the market and business infrastructural conditions within which the owner-manager has to manage and make strategic decisions. A regional dimension allows for the accommodation of similar external factors which were common to all surveyed firms and thus permits comparison of findings between firms in different sectors or possessing different firm characteristics within that region only. Given the lack of other regional studies in Southern Ireland, this one provides for a useful benchmarking study for replication in other regions of Ireland. The region of this study is the Mid-West region of Ireland. The profile of the region and the rationale for its choice as the broader location of the empirical study are provided in Chapter Four.

3.4.2.3 Ownership Structure of the Small Business

A business may be established by one individual or by a group of like minded individuals who wish to develop a business idea. Research into the size of the founding team suggests a link between multiple owner-managed firms and higher levels of small firm growth (Kinsella *et al.* 1994; Barkham *et al.* 1996; Littunen and Tohmo 2003; Barringer and Jones 2004; Cooney and Malien 2004). This was based on the idea that with a number of owner-managers a range of complementary skills, knowledge and work experience is available to enhance decision-making in the firm. However, Storey (1994) found that it was difficult to conclude from the studies he reviewed whether a second or subsequent owner was likely to result in higher firm growth. He further indicated that where owner-managers complimented their knowledge and skills by employing managers or sourcing this expertise externally equally can result in higher firm growth. The notion that multiple owners resulted in higher firm growth was also debated in studies by Hamilton and Lawrence (2001) and Barringer *et al.* (2005). They suggested that the number of founders was not a distinguishing feature of higher growth firms in their studies. Potential contributing reasons related to the composition of the team of owners and their level of involvement in the day to day operations of the business.

In view of the fact that the bulk of the studies reviewed were in agreement as to the significance of multiple ownership on small firm growth this variable was tested to determine if similar results would emerge in this study. The inclusion of this determinant would help ascertain if multiple ownership is more prevalent in certain industry sectors or by other firm characteristics. This detail will identify the portfolio of skills and knowledge in the senior management team which are most advantageous for higher firm growth as a basis for determining how this combination can be compensated for in single owner-managed firms.

3.4.2.4 Industry Sector

An industry sector describes a group of companies that operate in the same segment of the economy, share a similar business type and possess similar business activities. Small firms operating in a particular industry are constrained by the type of product or service they provide and are constantly competing with one another for market share, consumer acceptance as well as technological leadership in their particular sub-sector. These competitive and consumer forces shape a firms behaviour and determine the status of the industry as a whole (Weinzimmer 2000). A number of studies found that higher growth firms operated in certain industry sectors where firms operating in mature industry sectors are likely to have lower average growth rates, all other things being equal, due to reduced opportunities for firm expansion (Coad 2007; Wiklund *et al.* 2009; Littunen and Niittykangas 2010). In particular higher growth was associated with firms operating in the high technology sectors (Kinsella *et al.*1994; Orser *et al.* 2000). Similarly, small firms operating in industries characterised by high technological demands, innovation and product development and higher barriers to entry were associated with higher levels of firm growth (Audretsch 1995; Almus and Nerlinger 1999; Weinzimmer 2000 Peneder 2008; Wiklund *et al.* 2009; Littunen and Niittykangas 2010).

In contrast, in the general service sectors, where barriers to entry were low, with intense competition between rival firms and with little requirements for product innovation or differentiation results in less potential for smaller firms to grow (Cooper *et al.* 1994; Weinzimmer 2000). The industry sector variable is important to consider when researching internal determinants of firm growth as it fashions a sense of the external factors affecting firm growth. While certain industry sectors should result in the greater potential for firm growth it is important to assess if factors related to the owner-manager and or the characteristics of the firm might impact on the achievement of this growth potential.

The inclusion of the industry sector characteristic as an indicator of small firm growth will establish if industry sector focused interventions are required. The examination of how internal factors might vary by industry sector serves to highlight the profile of the small firm who is competent in achieving growth and are worthy of cultivating due to their higher firm growth potential.

In summary, firm age and firm size received the most attention in the literature reviewed for this study. The impact of firm age follows similar principles to those mentioned for firm size (Storey 1994; Barkham *et al.* 1996; Orser *et al.* 2000; Bullock et *al.* 2004). Smaller firms and younger firms grow more rapidly as they attempt to achieve efficiencies in their operations. Equally, a positive relationship may be expected if a larger firm benefits from economies of scale, or between age and growth if an older firm benefits from reputation effects (Glancey 1998). Therefore, these two characteristics are of prime concern to this study in the Irish context. In addition ownership structure and industry sector are examined to determine if multiple ownership results in higher growth.

In this study, the following characteristics of the firm are examined for their association with small firm growth:

- firm age,
- firm size,
- ownership structure,
- industry sector .

These firm characteristics should be examined with some owner-manager characteristics to provide a more accurate representation of their impact on small firm growth. Likewise, the research should address how the characteristics of the firm and those of the owner-manager influence the strategies for growth adopted by the owner-manager.

3.4.3 The Strategic Focus of the Business and Small Firm Growth

Strategy is a term widely used and has taken on multiple meanings and definitions in the academic literature (Zimmerer and Scarborough 1996; O'Regan and Ghobadian 2002; Porter 2004: Wickham 2004; McGee *et al.* 2005; Kirkwood 2009). Common across the definitions of strategy was a focus on the long term direction of the business, the development of a strategic plan and the ability to gain a competitive advantage. The strategic choices of the owner-manager are expected to have an important impact on the growth performance of the business. Central to strategy development in the small firm is the type of objectives for business development which provide a starting point on which to assess the strategies adopted to achieve business growth. The strategic focus of the owner-manager is an important driver of the strategic direction and type of strategy adopted in the small firm, where a strategically oriented owner-manager pursues opportunities regardless of resources available to them (Barkham *et al.* 1996; Roper 1998; Beaver and Ross 2000; O'Gorman 200; Poutziouris 2003; Mazzarol 2005).

Strategy and its role in business growth straddles a broad range of activities, for instance Storey (1994) listed 14 components under the strategy classification. An assessment of the direct impact of these strategic components on firm growth was difficult to elicit due to variations in how they were investigated and how they were defined in the studies. The Kinsella *et al.* (1994) study emphasised how the existence of a formal written business plan (that produced at the onset of the business) its nature and use were connected with small firm growth. In comparison Barkham *et al.* (1994) in their study examined how the objectives for growth, the type of strategies adopted, the use of business planning and the type of marketing and product development strategies were linked with small firm growth. Other studies (O'Gorman 2001; Poutziouris 2003; Kirkwood 2009) examined the type of strategies adopted and the process of strategy development. As variations existed in the objectives of the research studies, in the number and diversity of strategic indicators investigated and the methodologies adopted (which extended into qualitative methods to examine process and management practice issues) it was necessary to distill a range of factors relevant for a quantitative study on the role of strategy on small firm growth and with a focus on informing government policy.

The focus of this study remains with how a set of core strategic activities impact on small firm growth, in particular topics such as the specific objectives for business growth, the existence of a strategic plan, the strategies adopted and if external advice was sourced for strategy development will be investigated. Additionally, information on the impact of the customer profile and involvement in international business activities on small firm growth adds to the understanding of general strategic focus of the small business. Information on these issues will provide an integrated insight into the primary outputs of the strategic behaviour of the owner-manager and serve as an important yardstick of the effectiveness of this strategic behaviour. Each strategic topic and how it contributes to the research aim is now discussed in greater detail.

3.4.3.1 Business Growth Objectives

Paramount to the understanding of the strategic activities was an investigation into the type of objectives the owner-manager had for their business. The majority of owner-managers have multiple objectives for firm development (Storey 1994; Barkham *et al.* 1996; Gibb 2000; Smallbone and Wyer 2000; Wiklund and Shepherd 2003; Barringer and Jones 2004; Wickham 2004; Donohoe and Wyer 2005; Gilbert *et al.* 2006; Dobbs and Hamilton 2007; Delmar and Wiklund 2008; Andersson and Tell 2009; Littunen and Niittykangas 2010). An assessment of the objectives for business growth were researched in a number of ways from a dichotomy of whether growth objectives or aspirations for firm growth existed in the firm (Storey 1994; Kinsella *et al.* 1994) to studies which identified the type of objectives for growth that owner-managers had for their business (Barkham *et al.*1996; Smallbone and Wyer 2000; Poutziouris 2003; Andersson and Tell 2009; Littunen and Niittykangas 2010). The latter studies elicited more comprehensive detail on firm growth objectives which provided a more detailed context within which subsequent strategic actions were devised in the firm.

In particular Barkham *et al.* (1996) suggested that four categories of commercial objectives were associated with higher growth firms. These included expansion of profit, improving margins, having a marketing strategy and improving production processes. Objectives for profit and commercial gain were most prevalent in higher growth firms (Smallbone *et al.* 1995; Barkham *et al.* 1996; Smallbone and Wyer 2000; O'Gorman 2001; Poutziouris 2003). Additionally, Storey (1994) found that multiple objectives for firm growth existed in the majority of the studies he reviewed, which in the main targeted profit growth.

Overall, supportive evidence was provided in the literature that higher growth firms had strong growth objectives for their business. Kinsella *et al.* (1994) did not elicit the type of business growth objectives from their surveyed firms, but investigated the overall growth ambitions the owner-manager had for their business. Whilst this was useful in ascertaining the more general perspective of the owner-manager towards firm growth it did not articulate how these ambitions were translated into specific business objectives. Hence, an examination of the precise objectives for firm growth is important and will determine what aspects of the business are prioritised by the owner-manager. Furthermore, obtaining detail on the objectives for firm growth provides a basis on which to assess subsequent decisions on the type of strategies adopted and proposes an important starting point for personnel in development agencies when assessing the effectiveness of strategy in the small firm.

3.4.3.2 Strategic Planning

There was a general consensus in the literature of the positive relationship between strategic planning and firm growth (Kinsella *et al.* 1994; Storey 1994; Lussier 1995; Barkham *et al.* 1996; Roper 1998; Beaver and Ross 2000; Poutziouris 2003). In summary, a strategic plan was reflective of greater understanding by the owner-manager of their customer needs, competitor behaviour, awareness of market opportunities and challenges encountered in growing their business. In the majority of studies strategic planning was primarily measured by the existence of a strategic plan. Within many of these studies the term 'business' and 'strategic' planning were used interchangeably, differences existed in the level of detail on the content of the plan and the type of strategies adopted rendering it difficult to make comparisons between the studies. Kinsella *et al.* (1994) investigated if respondent firms had a business plan on the establishment of their business as opposed to a strategic plan or if they subsequently introduced one into the business.

Notwithstanding the importance of a business plan at the start of the business, in a study on established small firms information on the business plan would not capture the longer term strategic perspective of the owner-manager. While the majority of the studies concurred on the positive link with the existence of a strategic plan and firm growth some researchers debated its impact (French *et al.* 2004; Gibson and Cassar 2005; Kraus *et al.* 2006). In these studies no differences existed between higher and lower growth firms for the existence of a strategic plan or for the use of strategic planning frameworks. The primary reason was due to problems in the implementation of the strategy and a lack of consensus as to whether the choice of strategy was the correct one in the first instance. For this study the primary focus is to determine if the higher growth small firms show evidence of engaging in a greater number of strategic activities. This will also identify how the reliance on the discrete measure of having a strategic plan or not adequately reflects how the strategic focus of the business impacts on small firm growth.

3.4.3.3 Customer Concentration

Bridge *et al.* (2003) and Mazzarol (2005) argued that an understanding of their customers was a central foundation for the development of a focused and targeted competitive strategy and in gaining a competitive advantage. The firm's strategy must be built on an ongoing understanding of their customers. Customer numbers and size may influence the leverage and flexibility in the choice of strategy adopted by the owner-manager. Hendry *et al.* (1995) found that small firms who sold to a limited number of customers generated higher profitability but had had less flexibility over firm activities due to the leverage of their customers compared to small firms who had a broader customer base. Thus, there may be disadvantages to committing firm resources to a few customers, as it can restrict growth to other existing or new customers.

Conversely, Storey (1994) and Smallbone and Wyer (2000) found that faster growing small firms tended to have a diverse customer base. Kinsella *et al.* (1994) found that no clear pattern emerged in terms of customer size, however there was a slight tendency for faster growth firms to sell to a greater number of larger organisations. Gaining a consensus on the number of customers and their impact on small firm growth was difficult in the literature. The studies provided varied results in terms of the impact of the customer (size and the number) on small firm growth due to a lack of detail on contextual issues such as the industry sector the firm operates in, which may have a bearing on the leverage of the customer on small firm activities. Additionally, little detail was provided on the nature of the customer profile. Therefore, it is useful to examine if the number of customers and the type of customer influence firm growth. This two dimensional profile of the impact of the customer can be compared across the industry sector dimension or the size of the firm to provide a more composite perspective of the impact of customer mix on small firm growth.

3.4.3.4 The Type of Strategy

Strategy relates to the set of actions performed by the owner-manager to achieve its business objectives and position their firm competitively in the marketplace

(Smallbone *et al.* 1995; Wickham 1998; Poutziouris 2003; French *et al.* 2004; Steffens *et al.* 2009). Arguably of critical importance are the actual strategies enacted by the owner-manager and the purported influence of these strategies on firm growth. There are a number of strategic options available to the owner-manager in the pursuit of their business growth objectives. From their analysis of the extant strategy literature Miles and Snow (1978) produced a typology of four business-level strategies which were deemed suitable for adoption by the owner-manager in the achievement of small firm growth. The strategies are the defender, analyser, reactor and prospector strategies which are summarised as follows;

- Defender: *Maintain and defend existing position by securing a market niche with a limited range of products / services than competitors.*
- Prospector: *Firms who are first in the market with new products, and adapts to changing customer needs on a proactive basis through product and process innovation.*
- Reactor: *A 'wait and see' approach and respond to competitive pressures to avoid losing customers and for firm survival.*
- Analyser: *Firm maintains a stable and limited line of products, while researching the market to identify potential product and market opportunities for expansion.*

While these strategic typologies were first identified in the 1970s they have been applied as the basis for researching strategy in the small firm since (see Smith *et al.* 1986; Conant *et al.* 1990; Parnell and Wright 1993; Beekun and Gin 1993; Schenk 1994; Collins *et al.*1997). Further those more recent studies endorsed the findings of Miles and Snow (1978). With regard to the adoption of the prospector strategy Conant *et al.* (1990) found firms who adopted the prospector strategy had a longer term focus and were prepared to invest in the continued development of the business and focused on ongoing identification of new market opportunities. Prospectors were viewed as sources of innovators and competed on gaining differentiation through product or process innovation and speed to market. They operated in dynamic rapidly changing and unpredictable industry environments.

With respect to the defender strategy, Lumpkin and Dess (1996) and Rajagopalan (1996) found that owner-managers who chose this strategy were satisfied as followers in the marketplace. These owner-managers were satisfied to react to competitor behaviour and wished to assume less risk in the marketplace. Defenders were most prevalent in stable and mature markets and less innovative driven industries.

The reactor strategy was associated with firms who experienced difficulties in adjusting to market and industry changes due to more rigid organisational structures and risk adverse decision making by the owner-manager. Finally, the analyser strategy was viewed to combine elements of the prospector and defender strategies, where it was placed between the extremes of both (Miles and Snow 1978; Gimenez 1999). While overall the evidence supported the association of the prospector strategy with higher levels of firm growth a number of studies found that this was not always the case. This latter point was based on the idea that firms moved between strategies (Miles and Snow 1978; Conant *et al.* 1990; Gimmnez 1999) and that growth could be attributed to all strategies, for example the adoption of reactor strategies outperformed the other three strategies and the defenders outperformed analysers and prospectors (Conant *et al.* 1990).

In summary, the review of empirical evidence related to Miles and Snow's (1978) taxonomy of generic strategies provide a template for the investigation of which one or combination of strategies adopted by the owner-manager are linked with higher levels of firm growth. The use of this framework will test its relevance in what is a changed business environment.

On the whole, with respect to the impact of the strategic focus of the owner-manager on firm growth the research findings suggest a positive influence of profit focused objectives and the existence of a strategic plan. Less conclusive results emerged in relation to the impact of the customer or the type of strategy adopted on firm growth. The inclusion of these aspects as part of the broader strategic orientation of the owner-manager will capture how multiple aspects of the strategic focus of the owner-manager, separate to the emphasis on a strategic plan impact on small firm growth. This information will address a call for the need to improve managerial and strategic capabilities in Irish SMEs (Small Business Forum Report 2006) by highlighting what are the needs of owner-managers to enhance their strategic capabilities and competencies.

Overall, what is of concern to this study is whether the development of specific growth objectives and the existence of a strategic plan are likely to result in higher firm growth. If so then their benefits need to be heightened in small firm policy and further it should be an important message communicated to owner-managers when providing advice on how best to achieve higher firm growth. Consequently, the lack of supportive evidence of these strategic determinants will highlight issues which need to be remedied in order to develop competencies and skills in these areas and better guide the development of government 'soft support' training and development interventions.

As discussed in Chapter Two the Irish SME sector and in particular the micro and small firm underperformed in export activities despite endorsements in policy for the need for such activities amongst SMEs (Small Business Forum Report 2006; Fortas 2007; Building Ireland's Smart Economy 2008).

3.4.3.5 Internationalisation

Historically, only a small percentage of SMEs engaged in exporting (Chetty and Campbell-Hunt 2003; Deakins and Freel 2006), yet according to Deakins and Freel (2006) exporting and internationalisation are increasingly important particularly to achieve higher firm growth.

Similarly, Irish government agencies view it as a vital option as the Irish market presents relatively limited domestic market opportunities for Irish SMEs (Forfás 2007; Building Ireland's Smart Economy 2008). The internationalisation of business activities by Irish owner-managers tends to occur in markets close to the domestic market where the primary mode of market entry is through exports as it allows the owner-manager to maintain control of primary decisions for firm growth (O'Gorman 2001; Zahra and George 2002; Pope 2002; Lawless 2007). The body of research on the relationship between exporting and growth in Irish SMEs is scarce. This may be attributable to the fact that the majority of international activity is located within FDI and large indigenous firms in Ireland (Small Business Forum 2006; CSO 2007; Forfás 2007; CSO 2008). This also reflects the status of such research outside Ireland. Dobbs and Hamilton (2007) in their assessment of small firm growth research studies found that while this topic was gaining increased interest, research had not produced strong conclusions as to the impact of internationalisation on firm growth. Research on exporting and the small firm tends to focus on the reasons why small firms export and the process they engage in (Bell 1994; Tybejee 1994; Bell and Young 1998; Lawless 2007). Tybejee (1994) and Bell (1994) remarked that industry membership determined the need for and the potential to export. This was related to the nature of the product or service, where those with shorter product life cycles are motivated to accelerate entry into export markets to remain competitive Bell (1994). With regard to the association of exporting and small firm growth Kinsella *et al.* (1994) found that higher growth firms were less reliant on local and domestic markets than lower growth firms. They found that greater importance was placed on exporting due to the perceived limitations of their domestic market. Hitt *et al.* (1997) and Littunen and Niittykangas (2010) found that moving into new international markets had a positive effect on firm performance as a result of increased market expansion and through product innovation which also benefited domestic market expansion.

However Bloodgood *et al.* (1996) found only a marginal positive relationship between export activity and increased revenue for the firm. This was endorsed by other authors such as McDougall and Oviatt (1996) and Westhead *et al.* (2001) whose research indicated that exporting was not significantly related to firm growth. These results suggested that the initial costs and investment required for exporting resulted in delayed profits and return on investment. In a similar manner Lawless (2007) suggested that the notion of 'sunk costs' which reduced the initial financial returns from investment in international markets dissuaded the owner-manager from this route to business growth.

In general, the literature on small firm internationalisation has mostly concentrated on the reasons why owner-managers engage in export activity with less empirical evidence available on how involvement in such export activity impacts on higher firm growth. As the link between the level of internationalisation and small firm growth remains ambiguous in the general growth literature and is severely lacking in the Irish context this study attempts to identify if higher growth small firms are more active in internationalisation of their business activities. This will further augment the research conducted by Kinsella *et al.* (1994) to establish the level of export activity engaged in by respondent firms and to determine if higher growth is associated with those firms who export greater levels of their product and services. Moreover, it addresses a key government policy issue for Irish SMEs.

3.4.3.6 The Use of External Advice with Strategy Development

Small business owners may gain expertise and access to information through the use of formal and or informal sources which may consist of professional advisors, suppliers, customers and membership of business associations or networks. A number of studies found some evidence that the use of external advice did positively impact on the performance of the firm (Bennett and Robinson 1999; Bennett *et al.* 1999; Boter and Lundstrom 2005). Bennett and Robinson (1999) found that structural factors such as the extent to which the firm used technology, was involved in R&D and engaged in export activity determined their use of external advice.

Other studies suggested that owner-managers who availed of external sources of assistance in strategy development were more effective in implementing their strategy which contributed to improved overall business performance (Kinsella *et al.* 1994; Storey 1994). Additionally, Smallbone *et al.* (1995) found that older and mature firms also benefited from external advice which resulted in enhanced firm performance. In this instance advice was important for managing the challenges encountered in achieving and sustaining firm growth. As firms with a number of structural and business related variables and with different business requirements source external assistance, establishing a clear link between the use of external advice and higher firm growth was difficult to arrive at. Bennett and Robinson (1999) and Wren and Storey (2002) confirmed that it was difficult to establish the specific impact of this external advice on the performance of the firm due to the complexity of the relationship between both parties, where it was difficult to ascertain if seeking advice was a consequence of past performance and or intended future growth. Moreover, a lack of discussion on the source of the advice and the nature of the detail of the advice further rendered comparisons problematic.

In this study the focus of the use of external assistance is for strategy development only. Given the complexities of strategy development it was useful to ascertain if owner-managers sought assistance with this function, and, if so, who the advice was sourced from and how it might be linked with higher firm growth. From a policy viewpoint this information will have value for individuals in development agencies and service providers by profiling the type of small firm that avail of their services and the level of satisfaction with their experience. It will further unearth areas that require attention by owner-managers in strategy development.

Taken as a whole the investigation of a composite set of strategic related activities (objectives for firm growth, existence of a strategic plan, the type of strategy adopted, the customer profile, level of export activity and the use of external assistance with strategy) will highlight the profile of the higher growth firms who engage in what are viewed as the core strategic activities needed to achieve firm growth.

From the research perspective the findings will add to the debate on which combination of strategic issues are most commonly evident in the higher growth small firms and will address what is an under researched topic in the Irish context. Moreover, from a policy perspective the findings of this study will identify areas requiring attention in terms of how owner-managers can be assisted in enhancing their performance in strategic planning and in strategy development.

Thus, an investigation of the influence of the strategic focus of the business and firm growth includes:

- objectives for business growth,
- the customer profile,
- detail on the type of strategies pursued to achieve small firm growth,
- level of export activity,
- if external assistance was used for strategy development.

To sum up, strategy in the small firm is not just reflected in the existence of a strategic plan, it encompasses a range of components. Examining how a number of strategic components might affect firm growth will provide a more holistic perspective on the strategic focus of the business. As strategies can vary by firm, then strategy as a determinant of small firm growth should be examined with consideration of firm and owner-manager characteristics. Given that owner-managers tend to maintain a high level of control over the strategy development in the small firm, then owner-manager characteristics such as their age, educational profile, and prior work experience warrant investigation. In addition the characteristics of the firm (age, size and industry sector features) should be considered as to how they are linked to the type of strategy devised and thus on the level of firm growth. Irish Government policy stresses the importance of developing a more competitive and international focused small firm sector. To achieve this they need to decide on how best to create conditions and supports to facilitate owner-managers to grow their business. The information obtained from this investigation profiling the characteristics of higher growth small firms can be used to devise more targeted and relevant financial and non-financial supports to facilitate sustained firm growth in these firms. Likewise, information on the characteristics of the lower growth small firms draws notice to the issues which require attention when devising training and development programmes to ensure the differences between the needs of higher and lower growth firms are accommodated for.

The review of the literature on the internal determinants of small firm growth has identified a considerable number of factors embodied in three aspects of the small business (owner-manager characteristics, firm characteristics and the strategic focus of the business). Despite the substantial research, there still remains a lack of agreement as to which one or combination of factors which are consistently connected with higher growth firms. The breadth of factors investigated, the variation in the range of research methodologies adopted, the different time frames applied in the studies and the use of an assortment of growth measures further resonates the difficulties in arriving at a precise blueprint of what constitutes a higher growth small firm. Thus, the debate continues in the research, where this study will add to that debate and will set to establish which one or combination of internal factors are most significant for higher firm growth in a sample of Irish SMEs in the Mid-West region of Ireland.

In this pursuit of identifying higher growth small firms a number of internal factors were selected for investigation in the empirical study. These factors and their expected impact on the three measures of growth applied are listed in Table 3.2. These form the basis for the development of the research hypotheses to guide the empirical study which are presented in Chapter Four.

Table 3.2: Internal Determinants and their Expected Impact on Small Firm Growth

Determinants of firm growth (Independent variables)	**Dependent Variables (employment, turnover and turnover per employee)**
Owner-manager Characteristics	
Motivation to start the business	Positive
Younger owner-managers	Positive
Post second level education	Positive
Experience gained in the same industry sector	Positive
Work experience at managerial level	Positive
Ownership of another small firm	Positive
Firm Specific Characteristics	
Younger firms	Positive
Smaller firms	Positive
Industry sector	Positive

Existence of multiple ownership	Positive
Strategic focus of the	
Objectives for profit	Positive
The existence of a strategic plan	Positive
The choice of the prospector strategy	Positive
Customer concentration	Positive
Internationalisation	Positive
The use of external advice in strategy development	Positive

3.5 Concluding Remarks

The review of the literature has discussed a range of internal factors and their impact on small firm growth in different contexts. Essentially, it is concluded that the establishment of a new business relies on the ability of one or a few key people to identify a business opportunity and develop it into a commercial business venture. Once the firm is established the owner-manager(s) develop a direction or vision for the business. This is reflected in the objectives of firm growth (financial and or non-financial objectives) and the strategies adopted to ensure this vision is realised. The review of the literature provides a list of factors focussing on the individual owner-manager, the characteristics of the firm, and the strategic focus of the business as determinants of small firm growth. Whilst many internal factors are viewed to contribute to small firm growth, no single factor appears to make a dominant contribution and the debate in the literature continues on the ability to do so, given the heterogeneity of the small firm sector. The variations in the research findings further endorse the heterogeneous nature of growth in the small firm and reinforce the importance of understanding how a range of internal factors impact on small firm growth.

This leads to the development of a number of research hypotheses which are tested empirically. The choice of the internal factors and the associated hypotheses for inclusion in this study are presented in the next Chapter, Chapter Four as is the methodology adopted for the empirical study.

Chapter Four: The Research Approach

4.1 Introduction

The primary objective of the empirical research was to investigate how a range of internal factors influenced growth in a sample of small firms in the Mid-West region of Ireland. Small firm growth is an increasingly investigated phenomenon where the focus of empirical studies are diverse in terms of the number of variables researched, the methodologies adopted, the sample size and the measures of growth applied. The review of the extant literature highlighted a range of internal factors which were commonly found to positively impact on small firm growth. A selection was chosen for inclusion in this study, as presented in Table 3.2 in the previous chapter. This chapter describes the research approach adopted for the empirical study. The chapter commences by outlining the hypotheses underpinning the research study and describes the measures of small firm growth applied (dependent variables). The data collection method (in-depth interviews) and the main topics examined are presented. It also discusses the selection of the sample and describes the data analysis methods applied as appropriate for the study. An overview of the characteristics of the surveyed firms and the average percentage level of growth for employment, turnover, and turnover per employee is provided. The results of a range of scatter plots and correlation tests are presented to highlight the relationship between the dependent variables.

While the research approach adopted is guided primarily by the methodology applied in the Kinsella *et al.* (1994) study, a number of other small firm growth studies were examined to combine different perspectives and to aid the description and classification of the determinants and measures of small firm growth.

4.2 Developing the Research Hypotheses

As discussed in Chapter Three, the internal factors were classified into three primary categories, namely owner-manager characteristics, firm characteristics and the strategic focus of the business. The measures of growth were employment, turnover and turnover per employee. Within these three categories of internal determinants a number of features emerged as noteworthy for investigation in this study and formed the basis of the research hypotheses. The core focus of the empirical aspect of the study was to identify what internal factors had a significant impact on small firm growth. The internal factors chosen for investigation in this study are briefly revisited as the basis for developing a number of research hypotheses to guide the empirical research study.

4.2.1 The Characteristics of the Firm

In the literature reviewed firm age, size, industry sector and ownership structure were heavily investigated to explain small firm growth. The dominant research findings which informed the development of the hypotheses are summarised. In the majority of cases, younger firms achieved higher levels of firm growth (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Glancey 1998; Davidsson and Wiklund 2000; Orser *et al.* 2000; Bullock *et al.* 2004; Geroski and Gulger 2004; Heinonen *et al.* 2004). Additionally, smaller firms were associated with higher firm growth (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Davidsson and Delmar 1997; Glancey 1998; Orser *et al.*

2000; Rutherford *et al.* 2001; Audretsch *et al.* 2004; Bullock *et al.* 2004; Moreno and Casillas 2007). Small firms operating in the high technology industry sectors displayed greater firm growth relative to those operating in the traditional manufacturing sectors (Kinsella *et al.* 1994; Storey 1994; Audretsch 1995; Almus and Nerlinger 1999; Weinzimmer 2000; Coad 2007; Peneder 2008; Wiklund *et al.* 2009; Littunen and Niittykangas 2010).

With regard to ownership structure (Kinsella *et al.* 1994; Barkham *et al.* 1996; Barringer and Jones 2004; Cooney and Malien 2004) found that higher firm growth was more prevalent where the owner-manager had ownership in a second small business. Based on the above arguments the hypotheses presented in Table 4.1 were put forward for investigation in this study.

Table 4.1: Firm Characteristics and Small Firm Growth

Firm Characteristics	Expected association with firm growth
Firm Age	H1.1: Younger firms (under 10 years) will exhibit the higher rates of firm growth
Firm size	H1.2: Firms employing less than 10 persons will achieve higher levels of firm growth
Industry Sector	H1.3: Small firms operating in the high technology sector (ICT) will display higher firm growth
Ownership Structure	H1. 4: Greater firm growth will be associated with firms operated by more than one owner-manager

4.2.2 The Characteristics of the Owner-Manager

The results of research in relation to the impact of owner-manager characteristics on small firm growth were less clear cut than those of the firm. Higher growth firms were managed by owner-managers who were 'pulled' into self employment or started their business for positive motivations (Kinsella *et al.* 1994; Smallbone *et al.*1995; Barkham *et al.* 1996; Delmar and Davidsson 1998; Hamilton and Lawrence 2001; Reynolds *et al.* 2001; Poutziouris 2003;

Delmar and Wiklund 2008; Andersson and Tell 2009). Despite some divergent results in studies by Liao *et al.* (2001) and Papadaki and Chami (2002) the bulk of the studies promoted that a positive motivation to start the business would result in greater levels of small firm growth.

Primarily, younger owner-managers displayed faster rates of growth (Davidsson 1991; Storey 1994; Welter 2001; Bullock *et al.* 2004). The impact of owner-manager human capital was largely determined by an examination of the education and work experience profile of owner-managers in the studies. The influence of education was mostly examined by the formal highest educational award. Owner-managers who had a higher level of education were associated with higher firm growth (Kinsella *et al.* 1994; Roper 1998; Turok 1991; Wiklund and Shepherd 2003; Barringer and Jones 2004). There was a lack of focus on how other aspects of the educational experience of the owner-manager were linked with small firm growth. Given this, two aspects of education, the level of the award and the subject area of the award are tested for their impact on small firm growth.

A number of the aspects of the career history of the owner-manager were found to positively impact on small firm growth. In particular, owner-managers who had work experience in a related industry sector and at a managerial level attained higher levels of small firm growth (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Shane 2000; Shepherd *et al.* 2000; Aldrich and Martinez 2001; Klepper 2001; O'Gorman 2001; Bellamy *et al.* 2003; Delmar and Shane 2006; Peneder 2008; Wiklund *et al.* 2009; Littunen and Niittykangas 2010). Additionally, owner-managers who had experience in owning another small business achieved better growth (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Roper 1998; Wiklund and Shepherd 2003; Barringer and Jones 2004). Hence, it is concluded that higher firm growth would be associated with the owner-managers characteristics as advanced in the hypotheses described in Table 4.2.

Table 4.2: Owner-Manager Characteristics and Small Firm Growth

Owner-manager characteristic	**Expected association with firm growth**
Motivation to start the business	H 2.1: A positive motivation to start the business will result in higher levels of firm growth
Age of the owner-manager	H 2.2: Younger owner- managers will obtain higher levels of firm growth
Education profile • Educational level of the owner-manager • Subject area of educational award	H 2.3: Owner-managers holding a post secondary level award or higher will achieve higher levels of firm growth H 2.3.1: The nature of the educational award will positively impact on small firm growth
Industry sector of experience Level of experience	H 2.4: Experience gained in the same industry sector will result in higher levels of firm growth H 2.4.1: Experience gained at managerial level will result in higher levels of firm growth
Ownership of another small firm	H 2.5: Owner-managers involved in the ownership of a second small business will achieve higher levels of firm growth

4.2.3 The Strategic Focus of the Business

The strategic focus of the small firm embodies a broad range of factors where the objectives for firm growth, the existence of a strategic plan, the type of strategy adopted, the customer profile, the level of export activity and the use of external advice with strategy development were deemed most relevant for inclusion in this empirical study. The findings from the literature strongly endorsed a positive association between multiple objectives (profit focused) and higher levels of firm growth (Smallbone *et al.* 1995; Barkham *et al.* 1996; Smallbone and Wyer 2000; O'Gorman 2001; Poutziouris 2003). There was a strong agreement in the majority of studies that having a strategic plan was found to positively impact on the achievement of small firm growth (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Roper 1998; Wickham 1998; Beaver and Ross 2000; Smallbone and Wyer 2000; Poutziouris 2003). The Miles Snow Strategic Typology (1978) was applied as a basis for investigating the nature of the general type of strategy in place in the small firm. Within the studies reviewed it was found that owner-managers who adopted the prospector strategy were the best performers (Smith *et al.* 1986; Miles and Snow 1978; Conant *et al.* 1990; Parnell and Wright 1993; Collins *et al.* 1997). Additionally, owner-managers who sourced external advice for strategy development achieved the higher levels of small firm growth (Kinsella *et al.* 1994; Storey 1994; Bennett and Robinson 1999; Bennett *et al.* 1999; Boter and Lundstrom 2005). This line of investigation highlighted six topics outlined in Table 4.3 which formed the basis of a number of hypotheses:

Table 4.3: Strategic Focus of the Business and Small Firm Growth

Strategic focus of the business	**Expected association with firm growth**
Growth objectives	H 3.1: Objectives for profit is associated with higher levels of firm growth
Strategic plan	H 3.2: The existence of a strategic plan will have a positive influence on small firm growth
Type of Strategy adopted	H 3.3: The adoption of the prospector strategy is associated with higher levels of firm growth
Customer Concentration	H 3.4: Firms who have a broad customer base will exhibit higher levels of firm growth
	H 3.5: Involvement in international markets will result in higher levels of firm growth.

Internationalisation	
Use of external advice with strategy development	H3.6: The use of external advice with strategy development will impact positively on small firm growth.

In summary, the findings of the literature review indicated that a number of factors at the individual, firm and strategic focus levels were implicated as determinants of small firm growth. These internal factors are examined as to their impact on growth in a sample of Irish SMEs in the Mid -West region of Ireland to ascertain if the findings of the survey lend support to those of the Kinsella *et al.* (1994) and the other studies examined.

4.3 Measuring Small Firm Growth – Dependent Variables

The adoption of multiple measures of small firm growth was recommended in a number of the research studies reviewed (Kinsella *et al.* 1994: Storey 1994; Barkham *et al.* 1996; Roper 1998; O'Gorman 200; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). These studies concluded that they captured the multifaceted nature of firm growth (financial and non-financial) and described the relationship between the growth measures. Three measures of firm growth were applied to this study; employment growth, turnover growth and turnover per employee growth (proxy for labour productivity).

Employment growth is a popular measure adopted for research with a public sector orientation as job creation is an important focal point for government policy (Kinsella *et al.* 1994; Barkham *et al.* 1996; Davidsson and Wiklund 2000; Moreno and Casillas 2007; Kirkwood 2009; Shepherd and Wiklund 2009).

Employment data was collected from each respondent firm on the number of owner-managers and full and part-time staff for each year of the study. The second measure of growth adopted the financial measure of turnover. Turnover comprised the net selling value of goods/services manufactured by the enterprise, of services provided by the enterprise for others and of goods sold without further processing.

The final measure for growth adopted for use in the study was turnover per employee. This served as a proxy for labour productivity. Turnover per employee was defined as sales per employee and calculated before deducting profits. Given that the cost of employing staff is a primary input cost for the small firm (SFA 2003; Small Business Forum 2006) owner-managers need to be able to assess the return on investment employees provide. In addition the need for small firms to improve their levels of productivity to compete more cost effectively in national and international markets was highlighted by the Small Business Forum (2006). Information obtained on the level of firm growth in these three areas addressed the core activities of the business. Data on employment growth captures information on employment generated in firms to address the focus of government policy. Additionally, results on the turnover of the firm provide an insight into the external market and competitive position of the industry sector the firm operates within. Finally, detail on turnover per employee offers important data on the ability of the owner-manager to manage firm resources across all functions of the business and also addresses a key government industrial policy issue. The inclusion of this measure since it was relatively unused in other research studies provides an extra dimension to the Kinsella *et al.* (1994) study and will benefit policy makers and researchers. The adoption of multiple measures of growth provides an integrated perspective, portrays its multidimensional nature and explains how growth may differ due to internal owner-manager characteristics, firm characteristics and the strategic focus of the business. Furthermore, the inclusion of multiple measures of small firm growth extends on the metrics adopted in the Kinsella *et al.* (1994) study.

4.4 Sample Selection

The survey examined the growth performance of established SMEs in the Mid-West region of Ireland. In selecting the most appropriate sample of firms a number of criteria were applied. Firstly, as the main focus of the research was on the determinants of small firm growth in established SMEs it was important that the surveyed firms were old enough to have experienced the issues associated with the achievement of firm growth and to ensure the owner-managers were able to answer the questions in the survey. As various age thresholds were applied across the studies reviewed it was difficult to elicit a common minimum age threshold. Therefore, an arbitrary decision was made that firms in this survey had to be in existence for at least five years before the start of the study period. The inclusion of this minimum age threshold ensured owner-managers were in a position to discuss the issues associated with growing their firm and would have gone beyond the 'volatility of newness' associated with the start up of a business. Furthermore, a number of documents indicated the importance of directing government policy to the established small firm, not just on "start-up" or newly established firms (which are given attention in the various Global Entrepreneurship Monitor (GEM) publications) in order to develop a more sustainable indigenous internationally directed SME sector in Ireland (Small Business Forum 2006; Building Ireland's Smart Economy

Framework 2008). Similarly, a number of academic studies (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Barringer and Jones 2004; Kinsella *et al.* 1994) suggested that a focus on the established small firm was necessary, as government investments solely nurturing start up firms were less cost effective if these firms were not developed into sustainable growing small firms. Finally, the inclusion of this age threshold provides empirical insights into a profile of small firm which is under-researched in Ireland.

The second criteria applied considered the unit of analysis. As the focus of the research was on the owner-manager who owned and managed their own firm, only single plant, indigenously owned firms were included.

Thirdly, in selecting the sample it was necessary to ensure a representation of the key industry sectors in the Mid-West region were included in the final survey. Firms were drawn from the manufacturing and business service sectors (consumer service firms were excluded) in the Mid-West region of Ireland and represented high and low growth industry sectors. The four industry sectors chosen were the electronics/engineering/manufacturing; the food/drinks and agribusiness; the software/ICT and the business service as these were representative of the most important sectors in the Mid-West region during the period of the study (IBEC 2003). The adoption of a multi-sector approach establishes if small firm growth is industry sector specific and to what extent internal factors are the sources of growth differences irrespective of industry sector characteristics.

Finally, as the study adopted a regional focus it was important that the region chosen was reflective of other regions in Ireland. The Mid-West region of Ireland was chosen as the general location of the firms surveyed. The Mid-West region is incorporated into the Border, Midland and Western (BMW) region. It is one of the eight statutory regions in Ireland and accounts for 7.5 per cent of national GDP (Mid-West Task Force Interim Report 2009).

Overall, the industrial base of the region is dominated by light industry such as electronics, instruments, metals and engineering. Food processing is particularly important, where pharmaceuticals and healthcare also have a presence. The sectoral profile of employment is similar to the national picture, with the exception of the manufacturing sector, which accounts for a larger share of employment in the Mid-West region relative to other regions in Ireland (Mid-West Task Force Interim Report 2009). The corollary of this is that the services sector in the region though growing, represents a smaller proportion of the region's economic activity than is the case nationally. ICT dominates the regions internationally traded activity and is in turn dominated by multinational corporations (Mid-West Task Force Interim Report 2009).

Similar to the national situation, the traditional manufacturing and construction sectors are showing decline as is the level of employment activity in FDI firms in the Mid-West region. The choice of a single regional focus, that off the Mid-West region of Ireland, provides empirical data not previously available on how internal determinants influence small firm growth in four key industry sectors where the results can guide local and national development agencies on the growth needs of these small firms. Additionally, this regional multi-sector study can form a useful benchmarking study for replication in the other statutory regions of Ireland. Moreover, this study is timely in the region where the influence of FDI firms is declining as is activity in the general manufacturing and construction sectors.

As was shown in Chapter Two, no single comprehensive national database of SMEs exists in Ireland or for the Mid-West region. In this absence, the sampling framework used in the construction of the sample was the databases for the Mid-West region compiled by local development agencies, such as Enterprise Ireland, Shannon Development Company Limited and the County and City Enterprise Boards. In addition, personal contact was established with representatives from these organisations to ensure the lists were up to date and to obtain profile data omitted from the listings. A number of commercial business databases such as the Kompass Irish Business Directory and the Golden Pages were also consulted for the names of firms who were not eligible for assistance from government agencies and thus, ensured that a comprehensive sample as possible was obtained. All sources of data were cross-checked to avoid duplication and double counting of firms.

The lists showed that there was approximately 2,000 SMEs (manufacturing and business services) operating in the Mid-West region of Ireland in 1996. This inventory of firms was screened to eliminate firms who did not adhere to the sample selection criteria (see Section 4.4) which resulted in a potential sample of just under 900 firms eligible for inclusion in the survey. It was hoped to obtain a sample of 100 of these firms to provide a fair reflection of the relevant population of SMEs in the Mid-West region of Ireland (this figure was arrived at from an analysis of the number of relevant firms in the databases and interviews with personnel in Shannon Development, Enterprise Boards and Enterprise Ireland). Also as the research involved face-to-face interviews it was deemed that the depth of information obtained from this number of firms would be off value to policy makers.

4.4.1 Response Rate

The one hundred owner-managers selected were contacted via an introductory letter and a follow up telephone call to inform them of the objectives of the research and to determine their commitment to participate in the survey. However, despite assurance from 100 owner-managers to partake in the survey, 80 interviews were successfully completed. A number of follow-up telephone calls were made with the outstanding 20 owner-managers to arrange or reschedule interviews, but to no avail. The eighty interviews completed provided all the necessary financial and non-financial detail requested and was usable for data analysis purposes. It is considered that the 80 firms were representative of the 100 firms initially approached. A summary of the key stages and activities involved in the sample selection process are detailed in Table 4.4 below

Table 4.4 Sample Selection process

Stage	Activity
Identification of the number of SMEs in the Mid-West region of Ireland	Enterprise Ireland, Shannon Development, County and City Enterprise Boards , Kompass Irish Business Directory and the Golden Pages
Removal of non-relevant firms from the listings	Selection criteria applied – i.e. firms had to be in operation for at least five years, be owner-managed; not part of a subsidiary and operate in either the Electronics/Engineering; Food/Drinks; ICT or Business Service sectors
Selection of respondents	Random sample selection of 100 firms
Contact with 100 firms	Via letter and follow up telephone call
Follow up with 80 owner-managers	Personal contact to arrange schedule for the interviews

Once the sample was secured it was necessary to ensure the contents of the Questionnaire was suitable for administration through face-to-face interviews.

4.5 The Questionnaire

Central to the methodology was the design of the questionnaire. A semi-structured questionnaire was deemed the most suitable method of collecting the data as it provided flexibility in the collection of comments to complement the quantitative data collected in the in-depth interviews. It gave consistency in the collection of the data from respondent firms. The questionnaire was divided into four sections which are described below. (See Appendix A for the full version of the questionnaire).

- Company characteristics,
- Owner-manager characteristics,
- Measures of small firm growth,
- Strategic focus of the business.

4.5.1 Company Characteristics

The questions in this section were designed to gain a description of the characteristics of the firm in terms of firm age, number of employees, the industry sector the firm operated in and its ownership structure (number of owner-managers). In addition, detail was elicited on the primary area of activity of the firm (product/service range).

4.5.2 Owner-Manager Characteristics

This section of the questionnaire concentrated on collecting information on the characteristics of the owner-manager such as their age, educational experience (level of education and the subject area of their highest educational award) and information on their career history (industry sector and the level of experience gained). Questions were also included to identify if the owner-manager was involved in the ownership of a second business.

4.5.3 Measures of Small Business Growth

This segment of the questionnaire requested information on the number of employees and the level of turnover achieved for each year of the period of the study (1996 to 2000).

4.5.4 Strategic Focus of the Business

Information collected in this section of the questionnaire elicited detail on the nature of business development strategies adopted by the owner-manager. Respondents were asked to outline their objectives for firm growth, if they had a strategic plan, a description of the growth strategies adopted and their involvement in export activity. Detail was also obtained on their customer profile. Finally, detail was gained on the use of external assistance with strategy development.

A pilot study of the questionnaire was undertaken to ensure the questions would be understood by the respondent, that the questionnaire was easy to administer and that the detail solicited provided the necessary information to address the requirements of the research hypotheses.

4.6 The Pilot Survey

A pilot survey is a small scale replica and rehearsal of the main study. It assists in determining the suitability and ease of use of the research instrument and the operational aspects of administering the questionnaire. Sarantakos (1993) suggested that the purpose of a pilot survey was to discover possible weaknesses, inadequacies, ambiguities and problems in any aspect of the research process. The pilot test involved a "participating pre-test" in that the selected sample of respondents were informed that it was a pre-test of the questionnaire and were encouraged to provide open and constructive feedback on their ease and ability to answer the questions as given. This interaction allowed for the interpretation of both verbal and non-verbal reaction of the respondent to the content and wording of the questions, the timing and duration of the interview, the relevance of certain questions and the ability of the interviewer to facilitate the process in a non-biased manner.

Piloting of the questionnaire was undertaken by face-to-face interviews with eight owner-managers at their premises. The selected firms represented each of the four industry sectors and a variation in firm age and firm size. On completion of the pilot test of the survey a number of modifications were made to the questionnaire. This resulted in more specific grouping of questions (in the owner-manager profile section) and rephrasing of questions which were problematic for respondents to answer (questions on strategy development and objectives for firm growth). Feedback from the pilot test also resulted in the reduction in the length of the questionnaire to accommodate the limited amount of time owner-managers were willing to give for the interview.

4.7 Data Collection - The Quantitative Approach

Curran and Blackburn (2001) evaluated the quantitative approach in studying small firm growth. They suggested that the merits included its ability to capture knowledge on the dynamics of the operations of the small firm and accurate descriptive quantitative evidence on relationships between events and factors in the small firm. Further, they suggested that data obtained from a quantitative study provided important snap shots of firm activity and how they may change over time. The findings of quantitative research studies are useful to identify relationships between independent and dependent variables and provide for a standardised and systematic method for gauging variations in the research findings. Curran and Blackburn (2001) suggested that quantitative research study findings serve as useful benchmarking studies. A review of the literature highlighted the prevalence of the quantitative approach (Kinsella *et al.* 1994; Barkham *et al.* 1996; Roper 1998; Liao *et al.* 2001; Poutziouris 2003). Additionally, the majority of research studies reviewed by Storey (1994) and Dobbs and Hamilton (2007) showed a bias towards the quantitative research approach. Since the focus of this study was on Irish SMEs it was considered that the use of a similar research approach to that adopted in the Kinsella *et al.*

(1994) study would allow for some general comparisons to highlight how internal factors influenced small firm growth in changed economic circumstances. Furthermore, as there was no recent research study undertaken in Ireland post the Kinsella *et al.* (1994) study, the findings of this study provide a point of reference for future research in the Irish context. Thus, the adoption of a quantitative research approach.

While a number of benefits were associated with the quantitative approach, it was also important to consider some of the potential limitations of this approach. One of the primary limitations associated with the quantitative approach is it's over reliance on the collection of quantitative data. In many instances, the quantitative approach is designed to provide an insight into "what" is happening in a quantifiable manner and does not provide an insight into the "why" behind the decisions made by respondents. This limitation was to a degree compensated for in the design of a semi-structured questionnaire and through the completion of in-depth face-to-face interviews which allowed for soliciting comments from the owner-managers.

4.7.1 The Choice of Face-to-Face Interviews

The face-to-face interview was chosen as the primary means of data collection as it facilitated the collection of quantitative data and ensured all the data was provided by the respondent. Given that the interview schedule was detailed and contained a large number of questions the pre-interview personal contact ensured that the respondents were prepared and had available the necessary employment and financial data when the interviewer arrived. As with other data gathering methods it was important to be mindful of some of the potential limitations in the use of face-to-face interviews. One such limitation was the potential occurrence of interviewer and interviewee bias during the interview. To reduce interviewer bias occurring one interviewer was responsible for the completion of all interviews which reduced any inconsistencies that might have occurred if multiple interviewers were employed in the administration of the questionnaire.

Respondent bias was also liable to occur particularity in their recollection of certain detail or their reluctance to provide financial data for each year of the study. This latter issue was accounted for in the initial personal contact with the respondents when a discussion took place on the type and level of financial and non-financial detail required. A commitment was obtained from the respondents that they would provide this detail. The selected owner-managers were initially sent a letter explaining the purpose of the research study, a list of the questions and the topics addressed in the questionnaire and their time commitment. This letter was followed up with a telephone call to introduce the researcher and expand further on the purpose of the research and the benefits of the research for practical small firm policy development. All respondents were guaranteed complete confidentially. As many of the owner-managers had limited time available it took a number of attempts to finalise interview details. In some instances interviews were rescheduled to accommodate the owner-manager.

Each interview was held with the owner-manager in their business and lasted for approximately one to one and half hours. The interviews were tape-recorded with the permission of the respondent and formed the primal input for the statistical analysis. The in-depth interviews were in some instances supplemented with secondary data from business plans and articles from newspapers or business magazines. In striving for reliability and data verification the information obtained was cross checked with published annual reports.

While it is not possible to prepare and legislate for all eventualities that might occur in the administration of the questionnaire, a thorough pilot testing of the questionnaire and stringent management of the interview process ensured the necessary information was obtained in a rigorous manner.

4.8 Data Analysis and Interpretation

Small firm growth measured the change in firm performance of the surveyed firms for the years 1996 to 2000 where the findings from the eighty owner-managers were analysed as one cohort. The type of data analysis was also guided by the methods adopted in the primary research studies reviewed, in particular, the Irish study conducted by Kinsella *et al.* (1994).

In the first instance, data for the completed eighty surveys were analysed using the Statistical Package for the Social Sciences (SPSS). Initial data analysis produced general frequencies and some cross analysis to provide a profile of respondent firms by a selection of owner-manager, firm characteristics and their strategic focus. In addition, information was produced on the levels of firm growth attained regarding employment, turnover and turnover per employee.

In calculating the data for the three measures of small firm growth, 1996 was treated as the base year on which the other years figures were calculated. The effect of inflation was removed from the turnover data by deflating it in 1990s rates. This real value of the turnover data was obtained by adjusting it for price movements and to allow for inflation using the Consumer Price Index (CPI) which differentiated separately between goods and services.

In relation to employment the growth index calculated figures for employment in 2000 minus those for 1996 and computed the change in employment performance for the period of the study.

Data were calculated to provide detail on the average percentage change in employment, turnover and turnover per employee growth for the cohort of 80 firms for the period of the study as a useful indicator on how the sample of firms grew in the three measures of firm growth. The percentage change was calculated as follows: (value at the end of 2000-value at 1996)/value at 1996*100 and averaged for the three years of the period of the study. The findings for all 80 firms were included in the analysis despite some extreme cases as it was believed that an examination of their performance was important to determine how internal factors impacted on their growth relative the remaining firms in the survey.

Because normality is a critical assumption which underlies the use of many statistical tests and inferences, it is an assumption which must be checked. The first step was to test the data for normality to guide the choice of the most appropriate statistical tests. Given that the sample size was relatively small and the nature of the data collected there was a belief that the data would not be normal. Observation of how the data for employment and turnover was distributed in histograms showed skewed data. The completion of Kolmogorov-Smirnov (KS) test confirmed that the data was not normally distributed. This suggested that non-parametric tests should be used as they test data that is not normally distributed and allows for the testing of observations in groups to ascertain if a significant difference exists between the variables.

A combination of tests was run. For instance, The Kruskal-Wallis H test is the non-parametric version of ANOVA, a one way analysis of variance for data collected on ordinal scale or for interval data that are unsuitable for parametric testing was conducted. In addition the non-parametric version of the 't test'- the 'Mann Whitney U test' was adopted to test the relationship between two independent variables. The 95 per cent confidence level ($p>0.05$) was applied in the analysis.

In attempting to determine if matching internal factors were shared among the higher growth firms in the survey, the 80 firms were further segmented. From the sample of 80 firms, the higher growth firms who adhered to the threshold measures proposed in the EUROSTAT-OECD Business Demography Manual (2008) were selected for further investigation. The higher growth firms were those who complied with the following criteria:

"All enterprises with average annualised growth greater than 20% over a three year period, and with 10 or more employees in the beginning of the observation period, should be considered as high-growth enterprises.

Growth can be measured by the number of employees or by turnover" (OECD Manual on Business Demography Statistics 2008).

Each of the higher growth firms were studied to determine how the three sets of internal determinants impacted on their growth. Analysis was also undertaken to ascertain the differences and similarities between the profiles of the higher growth firms. The primary themes emerging from the findings on the characteristics of the higher growth firms were compared to the Kinsella *et al.* (1994) study. This narrative dimension of the analysis enhanced the overall robustness of the research findings as it allowed for the special features of the higher growth firms to be identified and to tease out relevant growth process issues.

The following provides a brief overview of the general characteristics of respondent firms as a precursor to the presentation of more detailed findings of the statistical analysis testing the range of hypotheses in Chapters Five, Six, Seven, and Eight.

4.9 Characteristics of Respondent Firms

All respondents were the owner-manager of the business. The vast majority 86.2 per cent were involved in the business since its establishment.

4.9.1 Industry Sector

Owner-managers were asked to identify which one of four industry sectors their business was associated with. The breakdown of respondents across the four sectors was dominated by Electronic/Engineering and Manufacturing firms (32 per cent) and secondly by firms in the Food/Drink/Agribusiness sector (22 per cent). The remaining firms were fairly evenly divided between the Software/ICT sector (16 per cent) and the business service sector (10 per cent).

The majority of firms (83.8 per cent) were involved primarily in manufacturing activities and 16.3 per cent involved in service delivery. Eighteen per cent of firms provided a combination of product and services.

4.9.2 Firm Age

The respondents were asked to indicate the year of establishment of their business. From this three age groups were defined to analyse the data. The age profile of respondents is presented in Table 4.5.

Table 4.5: Age Profile of Respondent Firms

Firm age	N	Percentage
5- 10 years	26	32.5
11 - 15 years	32	40.0
15 + years	22	27.5
All Firms	80	100.0

The average age of the firm was 14 years.

4.9.3 Firm size

The majority of respondents employed less than 50 persons. The largest firm had 100 employees. The percentage breakdown of firms in each size category for each year of the study is outlined in Table 4.6.

Table 4.6: Employment Profile of Respondent Firms (1996-1999)

Employment Categories	1996 (%)	1997 (%)	1998 (%)	1999 (%)
0 - 10 employees	25.0	20.0	15.0	11.3
11 - 50 employees	70.0	72.5	75.0	80.0
51 - 100 employees	5.0	7.5	10.0	8.8
Total	100.0	100.0	100.0	100.0

- Firms operating in the software/ICT sector and the service sector did not have more than 50 employees.
- Twenty two per cent of firms in the software/ICT sector employed between 0 and 10 employees where 11.1 per cent of firms in the service sector employed less than 10 persons. In comparison 33.3 per cent of

firms in both the electronics/engineering/manufacturing and the food/drinks/agribusiness sector employed less than ten persons.

This preview provides a general context within which to examine the relationship between the three dependent variables.

4.10 Employment, Turnover and Turnover per Employee Growth

Information was provided by all 80 respondents on the numbers they employed and for their turnover for each year of the study. A brief overview of the findings for each of the dependent variables is presented

4.10.1 Employment Growth

In 1996 the eighty firms had a total 1,756 employees which increased to 2,278 in 1999. These variations highlighted some exceptional cases. Sixteen firms had more than doubled employment, 20 firms experienced between 50 and 99 per cent increase in employment and 18 firms experienced between 25 and 49 per cent increase during the period. On the opposite end of the spectrum, eight firms accounted for a decrease in employment numbers over the period. The following figure shows the distribution for of employment for the eighty firms.

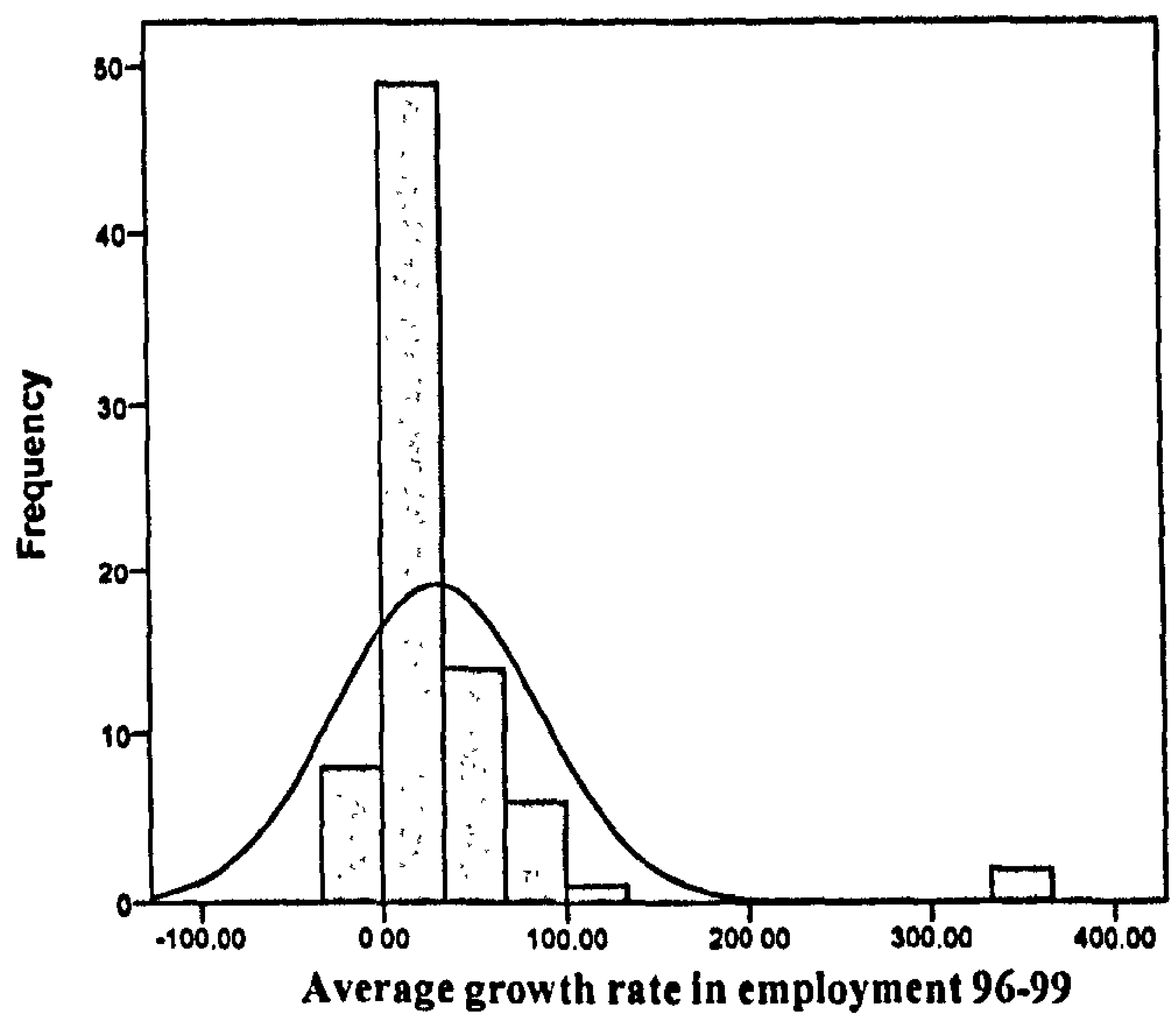

Figure 4.1: Distribution of Employment for Respondent Firms

The average level of employment growth was 29.80 per cent for the period of the study.

4.10.2 Turnover Growth

In 1996, six firms accounted for a turnover of less than €50,000, whereas at the other end of the continuum one firm accounted for a turnover in excess of €15m. Table 4.7 provides details on the minimum and maximum level of turnover growth for respondent firms and how they varied for each year. The mean turnover for respondent firms is included to highlight the disparity that exists between the minimum and maximum levels of turnover.

Table 4.7: Aggregate Turnover Data for Respondent Firms

Turnover €	Minimum (€ 000)	Maximum (€)(millions)	Mean (€) Millions	Median (€ 000)
1996	10,160	15,240,000	1,232,973	53,7500
1997	12,700	15,494,000	1,325,223	58,7500
1998	19,050	15,875,000	1,443,287	61,5000
1999	28,600	16,383,000	1,551,628	63,5000

In 1999 only three firms accounted for turnover of less than €50,000. However there was an increase in the number of firms (five firms) who reported a turnover of excess of 10 million Euros in 1999. The scatter plot in Figure 4.2 highlights the variation in the eighty turnover growth observations.

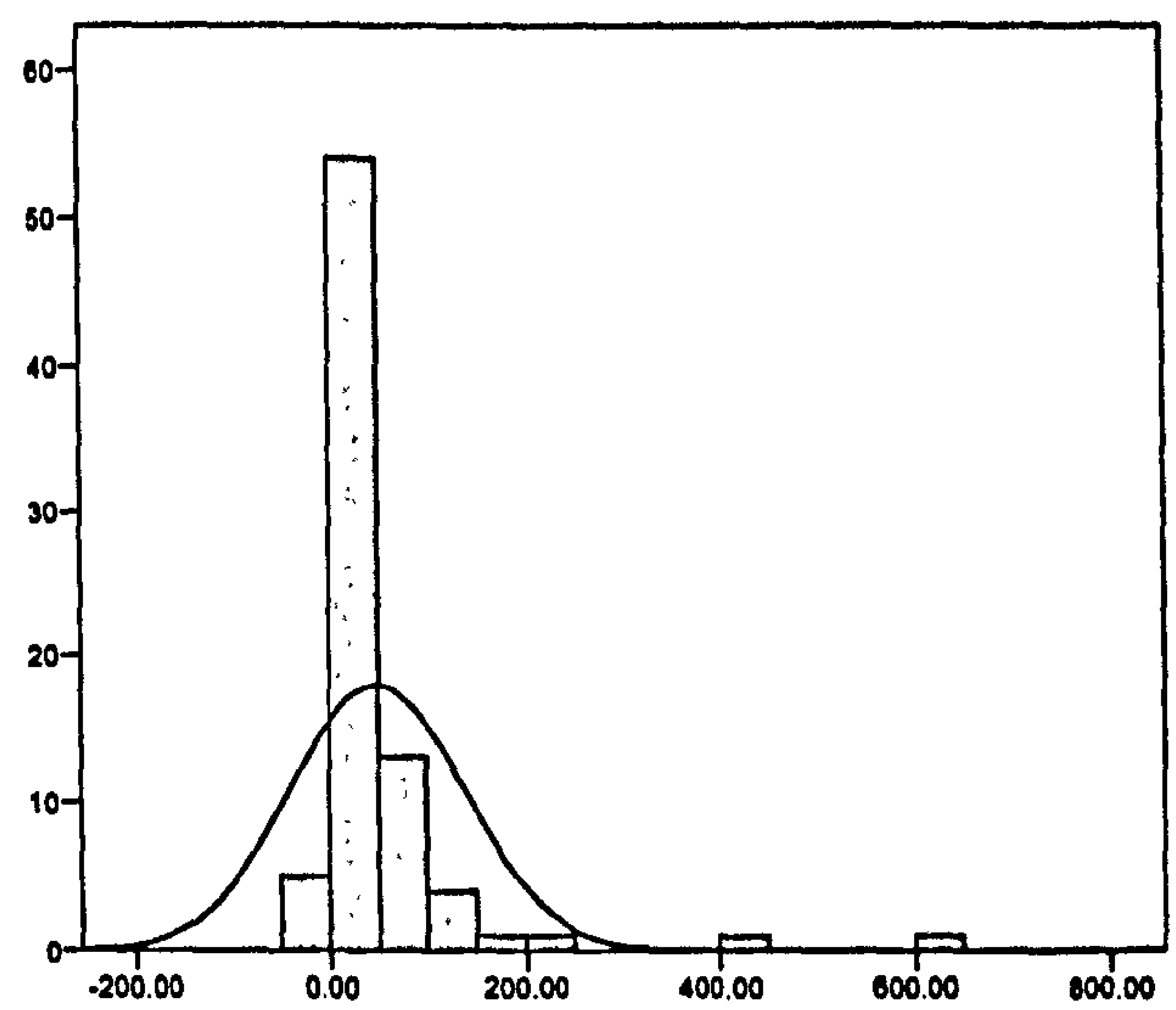

Figure 4.2: Distribution of Turnover for Respondent Firms

The average growth rate in turnover was 48.32 per cent for the cohort of respondents.

4.10.3 Turnover per Employee Growth

With regard to turnover per employee (proxy for labour productivity) the highest level was recorded for 1996 with a decline for the subsequent two years to a level of €45,862 in 1998. Table 4.8 describes the mean and median figures for each year.

Table 4.8: Turnover per Employee for Respondent Firms

Turnover per employee	**Mean (€)**	**Median (€)**
1996	51,623	35,975

1997	48,334	33,733
1998	45,862	30,017
1999	46,823	30,250

In 1999 where there was an increase to a level of €46,823 per employee. The average percentage change in turnover per employee for the sample of firms was 5.72 per cent. The growth rates for the three dependent variables are summarised in Table 4.9.

Table 4.9: Average Employment, Turnover and Turnover per Employee growth (1996 to 1999).

Growth measure	**N**	**Average growth (%)**
Average growth rate in employment 1996 and 1999	80	29.83
Average growth rate in turnover 1996 and 1999	80	48.32
Average growth rate in Turnover per employee 1996 and 1999	80	5.72

Each of these three measures will be examined for their association with a range of internal factors. Preceding this analysis the relationship between the three dependent variables is explored.

4.11 Relationship between Employment, Turnover, and Turnover per Employee Growth

Given the multifaceted nature of small firm growth where growth may occur in a number of areas of the business an examination of the relationship, if any that exists between the dependent variables provides a more integrated perspective of the dimensions of small firm growth. For instance, would an increase in turnover result in an increase in employment or turnover per employee growth or would an increase in employment growth show growth in turnover per employee?. To establish if a relationship existed between the three variables a series of scatter plots with a line of best fit was completed. This allowed for a visual inspection of the direction of the relationship between the measures examined. The first scatter plot examines the relationship between employment and turnover growth. Figure 4.3 shows the results.

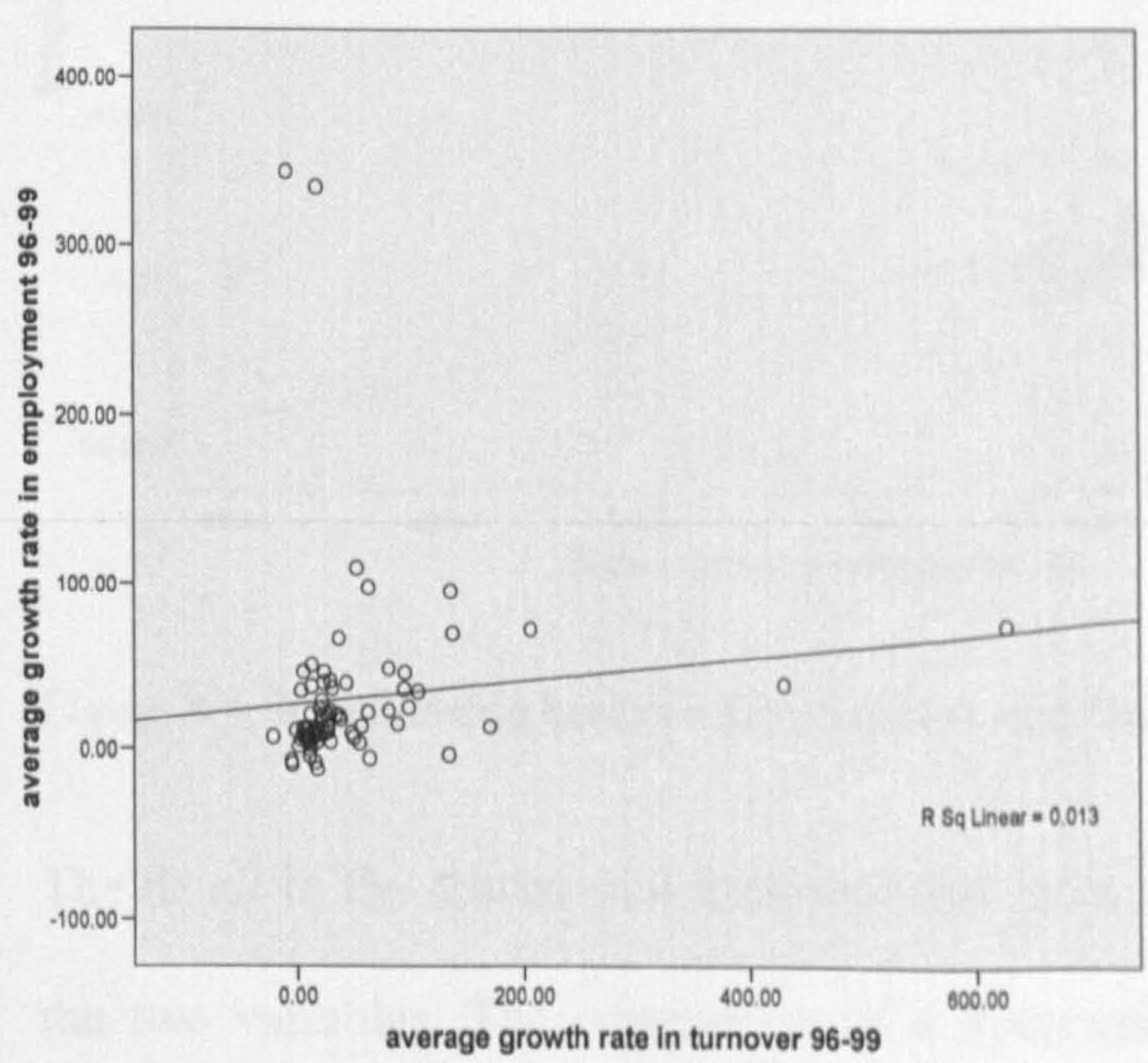

Figure 4.3: Relationship between Turnover and Employment Growth

Initial examination of the line of best fit in the scatter plot did not suggest a noticeable relationship. A Spearman's rho correlation was run between the two variables to identify the degree to which the variables were related. This produced a result of rho.441 and a p= .000 which suggests a modest positive association between the two variables. Therefore as turnover increases so does employment growth and vice versa showing the multidimensional nature of firm growth. The results show the prevalence of turnover growth in a number of respondent firms and heightens the need for policy to consider this when setting criteria for the allocation of funding.

Secondly the relationship between employment growth and turnover per employee growth was explored. Figure 4.4 presents the scatter plot.

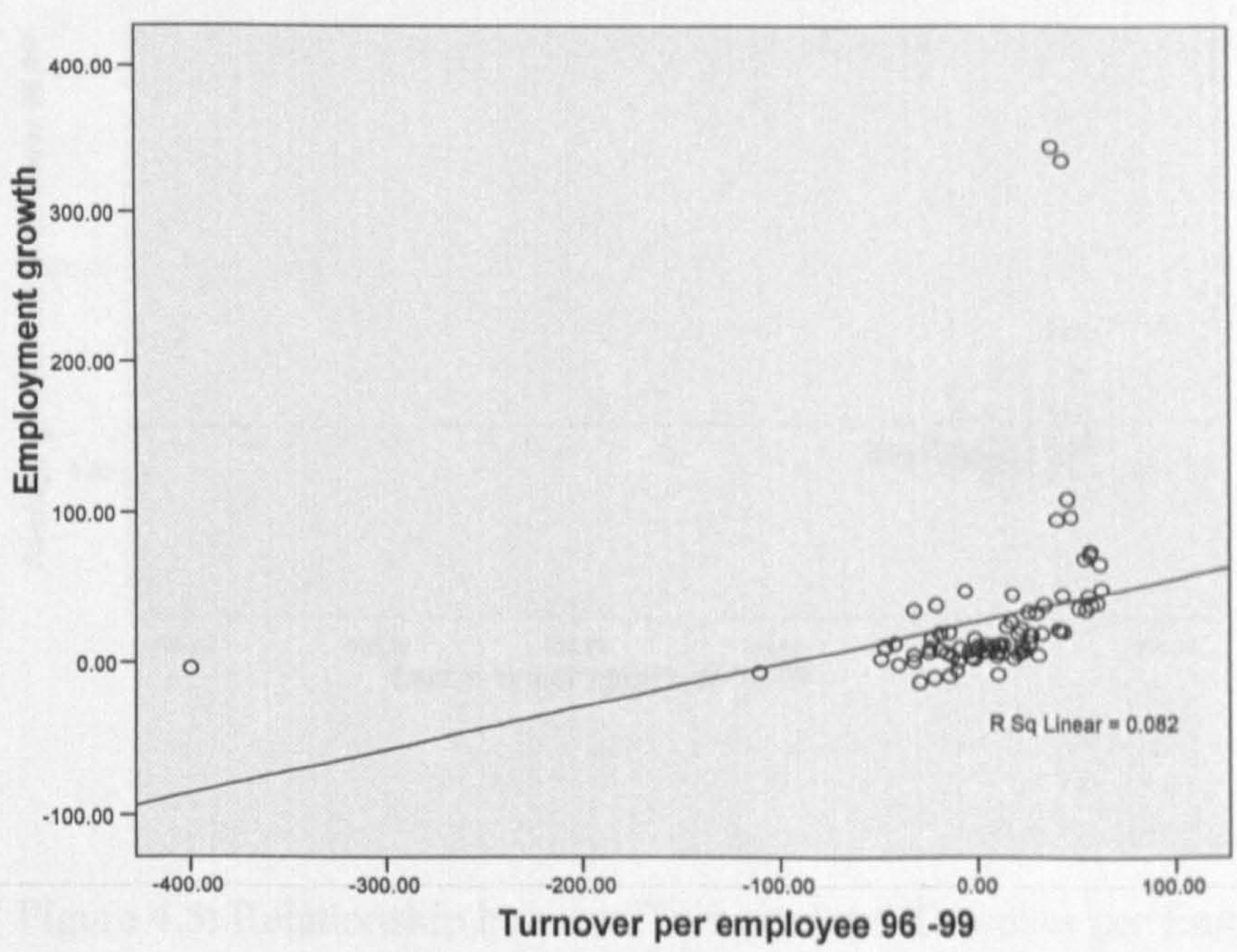

Figure 4.4: Relationship between Employment and Turnover per Employee Growth

The detail in the scatter plot indicated that there was some association between the two variables. The completion of a Spearman's rho correlation found that there was a strong positive relationship between employment growth and turnover per employee or labour productivity growth (rho .696; p= .000). Thus, as firms increase the numbers employed there is an increase in the level of turnover per employee growth and vice versa. This relationship continues to reinforce that growth can occur in a number of aspects of the firm. Additionally, the findings show that turnover per employee growth is aligned with employment growth in a number of firms resulting in increased efficiencies in many of the more labour intensive firms.

Finally an investigation of the relationship between turnover growth and turnover per employee found a weak positive association (rh .193; p =.086). The result is presented in Figure 4. 5.

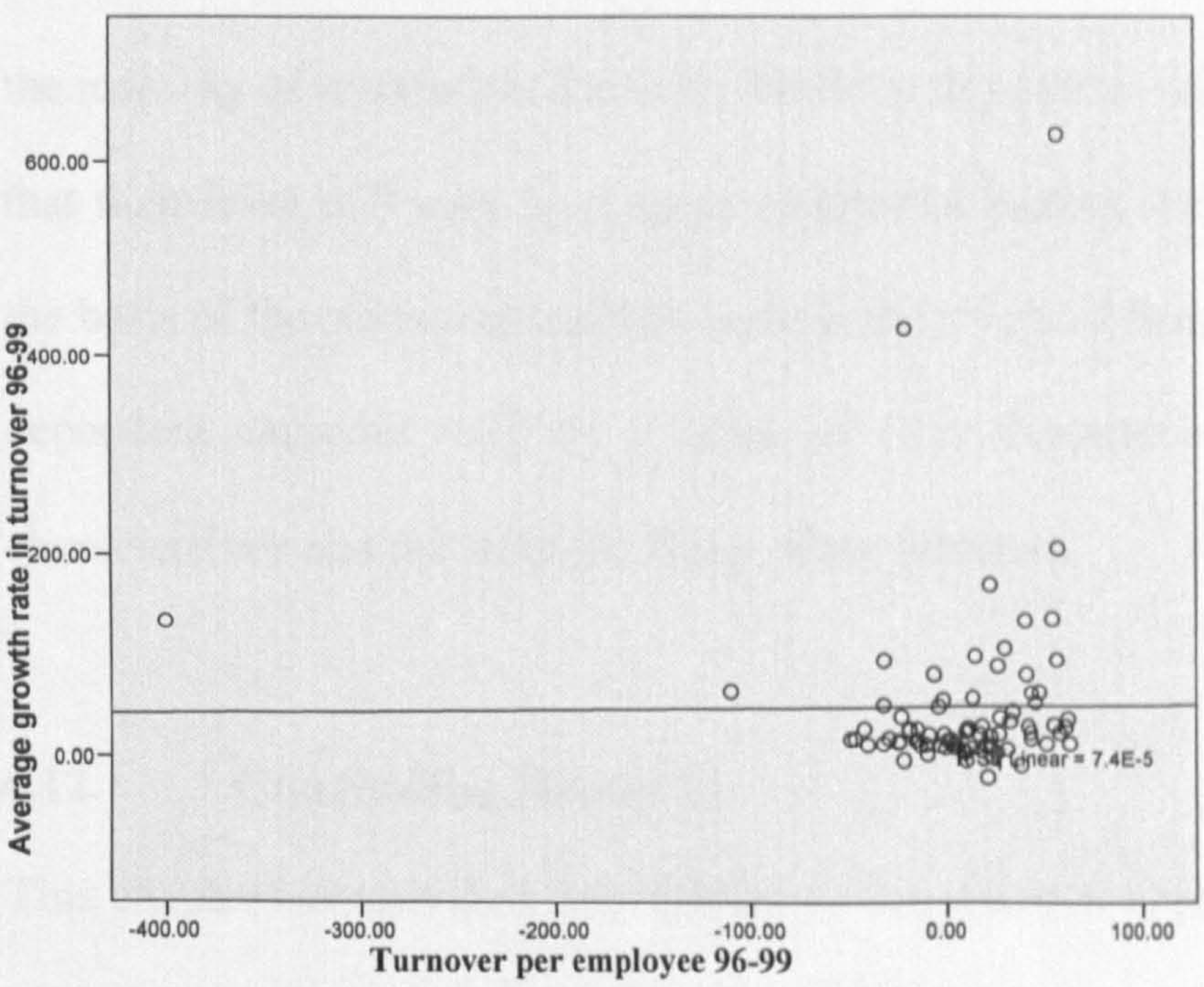

Figure 4.5: Relationship between Turnover and Turnover per Employee Growth

An increase in turnover growth does not result in a corresponding increase in turnover per employee. This result shows a less positive relationship that was found between employment growth and turnover per employee growth as highlighted in Figure 4.4. This would indicate that firms who are increasing turnover are not necessarily the most productive firms. This highlights potential for improving efficiencies in these firms to ensure profits are maximised.

Further analysis in Chapters Five, Six, Seven and Eight will establish how these relationships hold true by a range of firm, owner-manager and strategic activities with firm growth. This will indicate the profile of firm who is most likely to produce turnover growth and those most concentrated on employment growth.

To date the analysis has shown that the use of multiple measures of firm growth provide a means of examining how growth can occur in a number of aspects of the small business, but not necessarily concurrently . While growth occurred in the majority of respondent firms for the three dependent variables, it is expected that their level will vary by a range of internal factors. This information forms the basis of the statistical analysis on how the levels of firm growth for the three dependent variables vary by a range of firm characteristics, owner-manager characteristics and the strategic focus of the business.

4.12 Concluding Remarks

This chapter has provided information on the research approach adopted for the study. The quantitative approach incorporating the face-to-face interview was considered the best means of obtaining the type of information required to address the range of hypotheses developed. The quantitative study surveyed 80 owner-managers in the Mid-West region of Ireland.

The initial findings indicate that the highest level of firm growth occurred for turnover growth and secondly for employment growth. A positive relationship existed between turnover and employment growth and also between employment growth and turnover per employee growth. These findings form the basis for more detailed statistical analysis to ascertain how they are impacted upon by a range of firm, owner-manager, and strategic focus characteristics to address the research hypotheses. These findings are presented in Chapters Five, Six, Seven and Eight.

Chapter Five: Determinants of Small Firm Growth – The Influence of Firm Characteristics

5.1 Introduction

The characteristics of the firm are the subject of much study within the general small firm growth literature. Within this stream of research the evidence has shown that attributes such as firm age and size are important predictors of small firm growth. The existence of a team of owner-managers was viewed to enhance firm growth through the provision of an assortment of knowledge and competencies. The industry sector of the firm was discussed in a number of studies as a useful indicator of firm growth where stronger growth was evident in the high technology sector. These factors are included for investigation in this study. This chapter presents the analysis of the statistical differences in the dependent variables with the characteristics relating to the firm. The hypotheses tested are presented in Table 5.1 as are the primary research studies which explored the role of the selected firm characteristics as determinants of firm growth.

Table 5.1: Firm Characteristics – Research Hypotheses

Firm characteristic	**Studies which found a positive association**	**Research hypothesis**
Firm Age	Storey (1994) Kinsella *et al.* (1994) Barkham *et al.* (1996) Glancey (1998) Orser *et al.* (2000) Bullock *et al.* (2004) Geroski and Gulgar (2004)	H1.1:Younger firms (under 10 years) will exhibit higher levels of firm growth.
Firm Size	Storey (1994) Barkham *et al.* (1996) Orser *et al.* (2000) Davidsson and Wiklund (2000)	H1.2: Firms employing less than 10 persons will achieve higher levels of firm growth.

Industry Sector	Kinsella *et al.* (1994) Storey (1994) Almus and Nerlinger (1999) Jensen *et al.* (2001) Taymaz (2002) Barringer and Jones (2004) Peneder (2008)	H1.3: Firms operating in the high technology sector (ICT) will display higher firm growth.
Ownership Structure	Kinsella et al. (1994) Storey (1994) Barkham *et al.* (1996) Barringer and Jones (2004) Littunen and Tohmo (2003)	H1.4: Greater firm growth will be associated with firms operated by more than one owner-manager.

Preceding the testing of the hypotheses information is provided on the average percentage level of employment, turnover and turnover per employee growth connected with each firm characteristic for the period of the study. The results emerging in this study are compared with those found in the relevant literature as discussed in Chapter Three.

5.2 Firm Age

A general pattern emerging in the literature was that younger firms were associated with the higher levels of firm growth due to their ability to increase their scale of operations and gain economies of scale quickly to respond to customer and competitor challenges (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Glancey 1998; Orser *et al.* 2000; Bullock *et al.* 2004; Geroski and Gulgar 2004). Additionally, research completed by Jensen *et al.* (2001) and Taymaz (2002) found that turnover per employee growth was strongest in younger firms. A prior expectation of this study was that the younger firms would exhibit higher firm growth for all three measures.

H 1.1: Younger firms (those in operation for less than 10 years) will exhibit higher levels of firm growth.

Respondents were asked to indicate the year their business was established. The findings were grouped into three age categories, between 5 and 10 years, 11 and 15 years and 16 years plus. The majority of firms (40 per cent) were in operation for between 11 and 15 years, 32.5 per cent were in business for between 5 and 10 years and the remaining 27.5 per cent were established for over 16 years.

The youngest firms exhibited the highest level of growth for the three measures of employment, turnover and turnover per employee (79.4 per cent; 37.0 per cent and 11.3 per cent respectively). Conversely, firms who were in operation for sixteen years or more showed the lowest level of growth for all three measures. The average percentage level of growth evident for each age group is presented in Table 5.2. A Kruskal-Wallis H Test was conducted to test Hypothesis 1.1. which showed a positive significant impact of firm age for the three measures of firm growth.

Table 5.2: The Average Level of Employment, Turnover and Turnover per Employee Growth and Firm Age

Firm age	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
5 -10 years	26	79.49	37.03	11.39
11 - 15 years	32	41.87	29.11	7.95
16 + years	22	20.87	22.36	4.20
All Firms	80	29.83	48.32	5.72

Note: Significant differences were evident for employment growth $p=0.0001$; turnover growth $p=0.007$ and turnover per employee growth $p=0.005$.

Further statistical analysis was conducted to identify which age groups were significantly different from the others. The completion of a Mann-Whitney U test found a significant difference in the levels of growth between:

- The youngest and oldest firm for employment growth $p=0.0001$; turnover growth $p=0.003$ and turnover per employee $p=0.004$.

- Firms aged between 11 and 15 years and those aged 16 years and over for employment growth p=0.006 and turnover growth p=0.036.

Overall, the findings show that younger firms are an important source of growth, particularly employment growth. Growth declines with firm age for all three measures. These findings support Hypothesis 1.1 as the younger firms (those in operation for between 5 and 10 years) exhibited higher average levels of firm growth for all three dependent variables. Furthermore, there is a significant difference between firms in operation between 11 and 15 years and 16 years plus for two measures (employment and turnover per employee) growth. These findings concur with the primary studies reviewed (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Glancey 1998; Orser *et al.* 2000; Bullock *et al.* 2004; Geroski and Gulgar 2004). Equally, the findings provide comparable results to those of Jensen *et al.* (2001) and Taymaz (2002) in relation to turnover per employee growth where the youngest firms performed better than the other two older age categories.

5.3 Firm Size (employment numbers)

The size of the firm, measured in employment numbers is viewed to influence the growth potential of the small firm and is therefore a useful predictor of higher firm growth. A number of studies identified higher growth among smaller firms (Storey 1994; Barkham *et al.* 1996; Davidsson and Wiklund 2000; Orser *et al.* 2000). The reasons cited for this higher growth related to the fact that smaller firms were flexible in their business operations, had a greater ability to react quickly to address customer needs and respond to competitor and industry sector changes. In order to test the impact of this dimension on firm growth the following hypothesis was developed.

H1.2: Firms employing less than 10 persons will achieve higher levels of firm growth.

Firm size was assessed in terms of the number of employees in the firm. Respondents were requested to indicate the number of employees (full- time and part-time) into one of three employment groups; 0-10, 11-50 and 51 plus employees. These categories represented those size classifications most commonly used to describe SMEs in the Irish context (Small Business Forum Report 2006; CSO 2008). Given the importance of the micro and small firm (less than 50 persons) as part of the overall population of Irish SMEs (Small Business Forum Report 2006; CSO 2008) it was important to identify how they performed relative to the medium firm. In 1996, the micro firm accounted for 11.3 per cent of surveyed firms, 80.0 per cent of firms employed between 11 and 50 persons and 8.7 per cent of respondents employed between 51 and 100 persons.

The micro and small firm performed better than firms employing in excess of 51 persons for all three measures of firm growth for the period of the study. Growth was highest for turnover growth. Micro-enterprises achieved an average growth of 94.62 per cent for the period of the study, more than twice the growth rate achieved by firms employing between 11 and 50 persons and approximately 60 per cent higher than firms with in excess of 51 employees. Similar variations occurred for employment growth between firm sizes. Table 5.3 describes the average percentage levels of firm growth for firm size with the results of the Kruskal-Wallis H Test conducted to test this hypothesis.

Table 5.3: The Average Level of Employment, Turnover and Turnover per Employee Growth and Firm Size

Firm size	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
0 -10	9	67.42	94.62	24.45
11- 50	64	27.09	45.80	3.85
51 plus employees	7	6.46	11.90	1.20
All firms	80	29.83	48.32	5.72

Note: There was evidence of a statistically significant difference between firm size for employment growth p=0.008 and turnover growth p=0.023. Turnover per employee growth p= 0.232 was not significant.

The completion of a Mann-Whitney U test found a significant difference in the levels of growth between:

- The smallest firms (0-10) and those with 51 plus employees for employment growth p=0.008 and turnover growth p=0.039.
- Firms with 11-50 employees and 51 plus employees for employment growth p=0.032 and turnover growth p=0.039.

These findings provide support for two of the three dependent variables tested in Hypothesis 1.2 as the micro firm showed a significant difference in turnover and employment growth. The results strengthen the evidence in the literature and support the important role of the micro and the small firm in employment generation (Kinsella *et al.* 1994; Barkham *et al.* 1996; Glancey 1998; Davidsson and Wiklund 2000; Orser *et al.* 2000; Rutherford *et al.* 2001; Bullock *et al.* 2004). Additionally, given the significant contribution of the micro and small firm to the Irish economy (as described in Chapter Two) this finding reinforces the need to ensure their specific growth needs are understood and accommodated for in government industrial policy.

In relation to turnover per employee growth, the results diverge from those of Taymaz (2002). This study did not show a positive significant relationship between firm size and turnover per employee growth. The average percentage level of turnover per employee growth highlights the most positive contribution of the micro firm and as firm size increases there is a corresponding decline in turnover per employee growth. This would broadly align with the findings of Taymaz (2002). This is further substantiated by the very low levels of turnover per employee growth associated with the larger firms in the sample.

5.4 Industry Sector

The majority of the studies which addressed the impact of industry sector on firm growth found that growth was higher in small firms in certain industry sectors, where firms operating in high technology industry sectors characterised by high technological demands experienced speedier rates of growth relative to those operating in the traditional manufacturing sectors (Kinsella *et al.* 1994; Storey 1994; Almus and Nerlinger 1999; Jensen *et al.* 2001; Barringer and Jones 2004; Peneder 2008; Wilkund *et al.* 2009). Conversely, industry sectors where the barriers to entry are low, characterised by non-differentiated products/services and low levels of R&D investment will attract a greater number of new firms resulting in more intense competition. This may reduce the potential of a small firm to achieve higher firm growth (Cooper *et al.* 1994; Audretsch 1995; Almus and Nerlinger 1999; Weinzimmer 2000). It is hypothesised in this study that higher firm growth is characteristic of small firms operating in the high technology sector, in this study those firms operating in the ICT sector.

H1.3: Firms operating in high technology sectors (ICT) will display higher firm growth.

Respondent firms were categorised into four industry sectors comprising of the electronic/engineering/manufacturing; food/drinks/agribusiness; software/ICT and service sectors. These reflected the most important industry sectors in the Mid-West region of Ireland at the time the study was completed.

Employment growth was strongest for firms operating in the food/drinks/agribusiness sector (36.81 per cent), followed by firms operating in the electronics/engineering/manufacturing sector (31.45 per cent). In comparison, the greatest average level of turnover growth was evident in the software/ICT sector (87.14 per cent) followed by the food/drinks/agribusiness sector (64.82 per cent). The highest level of turnover per employee growth was also associated with firms in the food/drinks/agribusiness (24.14 per cent) and in the software/ICT (16.87 per cent) sectors. In general the two highest levels of turnover per employee growth were evident in firms with the highest levels of employment and turnover growth as described in Table 5.4. The results of the Kruskal-Wallis H test completed to determine if there was a significant difference between the average levels of growth across the four industry sectors is also noted below Table 5.4.

Table 5.4: The Average Level of Employment, Turnover and Turnover per Employee Growth and Industry Sector

Industry Sector	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Electronic/Engineering/ Manufacturing	32	31.45	20.48	8.71
Software/ ICT	16	24.77	87.14	16.87
Food/Drink/Agribusiness	22	36.81	64.82	24.14
Services	10	17.37	39.04	3.16
All Firms	80	29.83	48.32	5.72

Note: Significant differences were evident between turnover growth p=0.014 and turnover per employee growth p=0.036. Employment growth p=0.452 was not significant.

The findings are significant for two of the three dependent variables (turnover and turnover per employee growth) where the firms operating in the high technology sector achieved higher rates of firm growth. This provides support for two of the three dependant variables in Hypothesis 1.3.

Further statistical analysis (Mann-Whitney U test) established that for turnover growth:

- There was a significant difference (p=0.006) between the software/ICT and electronic/engineering/manufacturing sectors.
- There was also a significant difference (p=0.016) between the food/drink/agribusiness and electronic/engineering/manufacturing sectors.

In relation to turnover per employee growth;

- There was a significant difference (p=0.003) between the food/drink/agribusiness and the service sector.

These findings show that an identification of the industry sector the firm operates in is important to establish when investigating the determinants of small firm growth. The results correspond with a number of studies (Kinsella *et al.* 1994; Almus and Nerlinger 1999; Weinzimmer 2000; Barringer and Jones 2004; Peneder 2008; Wilkund *et al.* 2009). For instance, firms operating in high technology areas are more likely to achieve higher turnover and turnover per employee growth and are thus more likely to be revenue generators as opposed to employment generators. Additionally, in relation to turnover per employee growth the general findings showing the higher average growth rate of turnover per employee associated with the software /ICT sector align with the findings of Jensen *et al.* (2001) and Taymaz (2002).

There was also a significant difference between firms in the food/drink/agribusiness and electronic/engineering/manufacturing sectors for turnover and turnover per employee growth. The food/drinks/agribusiness sector performed very positively when consideration is given to the high level of employment growth attained (36.81 per cent). The findings in relation to these specific industry sectors do align with the more general trends in the manufacturing sector as highlighted in Chapter Two. As was discussed in Chapter Two, the most notable decline occurred in the traditional manufacturing sectors (e.g., textiles, clothing, leather, electronics, paper and printing) (Forfás 2006). In contrast, during this period there was an increase in employment in the added value export oriented sectors, such as the food/drinks, medical devices and medical equipment sectors (DKM Economic Consultants 2006). These trends taken in conjunction with the results of the empirical study direct attention to the importance of understanding the different growth outputs by industry sector as a basis for devising relevant policy supports. For instance how can policy address and encourage more employment growth in the food/drinks sector and provide supports that recognise the potential for higher turnover and revenue generation activities in the ICT sector?.

5.5 Ownership Structure

The majority of the studies examining the impact of multiple ownership on small firm growth found that the higher growth firms were associated with multiple ownership (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Jensen *et al.* 2001; Taymaz 2002 Barringer and Jones 2004; Littunen and Tohmo 2003).

A number of owner-managers were viewed to provide an assortment of knowledge, expertise, resources plus access to an enlarged pool of networks which serve to enhance firm growth. Despite these advantages opposing results were found in a number of studies (Hamilton and Lawrence 2001; Barringer *et al.* 2005). In essence these studies suggested that not all teams possessed complementary skills and knowledge and that where a team consisted of individuals with the same knowledge, skills and management practices then higher levels of firm growth may not be materialised. The hypothesis testing the impact of multiple ownership and small firm growth was posed as follows:

H1.4: Greater firm growth will be associated with firms operated by more than one owner-manager.

All eighty small firms were independently owned and managed operations where the majority, (51.3 per cent) were single owner-managed firms, 35 per cent had two owner-managers and the remaining 13.7 per cent had three or more owner-managers. While single owner-managed firms were associated with higher average levels of growth for turnover, similar levels of employment growth were recorded between single owned and firms owned by two individuals. The greatest variation occurred in relation to turnover per employee growth where a substantial decline occurred with an increase in the number of owner-managers. These findings are presented in Table 5.5.

Table 5.5: The Average Level of Employment, Turnover and Turnover per Employee Growth and Ownership Structure

Number of owner-managers	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
One owner/manager	41	31.74	52.12	16.61
Two owner-managers	28	32.16	47.43	1.45
Three owner-managers	11	16.76	36.43	-3.78
All Firms	80	29.83	48.32	5.72

Note: The differences between employment (0.545), turnover (p=0.297) and turnover per employee (p=0.155) growth and the number of owner-managers were not significant.

Hypothesis 1.4 was not supported after the completion of a of the Kruskal-Wallis H test. These results suggest that multiple ownership is not a significant indicator of higher small firm growth. An overview of the sample of surveyed firms provides some clarification for the results. Single ownership was dominant (53.8 per cent) amongst firms who were in existence for less than 10 years. This age group of firm displayed significantly higher levels of growth for all three measures. Additionally, the nature of the ownership structure was similar across the highest turnover growth industry sector, the software/ICT sector comprising of 56.2 per cent of single owner and 43.8 per cent multiple owner-managed firms. In relation to employment growth, the reverse occurred. Firms in the food/drinks/agribusiness sector performed best which contained 36.4 per cent of single owner-managed firms and 45.5 per cent two owner-managed firms. Furthermore, with regard to firm size 55.5 per cent of micro firms were single owner-managed compared to 44.5 per cent comprising of two or more owner-managers. The micro firm showed the highest level of employment and turnover growth. Given the above, the single ownership structure was most prevalent with the firm age and size groups which exhibited higher firm growth (bar the food/drinks/agribusiness). This would point to other non-structural or perhaps behavioural aspects of the team that may contribute to the differences in the results. However, these issues are best examined in a qualitative based research study. The findings in this research study promote that the impact of the ownership structure should be further examined bearing in mind the relative impact of each team member as opposed to the team size as a determinant of small firm growth. While the findings run counter to the proposition that a team of owner-managers results in higher firm growth, nevertheless they support the findings of research completed by Hamilton and Lawrence (2001) and Barringer *et al.* (2005) and raise issues on how best to capture the necessary information on the team dynamics as a determinant of small firm growth.

To sum up, a number of hypotheses were tested to identify how a range of firm characteristics were linked with three measures of small firm growth. The results are summarised in Table 5.6. The '+' sign denotes a significant positive impact on firm growth whereas '-' indicates that there was not a significant influence of the factor on employment, turnover and turnover per employee growth.

Table 5.6: Summary of Research Results

Research Hypotheses	Employment growth + or -	Turnover growth + or –	Turnover per employee + or -
H1.1: Younger firms (in operation for less than 10 years) will achieve the higher rates of growth	+	+	+
H1.2: Firms employing less than 10 persons will achieve more positive growth	+	+	-
H 1.3: Firms operating in the high technology sector will display higher firm growth	-	+	+
H1.4: Greater firm growth will be associated with firms operated by more than one owner-manager	-	-	-

The findings presented provide supportive evidence of the significance of firm age, firm size (for employment and turnover) and industry sector (turnover and turnover per employee) growth as internal determinants of small firm growth. Therefore, higher growth firms are likely to be less than ten years in operation, be micro firms and operate in high technology industry sectors.

5.6 Concluding Remarks

The results of this study draw attention to the importance of firm age, size and industry sector in deriving a profile of higher growth small firms. Contained within these findings are a number of points for consideration. The strong performance of the micro and small firm in employment and revenue generation is reinforced. This is reflected in the significant levels of turnover growth associated with the high technology and the higher levels of employment growth associated with the food/drinks/agribusiness sector. The results suggest a profile of firm in the high growth industry sectors that should be cultivated to achieve higher firm growth. Furthermore, both of these sectors performed positively for turnover per employee growth. Productivity is an issue for firms and for government policy. Turnover per employee growth was higher in the smaller firms and those operating in the high technology sector. Likewise, it highlights the firm characteristics achieving lower turnover per employee growth which require further examination to determine if potential for greater efficiencies and enhanced productivity can be developed in this cohort.

In addition to the positive growth levels achieved amongst surveyed firms there are concerns in relation to the lower performance of the electronics/engineering and the general service sector, particularly for employment and turnover per employee growth. Coupled with the findings presented in Chapter Two on their decline in the number of firms and their employment contribution signals the need for policy attention.

While the findings did not show a positive impact of multiple owners on higher firm growth, the ability to establish such a relationship may be connected to the dynamics of the team of owner-managers. This dimension merits further research to determine how the profile and behaviour of individual team members impact on small firm growth as opposed to the existence of the team per se. This preview of the firm characteristics of higher growth firms provides a foundation on which to assess the impact of owner-manager characteristics.

Chapter Six: Determinants of Small Firm Growth – The Influence of Owner-Manager Characteristics

6.1 Introduction

In the small firm, ownership and control of key decisions are typically held by the owner-manager who influence the growth orientation and the way the firm pursues its business objectives. This chapter will examine whether certain characteristics of the owner-manager influenced firm growth in the sample of firms surveyed in the Mid-West region of Ireland. Factors such as the motivation to start the business, educational profile, career history and involvement in another small business were investigated for their impact on firm growth. Table 6.1 describes the range of owner-manager characteristics and their expected impact on small firm growth as expressed in a number of hypotheses. These results are compared with those studies listed in Table 6.1

Table 6.1: Owner-Manager Characteristics - Research Hypotheses

Owner-manager characteristic	**Research studies which found a positive association**	**Research hypothesis**
Motivation to start the business	Kinsella *et al.* (1994) Storey (1994) Smallbone *et al.* (1995) Davidsson (2000) Smallbone and Wyer (2000) Reynolds *et al.* (2001) Delmar and Wiklund (2008)	H 2.1: A positive motivation to start the business will result in higher firm growth.
Age of owner-manager	Storey (1994) Barkam *et al.* (1996) Orser *et al.*(2000) Bullock *et al.* (2004)	H 2.2: Younger owner- managers will obtain higher levels of firm growth.
Educational level of the owner-manager	Kinsella *et al.* (1994) Roper (1998) Smallbone and Wyer (2000) Wiklund and Shepherd (2003)	H 2.3: Owner-managers holding a post secondary level award or above will achieve higher levels

	Barringer and Jones (2004)	of firm growth.
Subject area of educational award	Kinsella *et al.*(1994)	H 2.3.1: The nature of the educational award will positively impact on small firm growth.
Industry sector of experience Level of experience	Kinsella *et al.* (1994) Perren (2000) Shane (2000) Shepherd *et al.*(2000) Aldrich and Martinez (2001) O'Gorman (2001) Bellamy *et al.* (2003) Barringer *et al.* (2005) Peneder (2008) Kinsella *et al.*(1994) Roper (1998) Bellamy *et al.* (2003) Wiklund and Shepherd (2003)	H2.4: Owner – managers who gained experience in the same industry sector will accomplish higher levels of firm growth. H 2.4.1: Experience gained at managerial level will result in higher levels of firm growth.
Ownership of a another small firm	Storey (1994) Kinsella *et al.* (1994) Barkham *et al.* (1996) Roper (1998) Barringer and Jones (2004)	H 2.5: Owner-managers involved in the ownership of a second small business will achieve higher levels of firm growth.

As was the case in Chapter Five, the results for the average percentage level of growth for the three dependent variables for the eighty firms for the period of the study are presented in advance of discussing whether or not the results supported the range of hypotheses tested.

6.2 Motivation to Start the Business

The decision to start the business is driven by a range of factors broadly classified into 'push' and 'pull' factors (Reynolds *et al.* 2001; Davidsson 2000; Wiklund and Shepherd 2003; Acs 2006; Hessels *et al.* 2008). A common theme emerged in the literature that where small firms were established for positive reasons higher firm growth was achieved, compared to a business for which the main motivation was negative (Kinsella *et al.* 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Davidsson 2000; Smallbone and Wyer 2000; Reynolds *et al.* 2001; Delmar and Wiklund 2008; Littunen and Niittykangas 2010). When an individual started a business for positive reasons they were deemed to have a more growth oriented vision to drive the activities of the business. While the vast majority of studies were affirmative of the significance of a positive motivation and small firm growth it is noteworthy that Dobbs and Hamilton (2007) concluded from their analysis of a number of studies on small firm growth that evidence of a positive motivation for business establishment did not necessarily convert into actual firm growth thus, rendering it difficult to isolate a direct relationship between both variables.

Nonetheless, an understanding of the reason why the owner-manager started their business is important when researching the determinants of firm growth as it serves to link pre entrepreneurial activity and its subsequent influence on firm growth. For this study it was hypothesised that where a positive motivation existed to start the business then higher levels of firm growth would occur.

H 2.1: A positive motivation to start the business will result in higher firm growth.

The surveyed owner-managers were asked to rank in importance from a prescribed list of factors (combining positive and negative) the motivation they had for starting their business. Overall positive (pull) factors were most prevalent in influencing the decision to start a business. The three most important reasons cited are discussed. For instance, previous work experience was the most important factor influencing 37.5 per cent of respondents and ranked as an important factor by a further 41.3 per cent of owner-managers. The desire to work on their own was chosen as the most important factor by 33.3 per cent of owner-managers and important by 8.3 per cent. Redundancy was ranked as the most influential factor by 16 per cent, bringing to the fore the impact of a negative push factor.

The average percentage level of employment, turnover and turnover per employee growth associated with these three most important factors are displayed in Table 6.2 as are the results of the Kruskal Wallis Test undertaken to ascertain if a significant difference occurred between the factors.

Table 6.2: Employment, Turnover and Turnover per Employee Growth and the Motivation to Start the Business

Motivating factor	**Employment growth (%)**	**Turnover growth (%)**	**Turnover per employee growth (%)**
Prior work experience	25.79	51.55	13.13
Work on their own	36.22	26.34	13.52
Redundancy	18.50	40.93	.488
N= 70			

Note: No significant difference was evident between the motivation to start the business and employment growth p=0.360; turnover growth p=0.265 and turnover per employee growth p=0.360.

These findings do not support the premise that a positive motivation leads to higher firm growth and argues that motivation on its own is not a reliable predictor of small firm growth. The lack of a significant relationship can in some part be explained when the profile of the surveyed firms is reviewed.

The average age of the firm in this study was 14 years. Thus, for a number of owner-managers there may be a possibility that their responses were tempered by their actions and decisions post firm establishment. This issue of ex post commentary was mentioned by Dobbs and Hamilton (2007) when debating the difficulties of arriving at a conclusion on the role of motivation to start the business as a determinant of small firm growth.

Furthermore, the results indicate that there is a link between the age of the owner-manager and the type of motivation to start their business. Redundancy was the primary influencing factor for 66.7 per cent of owner-managers aged between 45 and 54 years and for all of the respondents in the 55 years and over age group. These were involved in the longer established firms (11-15 years and 16 plus years) and were set up in the early 1980s which was a time of high unemployment in Ireland. This could be a driver of the motivation to start a business where such a push factor shows the importance of taking into consideration the role of external conditions. Conversely, none of the aforementioned older managers (over 45 years) cited education as an important influence on the decision to start their business, whereas the youngest age group (25-34 years) of owner-manager did so. Accordingly, these results suggest that motivation can be determined by a combination of factors which may be a blend of positive and negative. This challenges the notion of testing the motivation to start a business from a dual perspective of 'push' or 'pull' factors. The results also emphasise the need to consider the motivating factors in the context of the broader economic environment which will better establish the circumstances of the motivation to start the business.

6.3 Age of the Owner-Manager

The literature investigating the impact of the age of the owner-manager on small firm growth produced varied results. The bulk of studies found that the younger owner-managers displayed faster rates of firm growth (Storey 1994; Barkham *et al.* 1996; Orser *et al.* 2001; Bullock *et al.* 2004). Essentially, the discussion on the age of the owner-manager as a determinant of firm growth focuses on the younger owner-managers possessing a greater eagerness for firm growth and to take risks to achieve economies of scale and sales. A prior expectation of this study was that the younger owner-managers would exhibit higher levels of firm growth. The age of the owner-manager represents their age in 1996.

H 2.2: Younger owner-managers will obtain higher levels of firm growth.

The owner-managers ranged in age from 32 years to 63 years. Table 6.3 sets out the data in relation to the age profile of respondents in 1996.

Table 6.3: Age Profile of Owner-Managers

Age group (years)	**N**	**Percent**
25 - 34	12	15.0
35 – 44	43	53.8
45 - 54	20	25.0
55 plus	5	6.2
All Firms	80	100.0

The sample was dominated by owner-managers aged between 35 and 44 years (53.8 per cent) with an additional 25 per cent represented by those aged between 45 and 54 years. The age profile of the owner-manager can be further contextualised by examining their distribution across a number of firm characteristics. Firms in the service sector had the highest percentage (90 per cent) of owner-managers aged less than 44 years. This compared with 77.2 per cent in the food/drinks/agribusiness sector and 68.8 per cent of owner-managers in the software/ICT sector. Firms in the engineering/electronics/ manufacturing sector had the least number of owner-managers of this age. With regard to firm size, the majority of (80 per cent) of owner-managers in the micro firm were under 44 years, compared to 60 per cent in the small firm and seventy one per cent in firms with more than 51 employees. Finally, the vast majority (97.6 per cent) of firms in operation for less than 10 years had owner-managers aged under 44 years, compared to 54.3 per cent in firms aged between 11 and 15 years and 17.6 per cent for the firms in existence for 16 years plus.

Employment growth was similar across the two younger age groups of owner-managers (35.66 per cent and 31.76 respectively). Employment growth declined with an increase in owner-manager age. Turnover growth was highest for owner-managers aged between 35 and 44 years. Turnover per employee growth was strongest for the youngest age group of owner-manager with a very noticeable decline with an increase in the age of the owner-manager. These findings are detailed in Table 6.4 with the results of the Kruskal Wallis Test conducted to determine if the differences between owner-manager age and the three measures of firm growth were significant.

Table 6.4: Employment, Turnover and Turnover per Employee Growth and Age of the Owner-Manager

Age of owner-manager	**N**	**Employment growth (%)**	**Turnover growth (%)**	**Turnover per employee growth (%)**
25 - 34	12	35.66	49.01	32.23
35 - 44	43	31.76	54.05	3.56
45 - 54	20	26.34	36.04	4.78
55+	5	13.16	50.57	2.73
All firms	80	29.83	48.32	5.72

Note: There was a statistically significant difference between age of the owner-manager for employment growth 0.002; turnover growth p=0.016 and turnover per employee growth p=0.013.

These results support Hypothesis H 2.2 as the younger owner-managers obtained higher levels of firm growth across all three dependent measures. The completion of a Mann-Whitney U test highlighted the significant difference between the various age groups as described in Table 6.5.

Table 6.5: Mann-Whitney U Test for Owner-Manager Age and Firm Growth

Firm Age	**Asymp. Sig. (2-tailed**	**Average growth rate in employment**	**Average growth rate in turnover**	**Average growth rate in turnover per employee**
25- 34 35- 44		P=.0007	P=.001	P=.001
35-44 45-55		P=.039	P=.026	n/a

These findings further endorse owner-manager age as a determinant of small firm growth across for all three measures between the oldest and youngest age groups. There was also a significant difference for two measures (employment and turnover) for owner-managers aged between 35 and 44 and those aged between 45 and 55 years. The findings concur with those of the literature advocating that younger owner-managers achieve higher firm growth (Storey 1994; Barkham *et al.* 1996; Orser *et al.* 2000; Bullock *et al.* 2004). In relation to turnover per employee growth, the findings suggest that it declines with owner-manager age most notably between the ages of 24 and 34 and 35 and 44 years.

The positive growth associated with the younger owner-manager coupled with the tendency for individuals to start a business in Ireland between the ages 25 and 34 years (GEM 2006; 2007) highlights the need to ensure policy address the knowledge and skills requirement of this profile of owner-manager to grow their businesses. Additionally, the age profile of the owner-manager is important to consider when designing training and development programmes to ensure they accommodate the younger owner-manager who may not have substantial industrial experience but are more highly educated.

6.4 Educational Profile of the Owner-Manager

An individual's educational experience provides subject specific knowledge and the acquisition of a broader set of skills and competencies and forms a key aspect of the human capital of the owner-manager which equips them to cope with challenges encountered in the workplace. The significance of the educational level of the owner-manager has been acknowledged as an important determinant of small firm growth (Kinsella *et al.* 1994; Storey 1994; Roper 1998; Wiklund and Shepherd 2003; Barringer and Jones 2004). However, according to Storey (1994), Barkham *et al.* (1996) and Bullock *et al.* (2004) it was difficult to establish a direct relationship between the formal educational award of the owner-manager and small firm growth. The difficulties in arriving at a consensus on the impact of owner-manager education on firm growth were due to the scarcity of detail provided in studies to describe the characteristics of the educational expertise of the respondent. Therefore, to build on the more composite role of education on firm growth, detail on two aspects of the educational experience was collected in this study, the highest formal level of educational award and the nature of its subject area. It was expected that higher levels of firm growth would be associated with owner-managers who had attained a post Leaving Certificate educational award as posed in Hypothesis 2.3.

H2.3: Owner-managers holding a post secondary level educational award or above will achieve higher levels of firm growth.

All respondents had attained a Leaving Certificate secondary education award. The Leaving Certificate is the final examination in the Irish secondary school system where most students taking the examination are aged between 17 and 19 years. This was the highest educational award for 18.7 per cent of respondents. The majority of respondents (41.2 per cent) had secured a Degree, a Postgraduate/Professional qualification was held by 21.4 per cent of respondents. These latter awards were granted by a number of Professional organisations in the Accountancy, Financial Services, and Marketing areas. A further 10.0 percent held a Diploma award and the remaining 8.7 per cent had completed a Certificate level award.

The level of education varied amongst the owner-managers. Over eighty per cent of owner-managers managing a firm less than ten years in operation had a degree or higher level of education, compared to 53.1 per cent of owner-managers in firms aged between 11-15 years and 54.4 per cent of owner-managers in firms 16 years plus. Firms in the software/ICT sector were managed by more highly educated owner-managers. The vast majority 93 per cent held a degree or higher level of education compared to 43.7 per cent in the electronics/engineering/manufacturing and 45.4 per cent of owner-managers in the food/drinks/agribusiness sectors. Owner-managers in the service sector showed higher levels of education than the preceding two sectors where 55 per cent had a degree or higher award.

The highest level of growth for the three dependent variables was for owner-managers holding a diploma or higher educational award. The lowest levels of growth were clearly evident for the Leaving Certificate award, where the most negative level was associated with the turnover per employee growth measure. This draws attention to the issue of the level of education and its impact on turnover per employee growth which is a topic not commonly examined in the research studies reviewed. A summary of the educational qualifications and the associated levels of employment, turnover and turnover per employee growth are presented in Table 6.6 as are the results of the Kruskal-Wallis H test conducted to test Hypothesis 2.3.

Table 6.6: Employment, Turnover and Turnover per Employee Growth and the Level of Education

Educational Qualification	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Leaving Certificate	15	9.6	14.35	-5.74
Post leaving Certificate	7	47.27	61.88	39.51
Diploma	8	20.29	21.64	28.43
Degree	33	37.09	68.41	8.31
Postgraduate	8	64.99	51.13	36.20
Professional	9	17.63	67.41	5.56
All Firms	80	29.83	48.32	5.72

Note: Evidence was found for a statistically significant difference between the educational qualification of the owner-manager for employment growth (p=0.014), turnover growth (p=0.038) and turnover per employee growth (p=0.031)

These findings support Hypothesis 2.3 where higher levels of formal education significantly impact on small firm growth across the three measures of firm growth. The completion of a Mann-Whitney U test determined if a significant difference existed between the levels of firm growth associated with a Leaving Certificate or higher educational award. There was a statistically significant difference (employment growth p=0.010; turnover p=0.032 and turnover per employee p=0.037). The findings provide support for the Kinsella *et al.* (1994); Storey (1994); Smallbone and Wyer (2000); Wiklund and Shepherd (2003) and the Barringer and Jones (2004) studies.

In addition to finding that higher educated owner-managers achieved greater levels of firm growth, Kinsella *et al.* (1994) discovered that higher growth firms had owner-managers who completed technical and engineering related programmes. The second aspect of education examined the nature of the subject area and its impact on the growth of the small business. The purpose of this question was to ascertain if a difference existed in the levels of small firm growth between specialist technical subject disciplines and the general business subject areas.

H 2.3.1: The nature of the educational award will positively impact on small firm growth.

A large variety of subject areas was reported by respondents to this question which were grouped into a number of primary topics to allow for meaningful statistical analysis. Business and management related disciplines, incorporating general business studies, accounting, finance and management constituted the primary subject area for 28.8 per cent of respondents. The second most popular subject area (18.8 per cent) was in the engineering/electronics discipline (production, mechanical and electronic engineering). Programmes with a focus on food science and agribusiness accounted 11 per cent and subjects with an information technology and computer software focus featured for 6.4 per cent of owner-managers. The responses for Leaving Certificate were included in the analysis as it was mentioned by 19.0 per cent of respondents and as this was their highest level and subject area of formal education. The remaining subject areas were quite diverse and included hospitality, tourism, nursing, childcare and retail subject disciplines.

When these primary educational subject areas were examined for their impact on firm growth, the average percentage level of employment growth was highest for educational awards in the engineering/electronics disciplines (62.85 per cent) and, secondly for disciplines related to food science and agribusiness (21.98 per cent). In comparison the average percentage level of turnover growth was highest for the food/science/agribusiness areas (68.17 per cent) and secondly, with the business and management (59.0 per cent) subject areas.

Finally, the average level of turnover per employee growth was higher for the food science (25.19 per cent) and for engineering/electronics (20.80 per cent) disciplines compared to business and management subjects (8.82 per cent). This would suggest that the specialist knowledge contributes in a positive manner to greater efficiencies in labour productivity. The average percentage growth in employment, turnover and turnover per employee growth for the primary subject areas is presented in Table 6.7 as are the results the Kruskal-Wallis H test.

Table 6.7: Employment, Turnover and Turnover per Employee Growth and the Nature of the Educational Award

Subject area of educational award for owner/manager	**Employment growth (%)**	**Turnover growth (%)**	**Turnover per employee growth (%)**
Business and management	20.02	59.00	8.82
Engineering/electronics	62.85	42.61	20.80
Food science /agribusiness	29.18	68.17	25.19
Leaving Certificate	9.54	14.95	-2.1
N= 63			

Note: A significant difference was evident between the different subject areas for employment growth p=0.025 only. Results for turnover growth p=0.094 and turnover per employee growth p=0.300 did not provide a significant difference.

A Mann-Whitney U test was conducted to identify if significant difference existed between the levels of firm growth and the subject areas.

There was a statistically significant difference between the Leaving Certificate and the other three subject areas: business areas (p=0.046); engineering /electronics (p=0.003) and food science/agribusiness (p=0.050) only. The lack of a significant difference between the three subject areas (business, engineering/electronics; food science and agribusiness) may be explained by the following points.

Information was elicited on the subject area of the formal educational award of the owner-manager. This did not take into account other informal training, development or mentoring programmes engaged in by the owner-manager which could have complemented the learning obtained from their formal educational award and facilitated firm growth. This is likely to be the case where the Leaving Certificate was the highest award and in the older firms. (This award was most prominent amongst the older owner-managers and in the longer established firms). In a related manner, given the average age of surveyed firms and that of the owner-manager it may be difficult for the respondent to disaggregate the impact of a factor which may be affected by more recent learning situations. For instance, in the longer established firm and for the older owner-manager their perception on the single impact of the subject area of their educational award on firm growth may be masked within the learning obtained from other formal and or informal training and development programmes and membership of networks or professional organisations which could have contributed to higher firm growth.

Furthermore, it is not clear from the results if the individuals who completed post graduate programmes in business had previously held a non-business primary degree/diploma/certificate award. If so, this blend of business and non-business knowledge could greatly enhance small firm growth.

Finally, of note was the fact that turnover per employee growth was higher for the technical subject areas compared to business subjects. When linked with the level of education it would appear that higher levels of education in technical subjects are linked to enhanced levels of turnover per employee growth. Understanding the connection between education, specifically at postgraduate level and turnover per employee growth is important for consideration in the design of entrepreneurship education or small business training programmes to ensure knowledge is provided on how to increase business efficiencies.

To conclude, the analysis endorses the significance of the level of the owner-managers educational award, where higher growth for employment, turnover and turnover per employee growth was linked with the possession of a Diploma or higher educational award.

Together with the fact that individuals are starting new businesses in Ireland younger and in high technology sectors (Global Entrepreneurship Monitor Report, Ireland 2006; 2007) then the role of entrepreneurship education should be used as a catalyst for imparting business acumen and knowledge amongst technical programmes to enhance the overall human capital dimension of individuals who start a new business. Moreover, as education influences the initial career choice of individuals (Krueger *et al.* 2000) it is important that an understanding of the career option of self employment is introduced into educational programmes across disciplines and at all levels.

6.5 Career History of the Owner-Manager

In the literature reviewed the impact of the career history of the owner-manager was most frequently ascertained by examining the nature of that experience and the seniority of the experience. Experience gained in the same industry was viewed to have a positive impact on firm growth as it provided the owner-manager with relevant knowledge and skills which could be transferred into new work situations. Additionally, this experience was believed to supply greater access to external networks which facilitated the achievement of enhanced small firm growth (Kinsella *et al.* 1994; Barkham *et al.* 1996; Venkataraman 1997; Perren 2000; Shane 2000; Aldrich and Martinez 2001; O'Gorman 2001; Bellamy *et al.* 2003; Barringer *et al.* 2005; Peneder 2008; Littunen and Niittykangas 2010).

Some deliberations emerged in the research as to how or what specific aspects of the experience gained in the same industry directly impacted on higher firm growth as it depended on how relevant it was to the specific needs of a new business in that industry, and secondly, on the capacity of the owner-manager to apply this experience in a relevant manner to their specific business context (Turok 1991; Hamilton and Lawrence 2001; Papadaki and Chami 2002).

Similar debates emerged in the literature in relation to the impact of the seniority of the experience gained. A number of studies found in favour of a positive relationship between managerial experience and higher levels of small firm growth (Kinsella *et al.*1994; Storey 1994; Roper 1998; Bellamy *et al.*2003; Wiklund and Shepherd 2003). Nevertheless, this was not found to be the case in seven of the studies reviewed by Storey (1994) or in the research completed by Barkham *et al.* (1996).

The first dimension of experience investigated in this study was on the nature of the experience gained by the owner-manager prior to business establishment. Owner-managers were asked to indicate the industry sectors they worked in. The majority (33.7 per cent) had gained experience across a variety of industry sectors (depicted in the 'other' category). Experience was gained in sectors such as general manufacturing, textiles and agriculture. With regard to experience gained in a specific industry sector, 21.3 per cent gained experience in the electronic/engineering sector. Experience gained by owner-managers in the service sector (18.8 per cent) spanned areas such as tourism, financial services, banking, professional services and general retail. A further 18.7 per cent had gained experience in the food/drinks sector and 7.5 per cent of owner-managers acquired experience in the high technology sector.

Of the owner-managers who had gained experience in the engineering and electronics sector, 70.6 per cent started a business in that area, another 23.5 per cent started a business in software/ ICT and 5.9 per cent started a business in the general service sectors. Where experience was gained in the high technology (ICT) area, the vast majority (90 per cent) started a business in this field. Finally, 85 per cent who acquired experience in the food/drinks sector started a business in this sector. The research investigated to what extent this experience influenced the growth of the business as proposed in Hypothesis 2.4.

H2.4: Owner-managers who gained experience in the same industry sector will accomplish higher levels of firm growth.

The greatest average level of employment growth was related to experience gained in the food/drinks sector (39.56 per cent) which also recorded the highest level of turnover per employee growth (15.83 per cent). In comparison average turnover growth was by far the highest with experience in the high technology areas. The results obtained from the analysis are detailed in Table 6.8 below. A Kruskal Wallis Test was conducted to determine if the results were significant.

Table 6.8: Employment, Turnover and Turnover per Employee Growth and Industry Sector Experience of the Owner-Manager

Industry sector experience for owner-manager	**Employment growth (%)**	**Turnover growth (%)**	**Turnover per employee growth (%)**
Electronics/Engineering	26.52	40.17	13.99
High technology	32.96	124.40	14.75
Food /drinks	39.56	28.11	15.83
Service	30.41	119.98	21.14
Other/combination	18.81	32.14	6.02
Total	29.83	48.32	5.72

Note: There was no statistically significant difference between the industry sector experience and employment growth p=0.470; turnover growth; p=0.403 and turnover per employee p=0.931.

These results meant that Hypothesis 2.4 was not supported. That said, the findings do indicate a positive influence of the prior work experience on the choice of industry sector the owner-manager starts a business in, but would suggest it is less influential on the growth of the established firm. While contrary to the findings of the primary studies drawn upon (Kinsella *et al.* 1994;

Barkham *et al.*1996; Aldrich and Martinez 2001; O'Gorman 2001; Bellamy *et al.* 2003: Peneder 2008), the findings align with a number of research studies which have debated the positive impact of same industry experience on small firm growth (Storey 1994; Turok 1991; Gartner *et al.* 1999; Hamilton and Lawrence 2001; Papadaki and Chami 2002; Frankish *et al.* 2007).

A number of points emerge from the profile of respondents which provide a rationale on why same industry experience may not result in higher firm growth. Firm age is viewed as an important consideration in the explanation of the results. The average age of the firm in the survey was fourteen years. As was the case with recollection of how the subject area of education impacted on business growth, ex post rationalisation (where respondents rationalise their behaviour after the events have taken place) may temper their recollection on how their prior industry experience directly influenced small firm growth. It is also asserted that the diversity, scale, and technological complexity of most industry sectors have changed since the inception of a number of the firms surveyed (e.g. ICT or Food Sector). Thus, these changes can have a bearing on how the prior experience gained, in some cases fifteen years previously impacted on small firm growth. The fact that younger owner-managers in the study had less accumulated experience, yet, exhibited higher growth points towards other factors that in some way compensate for this experience and contribute to the human capital development of the individual. For instance, does education or training compensate to provide a theoretical understanding of industry sector technological knowhow, or, can the employment of individuals with the necessary experience and expertise or sourcing external assistance assist in the achievement of higher firm growth?.

The second aspect of work experience examined how managerial experience influenced small firm growth. Hypothesis 2.4.1 was developed to test this association.

H 2.4.1: Experience gained at managerial level will result in higher levels of firm growth

The minority of owner-managers (13.8 per cent) held previous managerial positions and were those linked with the highest levels of employment (60.87 per cent) and turnover (122.76 per cent) growth. Turnover per employee growth was 19.05 per cent for those respondents who had acquired prior managerial experience.

It emerged that experience gained at managerial level did not significantly impact on small firm growth for any of the three measures (employment growth $p=0.098$; turnover growth $p=0.630$ and turnover per employee growth $p=0.177$). In interpreting these results note should be taken of the small number of respondents (11) who had gained managerial experience. Some comments are provided on the results as a basis for their explanation.

The nature of the managerial experience provides a useful context to determine the relevance of the knowledge gained to managing a small business. For nine of the respondents experience was gained in large multinational firms in Production and Financial Management. Thus, a question arises as to how the technical or functional specialist experience gained in a large firm context will benefit or can be replicated for the diverse role of owner-manager ?. Apart from the functional and technical expertise it is imperative that good leadership and people management skills are part of the legacy of the managerial experience gained which may not be obtained in a large firm context, particularly in a specialist functional context.

These results promote that prior same industry sector experience and managerial experience do not deterministically result in higher firm growth. Essentially, central to establishing the relationship between these two variables and firm growth is an understanding of their relevance to a small firm coupled with the ability of the owner-manager to transfer the learned knowledge, skills and competencies in an appropriate manner to the context of a small business.

6.6 Ownership in a Second Small Business

A number of research studies investigated if involvement in the ownership of another small firm impacted positively on small firm growth. A number of advantages were afforded to ownership in another small firm, which incorporated relevant small business management skills and competencies, the existence of established networks and credibility in the marketplace (Barkham *et al.* 1996; Scott and Rosa 1997; Roper 1998: Rosa 1999; Barringer and Jones 2004; Dobbs and Hamiltion 2007). These findings lead to a prior expectation that where a number of owner-managers were involved in the business then higher levels of firm growth would occur.

H 2.5: Owner-managers involved in the ownership of a second small business will achieve higher levels of firm growth.

Owner-managers in this study were asked whether they were involved in the ownership of another business(s) concurrent with the business under study.

Thirteen per cent of owner-managers were involved in the ownership of another business. Of these 2.8 per cent were involved in two other businesses. This involvement was only on a part-time basis and respondents described themselves as 'sleeping partners' or only had a passive role in the day to day running of the business.

The higher levels of employment growth were evident with owner-managers not involved in a second business (31.13 per cent) relative to 21.67 per cent for those who were involved in another business. Similarly, turnover growth and turnover per employee growth were higher (51.34 per cent and 6.31 per cent respectively) for those not involved in a second business. These findings are shown in Table 6.9. A Mann-Whitney U test was used to test for differences between two independent variables.

Table 6.9: Employment, Turnover and Turnover per Employee Growth and Ownership in a Second Business

Ownership in a second small business	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Yes	11	21.67	29.37	2.05
No	69	31.13	51.34	6.31
All firms	80	29.83	48.32	5.72

Note: The results were not significant (employment growth p=0.489 turnover growth (p=0.883) and turnover per employee growth (p=0.368).

The results did not validate hypothesis H 2.5 that owner-managers involved in the ownership of a second small business would achieve higher levels of small firm growth.

The findings were inconsistent with the primary studies reviewed (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Scott and Rosa 1997; Roper 1998; Barringer and Jones 2004). However, it is important to note the low response rate for the number of owner-managers who were involved in a second small business. Caution is therefore required in the interpretation of the findings. Furthermore the role of the owner-manager in their second business may attribute to explaining the results. As noted respondents indicated they were only involved as 'sleeping partners' in the other business and did not appear to have an active involvement in its day to day operations. In this capacity they may not be in a position to directly impact on firm growth. The results highlight that the adoption of a discrete measure (number of other businesses owned), without differentiating the link between the businesses and between the management of both firms limits the ability to determine the overall impact of multiple ownership on small firm growth.

The analysis in this chapter examined the impact of a number of owner-manager characteristics on small firm growth. These incorporated the motivation to start the business, the educational experience of the owner-manager, their career history and their involvement in another small business. The results arrived at for the various hypotheses tested are summarised in Table 6.10.

Table 6.10: Summary of Research Results

Hypotheses	Employment + or -	Turnover + or –	Turnover per employee + or -
H 2.1: A positive motivation to start the business will result in higher levels of firm growth	–	–	–
H 2.2: Younger owner-managers will obtain higher levels of firm growth	+	+	+
H2.3: Owner-managers holding a post secondary level degree or higher level of education will achieve higher levels of firm growth	+	+	+
H 2.3.1: The nature of the educational award will positively impact on small firm growth.	+	–	–
H2.4: Experience gained in the same industry sector will result in higher levels of firm growth	–	–	–
H 2.4.1: Experience gained at managerial level will result in higher firm growth	–	–	–
H 2.5: Owner-managers involved in the ownership of a second small business will achieve higher firm growth	–	–	–

Generally, the findings reinforced the significance of owner-manager age and education as predictors of higher small firm growth. The results did not support the viewpoint that motivation, same industry sector experience, managerial experience or ownership in another small business were linked with higher firm growth.

6.7 Concluding Remarks

The evidence on the impact of owner-manager characteristics on small firm growth was not as clear cut or defined as was the case with the characteristics of the firm, which point to the complexities of establishing a prescribed set of owner-manager characteristics with financial and non-financial growth. The evidence endorses the significance of the age and education of the owner-manager as determinants of higher firm growth. The younger owner-managers (25-34 years) with a post leaving certificate (Diploma or higher) educational award are more likely to achieve higher levels of firm growth.

Notwithstanding the fact that a number of owner-manager characteristics were not found to have a significant influence on firm growth the results do augment a number of studies and present areas for re-examination in future research studies. For example, the motivation to start the business was found to consist of a combination of positive and negative factors which varied due to the situational and external influences of the owner-manager. Thus, it is suggested that it may be too simplistic to divide motivation into a dichotomy of 'push'or 'pull' classifications.

While prior same industry experience can be an important determinant on what industry sector the firm is associated with, its direct impact on firm growth is questionable without assessing what relevant and transferable knowledge and skills were gained and applied in a workable manner to achieve small firm growth. An entrepreneur needs to be an effective manager and leader, however a manager is not necessarily an entrepreneur, and therefore the benefit of prior managerial experience lies in how the skills and knowledge learned in one context can be effectively replicated in the context of the small firm. Thus, educational and management training interventions need to deliver the relevant knowledge and skills on how to manage a small business in order to assist owner-managers achieve and maintain firm growth.

The results on the link between the levels of growth in turnover per employee and owner-manager characteristics produced very mixed results rendering it difficult to elicit a connection. The majority of research studies on turnover per employee growth focus on its relationship with firm characteristics. This study adds an extra dimension by researching its association with owner-manager characteristics. The findings emphasise the significance of the age of the owner-manager and their educational award only. Comparisons between business and technical qualifications and the level of turnover per employee growth should be further researched to gain an improved understanding of a topic – turnover per employee which is a key focus of industrial policy in Ireland (Small Business Forum 2006; Building Ireland's Smart Economy 2008). Overall, these results highlight the multi-dimensional construct of firm growth where growth did not occur for all three measures concurrently for the majority of owner-manager characteristics.

Finally, when owner-manager age and education are combined with firm characteristics a more developed profile of a higher growth small firm emerges. The inclusion of owner-manager characteristics reveal that smaller (micro) and younger (less than 10 years) firms operating in high technology sectors owned by more highly educated owner-managers (Diploma award or higher) display the greatest levels of firm growth across a range of the three measures (employment, turnover and turnover per employee).

Chapter Seven: Determinants of Small Firm Growth – The Strategic Focus of the Business

7.1 Introduction

A well defined strategy gives direction to the firm and reflects the objectives for business growth and the actions taken by the owner-manager to achieve these objectives. This chapter presents the findings of the empirical study on how a number of the strategic activities engaged in by the owner-manager influenced small firm growth. The objectives for business development, the existence of a strategic plan, their customer profile, type of strategy implemented and the use of external advice with strategy development were investigated, as these factors are more easily measured by those involved in small firm policy.

The hypotheses devised to determine their influence on firm growth are described in Table 7.1 as are the studies which found a positive impact of these factors on small firm growth.

Table 7.1: Strategic Focus of the Business – Research Hypotheses

Strategic focus of the business	**Research studies reviewed**	**Research hypothesis**
Growth objectives	Kinsella *et al.* (1994) Storey (1994) Smallbone *et al.* (1995) Barkham *et al.* (1996) O'Gorman (2001) Delmar and Wiklund (2003) Dohonue and Wyer (2005)	H 3.1: Objectives for profit will result in higher levels of firm growth.
Strategic plan	Kinsella *et al.* (1994) Storey (1994) Smallbone *et al.* (1995) Barkham *et al.* (1996) Smallbone and Wyer (2000) Poutziouris (2003) Delmar and Wiklund (2003	H 3.2: The existence of a strategic plan will have a positive influence on small firm growth.

Type of strategy	Miles and Snow (1997) Conant *et al.*(1990) Lumpkin and Dess (1996) Rajagopalan (1996)	H 3.3: The adoption of the prospector strategy will result in higher firm growth
Customer concentration	Storey (1994) Kinsella *et al.*(1994) Smallbone and Wyer (2000)	H 3.4: Firms who have a broad customer base will exhibit higher levels of growth
Internationalisation	Kinsella *et al.*(1994) Hitt (1997)	H 3.5: Involvement in international markets will result in higher firm growth
Use of external advice with strategy development	Kinsella *et al.* (1994) Storey (1994) Bennett *et al.* (1999) Bennett and Robinson (1999) Boter Lundstrom (2005)	H 3.6: The use of external advice with strategy development will impact positively on small firm growth.

Preceding the testing of the hypotheses, information is provided on the average percentage level of employment, turnover and turnover per employee growth evident with the strategic focus variables investigated which are compared with the relevant literature as discussed in Chapter Three.

7.2 Objectives for Business Growth

The choice of strategy is underpinned by the type of growth objectives devised by the owner-manager. Therefore, the objectives for firm growth were an important foundation on which to examine the level of firm growth achieved (Beaver and Ross 2000; Delmar *et al.* 2003; Wickham 2004; Donohue and Wyer 2005). Further, a number of studies suggested that a combination of objectives which prioritised profit resulted in higher levels of firm growth (Kinsella *et al.* 1994; Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Smallbone and

Wyer 2000; O'Gorman 2001; Delmar and Wiklund 2003). There was a prior expectation in this study that where owner-managers had objectives which emphasised profit then higher levels of firm growth would occur. This was set out in Hypothesis 3.1.

Hypothesis 3.1: Objectives for profit will result in higher levels of firm growth

Owner-managers were requested to rank in order of importance the primary objectives they had for the development of their business. The responses obtained were quite similar which facilitated their grouping into a number of key themes. An objective for profit was ranked as the primary objective for 57.5 per cent of respondents. Objectives for new product development/add to current product range was the primary objective for 13.8 per cent of owner-managers. Following these two primary objectives, a number of objectives were fairly equally prioritised by respondents. Despite the low numbers cited for some of these objectives, given that they were quite distinct and reflected the multidimensional nature of firm growth of the respondents they were included in the analysis. The variety of objectives and their ranking among the respondents is presented in Table 7.2.

Table 7.2: Business Growth Objectives

Business Objective	**N**	**Percentage responses**
Increase sales/profits	46	57.5
Develop new products or add to current products	11	13.8
Consolidate current position	8	10.0
Other objectives	6	7.5
Survival	5	6.2
Develop international markets	2	2.5
Improve marketing/sales activities	2	2.5
All Firms	80	100.0

Consolidation of current business activities was the most important objective for 10 per cent of respondents. Of those, fifty per cent commented that it involved a period of business assessment to identify areas for future growth through the identification of new market and product opportunities. For the remaining 50 per cent of respondents in this category, activities in the business were driven by a need to manage and reduce costs to achieve increased economies of scale. The 'other' category (7.5 per cent) of responses contained a mix objectives to include the development of production facilities, implementation of new ICT systems, succession planning for the sustainability of the business and generating external venture capital funding to continue current expansion plans. The 6.2 per cent of owner-managers citing survival as their primary objective were focusing on managing costs and cash flow, in particular production costs. These objectives for survival were most prevalent with firms in the electronics/engineering/manufacturing sector and those in operation for more than 16 years. Lastly, of note were the very few respondents who cited international market development as a primary objective. Those who did were already involved in exporting and wished to expand this dimension of their business.

The levels of growth connected with each objective provided varied results. The greatest level of employment and turnover growth were linked with the objective of consolidation (59.1 per cent and 91.9 per cent respectively). Turnover per employee growth was most positive for the objective of developing international markets (32.6 per cent). The levels of growth for each of the objectives are presented in Table 7.3, with a note on the results of the Kruskal Wallis Test conducted to test this relationship.

Table 7.3: Employment, Turnover and Turnover per Employee Growth and Business Objectives

Business Objective	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Increase sales/profits	46	30.40	52.57	4.65
Develop new products or add to current products	11	22.51	36.37	16.91
Consolidate current position	8	59.13	91.95	9.30
Other objectives	6	11.33	17.91	1.24
Survival	5	18.21	11.38	31.2
Develop international markets	2	28.80	50.35	32.6
Improve marketing/sales activities	2	23.02	23.50	1.66
All Firms	80	100.0	48.32	5.72

Note: There was no significant difference between the type of objectives and the levels of firm growth obtained in employment p=0.865; turnover growth p=0.876 or for labour turnover growth p=0.498.

The results did not support Hypothesis 3.1. The analysis produced results which were contrary to the bulk of studies reviewed. Further analysis suggested that the objectives for growth varied by industry sector.

The majority of respondents (42.2 per cent) who cited the profit objective were in the electronics/engineering/manufacturing and secondly in the food/drinks/agribusiness (24.4 per cent) sector. It was accounted for by 22.2 per cent of firms in the software/ICT sector and for 11.2 per cent of service firms. In comparison the objective for consolidation was accounted for mainly by firms in the food/drinks/agribusiness sector (50.0 per cent), by 37.5 per cent of firms in the electronics/engineering/manufacturing sector and 12 per cent of software/ICT firms. This was not mentioned as an objective by service firms. Consolidation was linked with the highest average percentage level of employment growth.

The objective for developing new products was fairly evenly distributed between the engineering/electronics/manufacturing (36.4 per cent), food/drinks/agribusiness (36.5 per cent) and the software/ICT sector (27 per cent) sectors. This objective was not cited by any firm in the service sector which would suggest a lack of innovation in this sector which may restrict growth by these small firms. The results show that the three primary objectives were evident in firms across the four industry sectors and with a range of firm characteristics denoting the wide-ranging perspective of the growth intentions of respondent owner-managers.

Additionally, the results highlight the merit in including industry sector when examining the findings. For instance, in this study the objective for profit was stronger in the electronics/engineering sector, yet firms in this sector had lower turnover and employment growth which directs the need to identify what issues are at play that in some way impact on the achievement of those growth objectives. Furthermore, the objectives cited by the respondents were not quantified which may mask variations that existed in the level of ambition and the scale of the objectives, which if available would allow for greater contextualising of the results within other strategic activities to obtain a more detailed understanding of the specific growth intention of the owner-manager.

7.3 Existence of a Strategic Plan

Planning provides a sense of direction to guide firm activities and for the allocation of resources around the achievement of firm objectives. The topic of business planning is widely debated in the small firm context. A number of studies provide broad support for a positive relationship between the existence of a strategic plan and small firm growth (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Roper 1998; Wickham 1998; Beaver and Ross 2000; Orser *et al.* 2000; Delmar and Wiklund 2003; Poutziouris 2003). Within the majority of these studies the existence of a strategic plan was the primary indicator of strategic planning activity in the small firm where the term business and strategic plan were often used interchangeably. In keeping with the findings of the primary studies drawn upon, this research examined if the existence of a strategic plan was more prevalent in higher growth small firms.

H3.2: The existence of a strategic plan will have a positive influence on small firm growth.

The majority of respondents (67.6 per cent) had a written strategic plan. These respondents showed higher levels of employment and turnover growth relative to firms who did not have a strategic plan. The reverse was the case for turnover per employee growth. Table 7.4 presents the results of the analysis for this hypothesis and the results of the Mann-Whitney U test applied to determine if the difference between two variables was significant.

Table 7.4 Existence of a Strategic Plan and Small Firm Growth

Existence of a strategic plan	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Yes	53	33.88	54.34	3.08
No	27	21.88	36.51	10.91
All Firms	80	29.83	48.32	5.72

Note: No significant difference was evident for the existence of a business plan and small firm growth (employment growth p=0.752; turnover growth p=0.803 and turnover per employee growth p=0..955).

Contrary to the expectations of Hypothesis 3.2 the findings did not suggest that having a strategic plan leads to higher small firm growth.

The reasons why this result emerged can in part be explained when a profile of respondent firms who had a strategic plan is examined. A strategic plan was most prominent with firms in the engineering/electronics/manufacturing sector (44.2 per cent) compared to 26.9 per cent of firms in food/drinks/agribusiness and 21.2 of respondents in software/ICT sectors. The lowest evidence of strategic planning was with the service firm (7.7 per cent). Therefore, the sector which showed the highest evidence of a strategic plan achieved low average levels of employment, turnover and turnover per employee growth. Conversely, firms in the software/ICT sector who showed the highest average level of turnover growth constituted 20 per cent of firms who had a strategic plan.

With regard to the age of the firm, the existence of a strategic plan showed very little variation. Of the firms who had a strategic plan 34 per cent were less than 10 years, 37.7 per cent were aged between 11-15 years and the remaining 28.3 per cent were in the 16 year plus age. More noticeable differences occurred in the size of the firm. The majority 75 per cent of respondents who had a strategic plan had between 11-50 employees, with 13.2 per cent employing less than 10 persons. This latter figure was similar to that for the firms who had in excess of

51 persons. A strategic plan was more widespread amongst firms with more than one owner-manager where they represented 60.4 per cent of respondents who had a strategic plan. Thus, strategic plans are more common in firms in the engineering/electronics/manufacturing sector, in firms employing between 11 and 50 persons and firms who had more than one owner-manager which, bar firm size are characteristics common to the lower growth firms in the survey. Thus, the strategic plan on its own is not a sufficient indicator of firm growth, rather the content of the plan and the strategies contained therein require consideration.

Information was also obtained on the time frame associated with the plan where the majority of the respondents who had a strategic plan (44.2 per cent) devised one for a 2-4 year period, followed by 38.5 per cent of respondents who had a one year plan. The remaining 17.3 per cent of owner-managers had a strategic plan which covered a five year period. A time frame of between 2 and 4 years was most prominent in the food/drinks/agribusiness sector (64.3 per cent). In comparison firms who had a one year strategic plan were evenly distributed between firms in the software/ICT (45.5 per cent) and the services sector (40 per cent). This may reflect the nature of the rate and pace of change in this sector where the firm is forced to move with changing market demands. The five year strategic plan was most obvious in the electronics/engineering/manufacturing (66.7 per cent) sector. This information would suggest that the nature of the industry sector the firm is associated with has a strong bearing on both the existence of a strategic plan and in the time frame covered by the plan. This is of consequence for those providing assistance and guidance for strategy development in terms of the type of strategic advice required by firms in different industry sectors.

Equally, the fact that over one third of respondents did not have a strategic plan but yet achieved growth would lend support to the debate on the use of a strategic plan as a primary indicator of strategic activity or firm growth (French *et al.* 2004; Barringer *et al.* 2005; Gibson and Cassar 2005; Kraus *et al.* 2006). These findings also bring to the fore comments put forward by Kinsella *et al.* (1994) in relation to the role of strategic planning and small firm growth. Kinsella *et al.* (1994) indicted that as the term business and strategic plan were often used in an interchangeable manner by owner-managers it was difficult to elicit the content of the plan thus, rendering results of studies difficult to compare. This issue was also raised by French *et al.* (2004) and Barringer *et al.* (2005). In order to ensure there is commonality of meaning on what is researched under the term 'strategic plan' it is necessary to capture an understanding and perception of the term from the owner-manager perspective.

The findings unearth a number of important issues in relation to the role of a strategic plan as an enabler of small firm growth. The results show that the majority of owner-managers had a strategic plan to guide the achievement of business growth. While certain characteristics were more evident across some of the firms who had a strategic plan (industry sector, firm age, ownership structure) there was no clear set of distinguishable factors common to all of those firms. It is noteworthy that the small firms who did not have a strategic plan exhibited firm growth and possessed some similar characteristics to their counterparts who had a strategic plan. This advances that the choice of strategy may be a more informative indicator of higher firm growth relative to the impact of the existence of a strategic plan.

7.4 Type of Strategy

Owner-managers have a myriad of strategic options to choose from in developing their business. For this research study the Miles and Snow Strategic typology (1978) was adopted as a guide to elicit information on the general strategic direction of the surveyed firms. The Miles and Snow Strategic typology presented a selection of four strategies, defensive strategy; reactor strategy; prospector strategy and analyser strategy. A number of research studies reviewed their application to the small firm (Conant *et al.* 1990; Lumpkin and Dess 1996; Rajagopalan 1996). It was found that the prospector strategy was most commonly adopted by higher growth firms (Conant *et al.* 1990). This study examined if the prospector strategy would result in significantly higher levels of small firm growth in this study.

Hypothesis H 3.3: The adoption of the prospector strategy will result in higher firm growth.

The most popular strategies adopted are displayed in Table 7.5 below.

Table 7.5: Strategies adopted by Respondent Firms

Type of Strategy chosen	**N**	**Percentage of respondents**
Analyser strategy	26	32.5
Prospector strategy	19	23.8
Combination of strategies	19	23.8
Defensive strategy	11	13.8
Reactor strategy	5	6.3
All Firms	80	100.0

While the analyser strategy was most popular (32.5 per cent) the prospector and a combination of strategies were each implemented in 23.8 per cent of surveyed firms.

The highest average level of turnover growth was associated with firms who adopted the prospector strategy (62.51 per cent) and secondly the defender strategy (46.66 per cent). In comparison average percentage employment growth was highest with respondents who adopted the defender strategy (53.13 per cent), followed by firms who adopted a combination of strategies (48.15 per cent). Finally, in relation to turnover per employee growth, the highest level of growth was associated with the adoption of the defensive strategy (27.69 per cent) and a combination of strategies (27.13 per cent).

A Kruskal-Wallis H test was undertaken to determine if a significant difference existed for the various strategies and the three measures of small firm growth. The results are presented in Table 7.6 with details the of average percentage level of firm growth associated with each strategy.

Table 7.6: Strategic Choice of Owner-Manager and Employment, Turnover and Turnover per Employee growth

Type of market strategy	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
Analyser strategy	26	16.07	43.72	5.67
Prospector	19	23.51	62.51	10.33
Combination of strategies	19	48.15	46.35	27.13
Defensive	11	53.13	46.66	27.69
Reactive	5	4.43	29.48	-3.58
All Firms	80	29.83	48.32	5.72

Note: There was no significant difference for employment growth p=0.089; turnover growth p=0.906 or turnover per employee growth p=0.058.

The results do not support Hypothesis 3.3 and do not link any one strategy type with significantly higher levels of small firm growth. The lack of a significant difference may be clarified by describing how the type of strategy varied among respondent firms.

The highest prevalence of strategic planning was evident in firms who adopted the reactive type of strategy, followed by those firms who choose the analyser strategy. The majority of firms who adopted the prospector strategy were in the food/drinks/agribusiness sector (33.3 per cent). A similar number of firms in the electronics/engineering/manufacturing (27.8 per cent) and in the software/ICT (22.2 per cent) sectors implemented it. A lower percentage (16.7 per cent) of service firms choose this option highlighting that the same strategy can be implemented by firms who have different growth objectives and operate in different industry sectors.

With regard to firm age, the popularity of the analyser strategy was evident across all firm age groups. In the youngest firm the analyser strategy was most popular (30.8 per cent), where 23.1 per cent of these firms each adopted the analyser and combination of strategies. The analyser strategy was also most popular (31.2 per cent) for the firms in the 11 and 15 year age group. This was also the case for 36.4 per cent of firms in the oldest age group of firm.

As the choice of strategy shows little variation across industry sector or age of firm, the findings point to the need to consider other factors, most likely related to the process and implementation of the strategy or indeed if the strategy chosen was the most appropriate for the business for their impact on small firm growth.

Finally, the prescriptive nature of the Miles and Snow (1978) framework did not allow for eliciting information on what aspects of each strategy were implemented, or, on other specific activities contained within these strategies which could have impacted on firm growth.

7.5 Customer Concentration

The number and size of the customers may influence the flexibility of the owner-manager in their operational and strategic activities and thus impact on small firm growth. There was a lack of consensus in the literature on whether a reliance on one or a few major customers or having a wide diversified customer profile impacted most on firm growth.

A number of studies indicated that the reliance on a single or few customers placed constraints on small firm activities and reduced their potential for firm growth beyond that customer (Kinsella *et al.* 1994: Storey 1994; Smallbone *et al.* 1995). Therefore, customer diversification is important for small firms to create a competitive advantage and facilitate firm growth. It was expected that a wide customer base would result in higher firm growth as posed in Hypothesis 3.4.

Hypothesis 3.4: Firms who have a broad customer base will exhibit higher levels of growth

Respondents were asked to provide details on the profile of their customer according to the percentage of sales they accounted for. The categories included:

'I depend on one major customer for over 50 per cent of my business'; 'I have a number of key customers who each account for over 20 per cent of my business'; 'I have a wide customer base none of whom accounts for more than 10 per cent of my business' and a 'combination of customers'.

The majority of firms (62.5 per cent) had a wide customer profile. Twenty five per cent revealed that their customer profile was dominated by firms who constituted over 20 per cent of their sales. Only 3.8 per cent had a dependency on one major customer with 8.8 per cent having a combination of customers. Variations existed in the levels of growth for the three measures across the selected customer types. Employment growth was greatest (61.5 per cent) for firms who had a major customer for over 50 per cent of their sales, while the lowest growth (13.7 per cent) was associated with firms who had a combination of customers. Average turnover growth was highest (64.53 per cent) with firms who had a number of key customers, each consisting of at least 20 per cent of their sales, with the lowest level of turnover growth associated with firms who had a combination of customer sizes. Finally, with regard to turnover per employee growth, as with employment growth the highest level of firm growth was evident with firms who had a dependency on one major customer for over 50 per cent of sales (43.72 per cent) and the lowest levels were more obvious in firms who had a wide customer base.

A Kruskal-Wallis H test was conducted to ascertain if significant differences existed between the customer size and small firm growth. The results are presented with the average growth rates for employment, turnover and turnover per employee growth in Table 7.7

Table 7.7: Customer Size and Employment, Turnover and Turnover per Employee Growth

Customer size	N	Employment growth (%)	Turnover growth (%)	Turnover per employee growth (%)
I depend on one major customer for over 50% of my business	3	61.50	33.00	43.72
I have a number of key customers who each account for over 20% of my business	20	42.72	64.53	14.00
I have a wide customer base none of whom accounts for more than 10% of my business	50	25.03	45.40	.419
Combination of customer types	7	13.70	29.48	3.71
All Firms	80	29.83	48.32	5.72

Note: No significant difference existed between customer size and employment growth $p=0.388$; turnover growth $p=0.851$; turnover per employee growth $p=0.221$

The findings do not support the view that greater levels of growth are characteristic of firms who have a broader customer base. The low number of respondents having one major customer for over 50 per cent of their sales and those with a combination of customers should be noted in the analysis. The highest average levels of employment and turnover per employee growth were associated with the one major customer. These three firms had over 51 employees and operated in the electronics/engineering sector. They were supplying in excess of eighty per cent of their output to large FDI firms. The fact that the a small firm sells over eighty per cent of their output to one customer should result in greater efficiencies in production and process activities which can explain the very high levels of turnover per employee growth.

Additionally, the benefits of concentrating on fewer customers was also borne out when the average levels of employment, turnover and turnover per employee growth was examined for the small firms who had a number key customers who each accounted for over 20 per cent of sales. Therefore, working with fewer customers would appear to result in higher revenue and the creation of opportunities for employment growth. The profile of firm here would suggest this is particularly prevalent in the electronics/engineering and ICT sectors, where it may be the case that as the customer increases their turnover, consequently so will the revenue for the small firm. The broader and more fragmented customer profile was most common amongst firms in the service sector and to a lesser degree in the engineering/electronics sector who were the lower growth firms.

7.6 Internationalisation

Market expansion through internationalisation is an important route for growth for Irish SMEs as the Irish market presents relatively limited market opportunities (Forfas 2007). How best to increase the export performance of Irish SMEs is a central policy issue (Small Business Forum Report 2006; Building Ireland's Smart Economy Framework 2008). The literature on how an international market presence impacts on small firm growth is scare where the majority of the studies focus on the reasons why small firms export and the process they engage in as opposed to establishing its impact on higher firm growth. Kinsella *et al.* (1994) and Hitt (1997) in their research found that higher growth firms were less reliant on local and domestic markets than lower growth firms. The difficulty in arriving at a positive determination of the impact of exporting on small firm growth was highlighted in a number of studies (Bloodgood *et al.* 1996; McDougall and Oviatt 1996 and Westhead *et al.* 2001). These indicated that it was difficult to disaggregate the specific impact of the exporting activity on overall small firm growth from other growth activities in the firm. This research study identified the level of export activity of respondent firms and if participation in this activity resulted in higher levels of firm growth.

Hypothesis 3.5: Involvement in international markets will result in higher firm growth

Fifty per cent of firms were involved in international markets which consisted primarily of the UK, French, and German markets in order of popularity. In order to determine the degree of export activity each firm was involved in respondents were asked to indicate what percentage of their sales was exported. This detail would establish if different levels of exporting activity had a significant impact on small firm growth. The findings are described in Table 7.8.

Table 7.8: Export Activity for Respondent Firms

Percentage exported	N	Percentage
0-25	18	43.9
26-50	9	22.0
51-75	8	19.5
76+	6	14.6
All Firms	41	100.0

The majority of respondents exported less than 50 per cent of their output with only a minority (14.6 per cent) exporting over three quarters of their output. A Kruskal-Wallis H test examined if differences existed between the different levels of export activity and small firm growth. The results are displayed in Table 7.9.

Table 7.9 Export Activity and Employment, Turnover and Turnover per Employee Growth

Percentage exported	**Employment growth (%)**	**Turnover growth (%)**	**Turnover per employee growth (%)**
0-25	36.06	19.47	10.41
26-50	18.37	85.21	10.87
51-75	22.93	68.08	24.88
76+	82.70	98.21	23.80

Note: There was no significant evidence of a significant difference between the various categories of export activity and employment growth $p=0.678$; turnover growth $p=0.307$ or turnover per employee growth $p=0.498$.

The findings reveal that firm growth is not impacted on by the level of export activity engaged in by the small firm and further draws attention to the poor export performance of Irish small firms. It also signals to policy that an understanding of the level of export activity per se is not a sufficient barometer to gauge successful small firm internationalisation. The higher level of export activity was more prominent in the ICT and Food/Drinks/agribusiness sector and in younger firms.

This topic requires further examination to determine the underlying reasons that interfere in the achievement of higher firm growth by firms operating in international markets. This promotes the development of research as endorsed in studies by Bloodgood *et al.* (1996); McDougall and Oviatt (1996) and Westhead *et al.* (2001) who recommended the need to obtain more detail on the nature of the export activity as part of the overall growth strategy of the firm.

7.7 The Use of External Advice with Strategy Development

A number of studies found some evidence that the use of external advice with aspects of business development positively impacted on the performance of the firm (Storey 1994; Kinsella *et al.*, 1994; Barkham *et al.*, 1996; Bennett and Robinson 1999; Bennett *et al.* 1999; Boter and Lundstrom 2005). Some studies suggested that owner-managers who availed of external sources of assistance with strategy development were more effective in implementing their strategy (Kinsella *et al.* 1994; Storey 1994). Despite this, studies by Bennett and Robinson (1999) and Wren and Storey (2002) found that due to the diverse structural and business related features of small firms seeking advice and for a wide ranging set of issues it was difficult to establish its direct link with higher firm growth. This research study examined the impact of external advice on strategy development where it was expected that its use would result in increased firm growth. Respondents were requested to identify if they used external advice for strategy development and from whom they sought this advice.

H3.6: The use of external advice with strategy development will impact positively on small firm growth

Less than half of the respondents availed of external assistance with strategy development (43.75 per cent). This advice was obtained primarily from government development agencies (Shannon Development and Enterprise Ireland) and secondly from their accountant. This finding is useful for government agencies as it highlights the level of engagement by respondent owner-managers with local development agencies in the Mid-West region as a primary source of advice with strategy development. This has consequences for development agencies to ensure they understand the needs of small firms in terms of the type of advice required and that their promotional activities reach out to owner-managers to encourage them to obtain advice for this aspect of the business.

In relation to firm growth, the higher average levels of employment (41.32 per cent) and turnover growth (66.97 per cent) were associated with firms who sought external advice with strategy development. The reverse was the case for turnover per employee growth (3.46 per cent for firms who sought external advice compared to 7.48 per cent for firms who did not seek external advice). The results are presented in Table 7.10 below as is the outcome of the Mann-Whitney U test. The results do not support Hypothesis 3.6.

Table 7.10: Use of External Advice and Employment, Turnover and Turnover per Employee Growth

Use of external advice	N	Employment growth (per cent)	Turnover growth (per cent)	Turnover per employee growth (per cent)
Yes	35	41.32	66.97	3.46
No	45	20.89	33.82	7.48

Note: There was not a significant difference for firm growth and use of external advice and firm growth for employment p=0.372; turnover growth p=0.354 and turnover per employee p=0.254

The majority of firms who used external advice were in the electronics/engineering/manufacturing sector (40.0 per cent) with the lowest take up on external advice evident for service firms (5.7 per cent). This may be due to the fact that many service firms are operating businesses which are outside the remit of government development agencies for funding and thus may not contact them for assistance.

The use of external advice was evenly distributed across firm age. Of those who sourced external advice 37.2 per cent were less than 10 years old and 31.4 per cent were aged between 11 and 15 years. In relation to the size of the firm, of those who sourced external advice the majority (74.3 per cent) employed between 11 and 50 persons and 17.1 per cent were micro firms. Given the higher usage of government development agencies for strategy advice (relative to commercial consultants or accountants) and its perceived lack of impact on firm growth indicates points of concern from the policy perspective as to the effectiveness of the advice provided. The findings also provide a speculative profile of the small firm more likely to seek advice for strategy development as a basis for targeting by development agencies. Notwithstanding the lack of a significant relationship between the use of external advice for strategy development and firm growth the results have consequences for service providers in terms of how they can devise an appropriate range of services to accommodate the heterogeneity of the small firm and on how to persuade more owner-managers to obtain advice with strategy development.

This chapter presented the findings on how a range of strategic activities impacted on small firm growth. The variables tested were the objectives of business growth; the existence of a strategic plan; customer concentration; the type of strategy adopted; the level of internationalisation and the use of external advice with strategy development. These results are summarised in Table 7.11.

Table 7.11 Summary of Research Results

Hypotheses tested	**Employment growth + or -**	**Turnover growth + or -**	**Turnover per employee + or -**
H 3.1: Objectives for profit will be associated with higher levels of firm growth	–	–	–
H 3.2: The existence of a strategic plan has a positive influence on small firm growth,	–	–	–
H 3.3: The adoption of the prospector will result in higher level of firm growth	–	–	–
H 3.4: Firms who have a broad customer base will exhibit higher levels of growth	–	–	–
H 3.5: Involvement in international markets will result in higher firm growth	–	–	–
H 3.6: The use of external advice with strategy development will impact positively on small firm growth.	–	–	–

While the results did not provide evidence of a significant impact of any of the strategic variables tested with higher firm growth, the findings do provide an important insight into what core strategic activities are undertaken in the small firm. The variations in the results confirm the multidimensional nature of small firm growth and show the difficulties in arriving at a strategic profile common across the higher growth small firms and signal areas in need of development at the strategic activity level of the small firm.

7.8 Concluding Remarks

This chapter examined the final set of internal characteristics for their impact on small firm growth, the strategic focus of the business. In general there was a positive intention towards firm growth exhibited in the high percentage of respondents who indicated profit as their primary objective. Additionally, the majority of firms had a strategic plan and where one existed the average levels of employment, turnover and turnover per employee growth were higher than for firms who did not have a plan. Strategy development is a complex issue in the small firm, highlighted in the inability to devise a set of strategic factors which are most important for higher firm growth. Consideration must be given to decisions and activities underpinning the development of growth objectives and the choice of strategy adopted which will capture an integrated perspective of how strategic planning as opposed to the strategic plan influences small firm growth.

Involvement in export activity does not increase the likelihood of higher firm growth which would imply that the Irish government focus on encouraging increased levels of export activity may not be effective. This finding, coupled with the low level of export activity amongst Irish small firms (see Chapter Two) resonate the necessity to devise more appropriate export enhancing policies which are based on a more insightful and interrelated perspective by policy makers as to what internationalisation entails as part of the overall small firm growth strategy.

In relation to the use of external advice for strategy development, the findings provide a skeletal outline of the profile of the small firm who seeks this type of advice and exposes the important role of local development agencies as focal reference points for the owner-manager. Given this, it is beholding on development agencies to track how the advice provided is applied by the owner-manager as a means of increasing its potential to have a greater impact on small firm growth.

Chapter Eight: A Profile of High-Growth Small Firms

8.1 Introduction

A primary objective of this study was to identify the characteristics of high-growth firms in the Mid-West region of Ireland and isolate variables that may be important in determining why some firms emerge as high-growers. Ultimately, the aim is to facilitate more effective use of government resources in their policy design and delivery of small firm supports. The results of the empirical study were presented in Chapters Five, Six and Seven and showed the significant impact of a selection of firm, owner-manager and strategic focus characteristics on firm growth. This chapter expands upon these findings by profiling the 10 highest growth firms in the survey. This second stage analysis provides a deeper investigation to unearth issues which explain the research findings and will expose aspects of the growth process.

This chapter commences by describing the criteria used to define a high-growth firm. The ten highest growth firms are evaluated to establish if they possess the same owner-manager and firm characteristics and if they engage in similar strategic activities. The results are also compared with the Kinsella *et al.* (1994) study. The chapter concludes by presenting the distinguishable internal characteristics of the high-growth firms and draws conclusions on the ability to arrive at a consensus or a blueprint on the archetypical high-growth small firm.

8.2 Defining High-Growth Small Firms

As was discussed in Chapter Three it is difficult to extract a single comprehensive perspective of the phenomenon of small firm growth due to its multidimensional construct, the fact that the majority of small firms do not grow continuously and that very few reach the status of a higher growth firm (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Hamilton and Lawrence 2001; Garnsey *et al.* 2006; Dobbs and Hamilton 2007; Andersson and Tell 2009; Blackburn *et al.* 2009; Leitch *et al.* 2010). Consequently, despite the extensive research on this topic variations in the type of growth objectives, differences in how growth is measured, disparity in the time frame of the research studies and a variation in the number and type of internal and external variables investigated result in a lack of coherence regarding the emergence of a single theory to describe small firm growth. Therefore, identifying a common definition of what constitutes a high-growth firm becomes more important to facilitate better comparison of research results. Addressing this issue, the OECD in their Business Demography (2008) have proposed a common methodological framework for business demography statistics to maximise their international comparability. They define high-growth small firms according to how they exceed selected threshold measures of growth on a number of different indicators, namely, employment, sales output and labour productivity. The OECD definition of a high-growth firm is as follows:

"All enterprises with average annualised growth greater than 20 per cent over a three year period, and with 10 or more employees in the beginning of the observation period, should be considered as high-growth enterprises. Growth can be measured by the number of employees or by turnover" (OECD 2008:61).

High-growth enterprises can be defined both in terms of employment numbers and in terms of turnover where the OECD (2008) recommends that both criteria are used.

The definition also called for the adoption of meaningful size thresholds to avoid the growth of very small enterprises distorting the results, whilst the size threshold should be low enough to avoid excluding too many enterprises. A provisional size threshold of 10 employees at the beginning of the growth period was recommended for use (OECD 2008). The provisional size threshold of 10 or more employees holds for both the turnover and employment measure as it ensures that the initial population is the same regardless of whether growth is measured in employment or turnover. Using this definition the characteristics of the 10 highest growth firms from the overall survey of 80 firms are now examined.

Prior to profiling the 10 firms a preview of the average percentage level of turnover and employment growth is presented for each firm. Greater detail on the industry sector of these firms and their type of products and services is provided in Section 8.3 below. The average percentage levels of employment and turnover growth for the period of the study for each firm are displayed in Table 8.1.

Table 8.1: Profile of High-Growth Small Firms

Company Name	**Average growth in employment (%)**	**Average growth rate in turnover (%)**	**Year on year growth (%)**
Company One	109.44	52.81	Yes for employment
Company Two	97.94	62.85	Yes for employment and turnover
Company Three	48.04	80.80	Yes for turnover
Company Four	45.63	23.51	
Company Five	39.21	43.50	Yes for employment and turnover
Company Six	34.13	106.82	Yes for employment

			and turnover
Company Seven	24.62	98.60	
Company Eight	22.80	80.81	Yes for turnover
Company Nine	22.12	28.93	Yes for employment
Company Ten	20.83	26.12	

The highest level of employment growth was evident for one firm operating in the general engineering sector (Company One). The second highest level of employment growth was associated with Company Two, a firm operating in a specialised segment of the electronics sector producing customised products for large firms in the pharmaceutical and medical devices market. In comparison higher turnover growth was primarily with the ICT sector (Companies Six, Three and Eight) and for one firm operating in the Food Sector (Company Seven). As displayed in Table 8.1 above three firms exhibited year on year growth for employment and turnover. Three firms experienced intermittent growth during the period where they experienced dips in both employment and turnover growth. For all firms the highest rate of average turnover and employment growth was experienced for the latter two years of the survey (1998 and 1999).

Two important issues emerge from this brief preview of the high-growth firms. The first is the temporal nature of small firm growth. Six of the firms were found to have experienced periods of plateaued growth or discontinuous growth primarily in the area of turnover. This would align with a strong body of research which advanced that continuous growth in the small firm was rare (Storey 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Deakins and Freel 1998; Hamilton and Lawrence 2001; Garnsey *et al.* 2006; Dobbs and Hamilton 2007; Andersson and Tell 2009; Blackburn *et al.* 2009; Leitch *et al.* 2010).

The second issue relates to the multidimensional nature of firm growth where growth in one aspect of the business may not result in corresponding growth in other areas. For instance turnover growth does not automatically result in employment growth, or indeed the converse may not be automatic. This reinforces the necessity of adopting multiple measures of small firm growth to capture where growth occurs and substantiates the call for such in the literature (Storey 1994; Barkham *et al.*1996; Roper 1998: Davidsson and Wiklund 2000; Hart and McGuinness 2003; O'Gorman 2001; Davidsson *et al.* 2006; Dobbs and Hamilton 2007; Blackburn *et al.* 2009; Achtenhagen *et al.* 2010; McKelvie and Wiklund 2010). The high-growth firms are now evaluated on each set of internal characteristics (firm, owner-manager and their strategic focus) to establish if common ones emerge amongst the group.

8.3 Firm Characteristics

The findings from the sample of 80 firms as presented in Chapter Five indicated that firm age, firm size, industry sector significantly impacted on firm growth where considerably higher growth was evident in firms less than ten years in operation, in micro firms and those who operated in high technology industry sectors. The firm characteristics of the 10 high-growth firms are summarised in Table 8.2.

Table 8.2: Firm Characteristics of High-growth Small Firms

Firm Name	**Firm Age**	**Firm Size (emp)**	**Industry Sector**	**Ownership Structure**
Company One	6	80	Engineerin g	Single owner-manager
Company Two	6	48	Electronics	Single owner-manager
Company Three	6	22	ICT	Two owner managers
Company Four	10	21	Electronics /ICT	Single owner-manager

Company Five	7	47	ICT	Two owner-managers
Company Six	8	45	ICT	Two owner- managers
Company Seven	6	30	Food	Two owner-managers
Company Eight	6	23	ICT	Single owner -manager
Company Nine	11	37	Food	Single owner -manager
Company Ten	14	28	Healthcare / Medical Device	Single owner-manager

The firm age is that in 1996. The most striking characteristic of the high-growth firms was their relative youth, where the majority of firms (8) were less than 10 years in operation and the group had an average age of 8 years. A sectoral analysis showed a bias by firms in the ICT industry sector who achieved higher levels of turnover growth relative to employment growth. Two firms were represented from the Food Sector where both operated in niche high value markets. Another firm, Company Ten, operated in the general healthcare and medical equipment sector manufacturing and supplying products to public and private hospitals, medical centres and to the medical retail sector. Company One operated in the general engineering (fabrication) sector and primarily acted as a subcontractor for the production of standard pieces for a large FDI firm. Two owner-managers classified their firm in the electronics sector where the owner-manager in Company Four commented that he operated between and within the electronics and ICT sector due to the nature of their customer and their diverse range of production capabilities.

With regard to identifying the optimal size of the high-growth firms, note should be taken of the exclusion of firms with less than 10 employees (micro firms) in the calculation promoted by OECD (2008). Within the high-growth firms the vast majority (9) had between 20 and 50 employees, reinforcing the proposition commonly held in the literature on the negative effect of firm age on firm growth and supports a number of studies reviewed (Storey 1994; Barkham *et al.* 1996; Glancey 1998; Davidsson and Wiklund 2000; Orser *et al.* 2000; Robson and Bennett 2000; Jensen *et al.* 2001; Taymaz 2002; Bullock *et al.* 2004; Geroski and Gugler 2004). The findings in this study also concur with those of Kinsella *et al.* (1994).

The exceptional case was Company One who employed 80 persons. Further analysis of their customer profile revealed that this firm sold in excess of 80 per cent of their output to one large foreign direct investment (FDI) customer. The greatest growth occurred for this firm in the latter 3 years of the study period due to a substantial increase in demand from their customer who was expanding their business. Moreover, 15 per cent of their workforce were temporary and contract staff whose numbers fluctuated according to customer requirements. Thus, it is contended that the growth for Company One appeared to depend on the firm's proximity to their customer and its ability to accommodate their increasing demands for products.

Recognition must also be given to the rapid pace of growth in the general ICT sector during the period of the study which most likely contributed to the growth opportunities for certain firms. That said, only a small number of the ICT firms from the overall survey achieved a high-growth firm status. This surely indicates that credit is due to the owner-managers in the high-growth ICT firms for effectively availing of and executing the opportunities offered by the overall industry growth.

Of note is the absence of general service firms in the pool of high-growth firms. This is despite the fact that the assessment of the Irish SME sector showed an increase in the growth of this sector during the Celtic Tiger period (see Chapter Two). The relatively low contribution of small firms in the Food/Drinks sector is also off concern given its significance to the Mid-West region and nationally which points to a need to identify how an increased number of high-growth firms can be developed in these two sectors.

Concerning the ownership structure of high-growth firms, six were owned by one owner-manager. The single owner-managed firms were obvious across all industry sectors and with no discerning difference apparent by firm age or firm size. Thus, multiple ownership was not found to be a significant predictor of growth in the high-growth firms and this finding does not accord with the findings of the Kinsella *et al.* (1994).

Going behind the data on the number of owner-managers to the information provided by respondents on the characteristics of the team of managers provides a number of likely explanations to support these results. In two of the high-growth firms (Companies Five and Six) the second owner-manager was a technical specialist in the software and electronics areas respectively, which was similar rather than complementary experience to that of the owner-managers surveyed. This resulted in a strong technical bias in the team with little evidence of general business acumen in the senior management team. In the third firm, Company Three, the second owner-manager had a minority share (15 per cent) in the business and held a role of Software Designer. This would strongly suggest that this partner assumed the role of owner as opposed to the more composite function of owner-manager. As staff retention was a key challenge for small firms during the Celtic Tiger era the allocation of a percentage ownership to a key technical employee was not unusual thus, proffering a reason for the nature of the percentage breakdown of the ownership of this business. In the fourth firm the second partner was the owner's wife who occupied the role of company secretary for the firm.

The portrayal of the composition of the owner-manager team and the roles they assumed endorse the rationale for the result that multiple ownership per se is not a reliable indictor of higher firm growth. Of more consequence when examining the impact of multiple ownership on small firm growth are issues related to the diversity of the team, their level of ownership and their relative power in the management of the firm. Furthermore, these findings accord with those found by Hamilton and Lawrence (2001) and Barringer *et al.* (2005) who raised issues on the importance of capturing this type of descriptive information on the team composition and dynamics as a determinant of small firm growth.

From a policy support viewpoint this finding has implications for government agencies such as Enterprise Ireland and the City and County Enterprise Boards who organise management development programmes for entrepreneurial teams. When assessing the development needs of the team it is important that beyond the number of owners to obtain information on the primary area of expertise of each member, their role and function in the management of the business and their level of control in the business as a foundation on which to devise integrated programmes suitable to each team members management development needs.

Given the analysis of firm characteristics, high-growth firms are likely to be less than ten years in operation, employ between 20 and 50 persons, operate in high technology industry (marginal difference) sectors and be single owner-managed firms. The characteristics of the firm are now explored in conjunction with the range of owner-manager characteristics investigated in the empirical study.

8.4 Owner- Manager Characteristics

Much of the literature on the determinants of small firm growth suggested that high-growth was positively related to the age of the owner-manager and their human capital dimensions. In this study the human capital dimension was assessed from two perspectives, the educational profile of the owner-manager and secondly their prior work experience. Preceding the analysis on how the human capital dimension impacted on the high-growth firms the reasons why these owner-managers started their business is explored to establish the relative existence of positive and negative motivations.

The majority of high-growth firms (6) were started for positive reasons, primarily due to the owner-managers desire to work on their own. Of the remaining firms, two owner-managers started their businesses due to redundancy (Companies Three and Six) and the other two owner-managers started their business due to dissatisfaction with their then current work situation

(Companies Eight and Ten). These results strongly suggest that a positive motivation to start the business is not a necessity to become a high-growth firm.

In developing a rationale for the findings it is proposed that while the reason to start the business is classified as negative, it can result in a strong determination in the individual to ensure their career choice of self employment is successful. Overall, these owner-managers had the higher levels of education which is characteristic of owner-managers aligned with higher firm growth. The industry sector the firm operates in also contributes to the explanation on how firms started for a negative reason can achieve high firm growth where the overall fast growth in a sector creates greater growth opportunities for the small firm. A further point for deliberation when researching the impact of the motivation to start the business with higher firm growth is the age of the firm. In the longer established firm it becomes more problematic for the owner-manager to directly connect pre start up motivation with firm growth separate from other intervening motivations or experiences.

The results emphasise that the dichotomy of motivation into positive or negative reasons is insufficient to fully capture the intervening impact of other individual or situational factors that can collectively propel an individual towards self-employment. Thus, while not in unison with the findings of the Kinsella *et al.* (1994) study they do accord with the increasing debate on this topic (Liao *et al.* 2001; Papadaki and Chami 2002; Dobbs and Hamilton 2007) and promote the need for a broader contextual understanding of the motivation to start a business in small firm growth research studies. Perhaps in the more established small firm, a move to explore the specific motivation of the owner-manager for firm growth may be more pertinent as a context within which to examine the type of objectives for firm growth in the small firm.

The next stage of profiling of the owner-manager concentrated on their age and educational profile which are summarised in Table 8.3

Table 8.3: Age and Educational Profile of High-Growth Owner-Managers

Firm Name	**Age of owner manager**	**Educational Award**	**Subject area of award**
Company One	39	Leaving Certificate	General
Company Two	33	Certificate	Engineering
Company Three	39	Postgraduate Diploma	Engineering
Company Four	34	Diploma	Engineering
Company Five	32	Degree	Engineering
Company Six	34	Degree	Software Design
Company Seven	35	Degree	Food Science
Company Eight	40	Professional (accounting)	Business
Company Nine	37	Degree	Business
Company Ten	42	Professional	Science

The owner-managers in the 10 high-growth firms were aged between 32 and 42 years. This age group closely mirrors those associated with high-growth in the study completed by Kinsella *et al.* (1994) and confirm a significantly negative connection between the age of the owner-manager and higher small firm growth.

The nonexistence of owner-managers aged 43 years upwards is noticeable within this group and indicates that firm growth declines with owner-manager age. This finding would place some doubt about the apparent success of current small firm supports if firm growth is not sustained with either the age of the firm or by older owner-managers, which are connected. These results raise issues at two levels that have a bearing on government supports. The first relates to the ineffectiveness of broad training and development supports which cannot attend to the needs of the different age profiles of owner-managers. Secondly, greater targeting and selectivity is needed to support the younger owner-managers who may not have substantial industrial experience but are more highly educated to equip them with the managerial and technical knowledge and competencies that will facilitate them in achieving longer term sustainable small firm growth. Conversely, programmes aimed at the older owner-manager need to address the challenges and obstacles (internal and or external) that militate against the achievement of higher firm growth and address the personal challenges encountered due to a change in their role and responsibilities that occur with business growth. The successful transition by the younger owner-manager to longer term sustainable firm growth is imperative to develop a strong indigenous Irish small firm sector and to ensure resources targeted at developing younger owner-managers are not wasted.

The significant impact of a higher education award and one in a technical discipline was reiterated when the educational profile of the owner-managers in the high-growth firms was reviewed. The higher levels of education were more popular in the Engineering and Science disciplines. These findings align with those of Kinsella *et al.* (1994). Therefore, education does have an important role in equipping individuals with the necessary subject specific knowledge (mainly technical) which is important for the development of a high-growth firm. Given the technical bias in the educational awards of the high-growth owner-managers it is imperative that education encourages enterprising behaviour across all disciplines to provide individuals with a broader sense of autonomy, independence and self-confidence, qualities which are important when managing a new firm.

Building on the knowledge and skills accumulated through education the second aspect of the human capital investigated the nature of the prior work experience and the seniority of the experience gained by the owner-managers in the high-growth firms. This is described in Table 8.4.

Table 8.4: Prior Industry Experience of High-growth Owner-Managers

Firm Name	Industry sector Experience	Managerial Experience	Ownership in a second business
Company One	Engineering	No	No
Company Two	Furniture	No	No
Company Three	ICT sector	No	No
Company Four	Engineering and electronics	No	No
Company Five	Education and Training	No	No
Company Six	Electronics	No	No
Company Seven	Food	No	No
Company Eight	Financial Services	Yes	No
Company Nine	Services / hotel sector	No	Yes
Company Ten	Healthcare	No	No

As was the case with the overall sample of 80 firms, owner-managers in the high-growth firms had gained experience in a variety of industry sectors.

This study found that prior experience in the same industry was not a significant predictor of small firm growth and thus did not accord with the findings of the Kinsella et *al.* (1994) study. A review of the nature of the experience gained and the size of the firm where it was gained posits some explanations for the results.

The majority (8) of owner-managers had gained experience in a specialist function in an organisation with in excess of 120 employees. The respondents had gained experience in roles such as Software Consultant, Teacher, Quality Assurance, Senior Fitter, Software Programmer, Food Technician, and Medical Sales Representative and in Information Technology Systems support and maintenance.

Given the diversity of roles assumed by the high-growth owner-managers and their lack of a significant impact of any one on higher firm growth resonates the views endorsed in a number of research studies (Turok 1991; Hamilton and Lawrence 2001; Papadaki and Chami 2002). As was the case in the aforementioned studies, the notion that the same prior industry experience was advantageous to higher firm growth is queried. In particular issues such as the direct relevance of this experience to a small firm context is difficult to ascertain in a quantitative study given the lack of detail on the learning acquired from the experience and how it was applied by the owner-manager to benefit small firm growth. Furthermore, given the assortment of the experience and that it primilarily occurred in a larger firm context further supports the findings emerging in research conducted by Papadaki and Chami (2002). For instance, the owner-manager of Company Five initially gained experience as a teacher in a second level educational institution which helped him identify an idea for a software product, however it is doubtful that working in a public sector organisation would have exposed him to the realities of running a small business in a rapidly changing industry sector. Likewise, the owner-manager of Company Six gained experience in the electronics sector, whereas his own business operates in the high margin value added market segments of a rapidly changing ICT sector, thus the relevance of the experience gained is questionable as to how it benefited him directly in developing the business.

The proposition that managerial experience results in higher firm growth was discounted in the sample of the 10 high-growth firms as was the case in the 80 firms. The most prominent finding relates to the lack of managerial experience in the cohort of high-growth firms as only one owner-manager held managerial experience (Company Eight). This experience was gained in the Financial Service sector. His position was a Technical Operations Manager leading to the contention that the tacit knowledge and skills required to manage a new business may be acquired through other sources other than from a dedicated managerial role. It is also construed that individuals with a technical background (as is the case with the majority of owner-managers in the high-growth firms) can learn managerial skills via daily operations, networking, the completion of management training and development programmes or source it through the employment of the external managerial expertise. In the high-growth firms where owner-managers did not have managerial experience they had employed functional managers in their business. The majority of firms employed Financial Managers (8 firms), with four firms employing one Marketing/Sales Manager and three firms employing between 2-4 Senior Marketing/Sales Personnel and two firms employed Human Resource Managers. Thus, it may well be the case that the lack of managerial expertise by the owner-manager was compensated for by the employment of the necessary know-how which compliments the technically accomplished owner-managers who are more aware of the technical opportunities which may be the key source of firm growth.

As was the case with managerial experience, only one owner-manager (Company Nine) was involved in the ownership of a second business. This business was a retail outlet for the sale and promotions of their range of food products and had five employees. A manager was appointed to take responsibility for this retail business. Thus, the role of the owner-manager was primarily focused on production and product development in the core business and was not directly involved in the management of the retail outlet. As was advanced in Chapter Six, further endorsement is given to the recommendation that the adoption of a discrete measure (number of other businesses) without differentiating the link between the businesses and the management of both results in an incomplete understanding of how multiple ownership impacts on higher firm growth.

Overall, with regard to the work experience component of the human capital of the owner-manager the results mirror those of the general higher growth firms in the overall survey and strongly indicate that the lack of same prior work experience by the owner-manager should not restrict the achievement of higher firm growth. Likewise, the fact that an individual has managerial experience should not lead to the assumption they are better equipped to achieve higher firm growth. These points are important when designing training and development interventions to ensure the real knowledge and skills requirements of the owner-managers are identified and not assumed on a premise that with certain experience or with a managerial role comes a prescribed range of skills and knowledge. Furthermore, where there is evidence that the owner-manager is involved in a second small business it is imperative that information is obtained on the link between the management of the two businesses in addition to the synergies that exist between the businesses themselves. None of the findings in relation to the work profile of the high-growth owner-managers align with those in the Kinsella *et al* (1994) study.

To conclude, taken in conjunction with the firm characteristics, the more developed profile of a high-growth firm shows they are likely to be less than ten years in operation, employ between 20 and 50 persons, operate in high technology industry sectors and be single owner-managed firms, with owner-managers aged between 32 and 42 years who have a third level educational award, most likely in the technical disciplines. The final category of internal factors examined the strategic activities in the high growth firms.

8.5 Strategic Focus Characteristics

The strategic perspective of the owner-manager is primarily reflected in their objectives for business growth and the strategies adopted which are given direction through the development of a strategic plan. The objectives for business growth, the existence of a strategic plan, their customer profile, the type of strategies implemented and the use of external advice with strategy development were investigated for their impact on firm growth, as these factors are more easily measured by those involved in small firm policy.

There was a lack of support for their significant impact on higher firm growth in the main survey of 80 owner-managers. Thus, the purpose of this section is to explore the potential reasons contributing to these results and to examine the range of strategic activities common across the high-growth firms. This information identifies issues that need to be addressed by government agencies to ensure owner-managers become more proficient and effective in the strategic activities of the small firm.

The initial analysis explores the objectives for growth, the existence of a strategic plan and the type of strategies adopted by the high-growth firms. The responses are displayed in Table 8.5.

Table 8.5: Strategic Activities (objectives for growth, a strategic plan and type of strategy adopted)

Firm Name	**Objectives for Growth**	**Existence of a strategic plan**	**Type of strategy adopted**
Company One	Increase sales/profits	Yes	Combination
Company Two	Increase sales/profits	No	Prospector
Company Three	Increase sales/profits	Yes	Analyser
Company Four	Increase sales/profits	Yes	Combination
Company Five	New product development	Yes	Prospector
Company Six	Increase sales/profits	No	Combination
Company Seven	New product development	Yes	Defensive
Company Eight	Consolidate	Yes	Combination
Company Nine	Manage costs	No	Prospector
Company Ten	Consolidate	Yes	Prospector

The majority of owner-managers indicated that they had a strategic plan for their business. Of the seven firms who had a strategic plan, four used it as a 'reference point' for their business and three indicated that it was used to 'check performance' which would suggest a sense of vagueness with regard to how the strategic plan is applied to guide the activities of the business or that its benefits are obtained by the owner-manager. On the contrary, the three owner-managers who did not have a strategic plan used operational and sales plans to guide their business activities. It is contended that this latter group adopt a more operational focus based on sales targets and managing costs as the basis for achieving their objectives. A number of questions emerge on why there are such variations between firms on the use of a strategic plan versus more operational plans. One lies in the perception of what a strategic plan is and its purpose?. Another issue relates to the potential ambiguity regarding the term strategic plan and a blurring of interpretations between what constitutes a strategic and business plan where the term may be used interchangeably. This point was strongly endorsed in the Kinsella *et al.* (1994) and Barkham et *al.* (1996) studies. Furthermore, is there a perception by the owner-manager that they should say that they have a strategic plan when in essence it probably does not fulfill the prescribed content or level of formalisation of a strategic plan?. One could also query what comprises a strategic plan for a firm such as Company One who is predominantly linked to one major customer. Likewise for Company Six, operating in a constantly changing competitive environment may render the development of a strategic plan difficult and too time consuming due to its dating quickly.

The third component of the strategic activity examined the type of strategy adopted by the high-growth firms. The results showed that the same strategies were adopted by firms operating in different industry sectors and that different strategies were adopted by firms within the same industry sector. No one strategic type was dominant amongst the high-growth firms. However, common themes emerged amongst all firms for the need to focus on increasing sales, cost management and to increase production efficiencies. The choice of strategy was largely influenced by customer and market demands and changes made by larger competitors. These same factors may also impact on the type and use of a strategic plan developed in the high-growth firms.

The responses show the heterogeneity of strategy in the small firm in that the same type of strategy was adopted by firms who had and did not have a strategic plan and across all industry sectors. Furthermore, the lack of a positive link between the strategy variables and higher firm growth raises questions about the feasibility of the strategy making or implementation activities and not just the strategy per se in the high-growth firms. Moreover, it is argued that issues may also arise in the choice of growth objectives and their suitability in the context of the resources and capabilities of the small firm. Further research is needed before conclusions can be drawn with regard to the extent and nature of the interaction between the various strategic variables and small firm growth. This information is required when developing financial and non-financial supports aimed at embedding a strategic orientation perspective more strongly in the small firm which emphasises strategic planning practices, processes and techniques that can be beneficial for firm growth.

The research also examined if high-growth firms were involved in export activity. Five firms engaged in export activity. The majority (3) were in the ICT sector and exported between 25 per cent and 50 per cent of their output. The USA, UK and France were the most popular destinations. The remaining two firms were in the food sector and exported less than 25 per cent of their produce to the UK and US markets. The fact that only 50 per cent of high growth firms were involved in export activity reinforces the concerns discussed about this in Chapter Two and further confirms the need for policy to develop an improved understanding of the issues and challenges encountered by the high-growth and all small firms in exporting to develop suitable strategies to accommodate different industry sector needs.

Finally, respondents were asked to indicate if they sought assistance with strategy development, and if so from whom. External advice was sourced by four owner-managers in the high-growth firms. In all four cases it was sourced from local development agencies (Enterprise Ireland and Shannon Development). The level of satisfaction was evenly divided where 2 were satisfied and 2 were dissatisfied with the quality of the advice received. Reasons why the owner-managers were dissatisfied were not forthcoming in the survey. Given the insignificant impact of the strategic activities on firm growth, this finding is noteworthy and suggests a lack of proactive engagement by local development agencies to ensure the demand led needs of the small firm sector are accommodated for.

8.6 Discussion

To date the chapter has provided an overview of the primary firm and owner-manager characteristics distinguishable amongst the 10 high-growth firms in the survey. Some discussion was presented on the rationale for the results to provide a context within which the analysis was undertaken and to highlight issues which were not apparent in the quantitative analysis. As the study was given impetus by the Kinsella *et al.* study (1994) a summary of the primary areas of alignment between both studies are identified and presented.

The importance of firm age, firm size and industry sector dimensions were found in both studies as presented in Table 8.6.

Table 8.6: High- Firm Growth Characteristics – A Comparison of the research studies

The impact of firm characteristics	**Current study**	**Kinsella *et al.* (1994)**
Younger firms (less than 10 years) achieve higher levels of growth	+	+
Smaller firms obtain more positive growth	+	+
Firms operating in the high technology sector display higher firm growth	+	+
Higher firm growth is associated with firms operated by more than one owner-manager	-	+

The role of education and having a technical qualification were common between the studies. However, divergent results emerged in relation to motivation, their work experience aspect of the human capital dimension as did the results for the impact of ownership in a second business. These comparisons are presented in Table 8.7.

Table 8.7: High Growth Owner – Manager Characteristics - A comparison of the research studies

The impact of Owner-Manager Characteristics	**Current study**	**Kinsella *et al.*(1994)**
A positive motivation to start the business result in higher levels of firm growth	-	+
Younger owner-managers obtain higher levels of firm growth	+	+
Owner-managers holding a post secondary level degree or higher level of education achieve higher levels of firm growth	+	+
The nature of the educational award positively impact on small firm growth.	+	+
Experience gained in the same industry sector results in higher levels of firm growth	-	+

Experience gained at managerial level results in higher firm growth	–	+
Owner-managers involved in the ownership of a second small business achieve higher firm growth	–	–

The third set of factors examined the strategic focus of the business and firm growth where the more comparable variables investigated were in relation to the existence of a strategic plan, the customer focus, involvement in export activity and the use of external advice with strategy development. There was no alignment with the results of this current study and those of the Kinsella *et al.* (1994) study. These are presented in Table 8.8.

Table 8.8: High-Growth Firms and Strategic Focus - A comparison of the research studies

The impact of Strategic Focus Characteristics	**Current study**	**Kinsella et *al.* (1994)**
Strategic plan	-	+
A concentration on a wide customer base	-	+
Involvement in export activity	-	+
Use of external advice with strategy development	-	+

While there are some noteworthy similarities in the findings of this study and those of Kinsella *et al.* (1994) some variations emerge particularly in relation to the human capital dimension and the impact of strategic activities on small firm growth.

As is the case with any comparison between studies due recognition must be given to factors which may impact on the direct comparison. For instance, in this case the empirical study was conducted during the Celtic Tiger era which was a different economic landscape than that during the completion of the

Kinsella *et al* (1994) study. Additionally, there was a difference in the measures of growth adopted. The Kinsella *et al.* (1994) study applied two measures whereas in this study, three measures were adopted (employment, turnover and turnover per employee) and a further classification promoted by OECD (2008) was applied to identify the high-growth firms in the study. That said, the studies do lend support to the importance of a range of firm and owner-manager characteristics which should be considered in the development of government policy. These policy recommendations are developed on in Chapter Nine.

While it is ambitious to seek to derive a one specific typology that encompasses the heterogeneity of a high-growth firm, this study has drawn together a number of common features at the firm and owner-manager level that clearly distinguish high-growth firms in the Mid-West region of Ireland. Conversely, the results of the study have identified a number of issues which require attention in order to enhance the growth achieving activities of firms in the more general small firm populace.

8.7 Concluding Remarks

There is the constant strive to identify what is a high-growth small firm. The results of the overall empirical study and the profiling of the 10 high-growth firms confirm that small firm growth is a complex, dynamic and longitudinal phenomena – thus rendering it difficult to determine the archetypical high-growth small firm. The findings strongly endorse that small firm growth cannot be explained by one particular dimension or set of determinants. Nevertheless, the findings provide evidence of a number of internal factors at the firm and owner-manager level which clearly distinguish high-growth small firms. This information provides important and useful insights that can be used by policy makers when devising small firm policy. It further highlights issues and challenges encountered in researching the dynamics and process aspects of firm growth. Finally, the results provide the basis for a number of recommendations for both the policy and research domains which are discussed in Chapter Nine.

Chapter Nine: Concluding Comments, Policy and Research Implications

9.1 Introduction

The topic of small firm growth is an important focal point for public policy and is a subject of much ongoing debate in empirical research. This research study contributes to the understanding of small firm growth from two perspectives. Firstly, it assesses the contribution that the SME sector made to the Irish economy during the period 1994 to 2005. Secondly, against this background it identifies the relative importance of the internal determinants of small firm growth in a sample of firms in the Mid-West region of Ireland.

The first part of the thesis comprised a Literature Review. Chapter Two presented an appraisal of the employment contribution, industry sector breakdown, level of export activity and the spatial distribution of small firms in Ireland. Chapter Three reviewed the academic and conceptual research studies which primarily related to the period of this study regarding the determinants of small firm growth and specifically the role of internal factors. A number of important internal factors at the owner-manager, firm and the strategic focus levels were identified for investigation in the empirical study. In addition, the combination of financial and non-financial measures of firm growth adopted in the empirical study was described. Chapter Four discussed the primary elements of the research approach. The methodology involved in-depth face-to-face interviews with 80 owner-managers in the Mid-West region of Ireland and was strongly guided by the methodology adopted by Kinsella *et al.* (1994).

The latter part of Chapter Four presented information on the profile of surveyed firms and the average percentage level of growth obtained for each of the three growth measures of employment, turnover, and turnover per employee growth (dependent variables). The Chapter concluded with an examination of the relationship between the dependent variables.

Part Two of the thesis (Chapters Five, Six, Seven and Eight) presented the analysis of the findings from the empirical study. Chapter Eight profiled the 10 highest growth firms to ascertain if there was a common set of internal determinants across these firms. The findings were also compared with the Kinsella *et al.* (1994) study. This Concluding Chapter summarises the key messages arising from the research and discusses their policy and research implications. The study limitations are also discussed. A concluding statement is provided.

9.2 Contribution of the SME sector to the Irish economy 1994 to 2005 – Some Key Messages

The assessment of the contribution that the SME sector made to the Irish economy between 1994 and 2005 provides a number of critical points for consideration by government. It is clear that small firms play a significant role in the Irish economy, where in 2005 small firms were a primary component of established firms (97 per cent of firms) and contributed 54 per cent of private sector employment (Small Business Forum 2006).

A number of key conclusions which emerged from the assessment are now discussed. The growth in the number of SMEs in Ireland was strongest between

1995 and 2000 (6.6 per cent per annum), compared to a growth rate of 2.6 per cent between 2000 and 2005. The industrial sector showed a more gradual decline in the number of firms during the period relative to the service and construction sectors which were characterised by strong growth. That said, after the year 2000 the most noticeable decline in the number of small firms and their employment contribution was evident in those two sectors. However, the underlying reasons behind the demise of these sectors are not forthcoming from the data.

Of concern is the limited evidence on the export performance of small firms. Irish firms with less than 50 persons are underrepresented in export activity. It was impossible to comment with any confidence as to the export activity of these firms given the lack of available data, or to identify which industry sector contributed best, what size of small firm was exporting, or indeed, the regional location of the small firms exporting. Moreover, export data for service and construction firms is vague. In order to achieve the focus of government policy (Enterprise Ireland Strategy Group 2006; Forfás 2007; Building Ireland's Smart Economy 2008) which recommend that Irish firms become more international, it is essential to strengthen the international growth achieving ability of Irish small firms. An understanding of the number and type of small firms that export is a fundamental prerequisite for developing appropriate policies and support interventions to encourage export activity.

Finally, the information on the spatial distribution of SME activity in Ireland is sketchy and not comparable between regions due to differences in regional classifications and variations used vis-à-vis how small firms are defined by size. Furthermore, the collection of this type of data is largely dependent on regional development agencies with no set guidelines for the collection of the data.

The above issues render it difficult to obtain a comprehensive understanding of SME activity in Ireland and to determine their overall economic contribution. Bearing this in mind, Section 9.4 below puts forward a number of recommendations regarding the policy implications arising from a comprehensive and holistic assessment of the role of the SME sector in Ireland covering the period between 1994 and 2005. Against this background the empirical study develops an enhanced understanding of the internal determinants of small firm growth in a sample of Irish small firms.

9.3 The Empirical Study – Principal Research Findings

The empirical study investigated how a number of internal factors incorporating the characteristics of the owner-manager, the characteristics of the firm and the strategic focus of the small firm impacted on business growth in 80 firms in the Mid-West region of Ireland. The findings from the survey were further developed by examining the profile of 10 high-growth firms in the survey with a view to identifying if these firms exhibited discernible internal characteristics. The results of this empirical study corroborate the majority of the conclusions from previous conceptual and academic studies that stress the central role of the owner-manager as the primary precursor of small firm growth (Storey 1994; Kinsella et al. 1994; Smallbone *et al.* 1995; Barkham *et al.* 1996; Delmar and Davidsson 1999; O'Gorman 2001; Wiklund 2001; Delmar and Wiklund 2003;

Wiklund and Shepherd 2003; Baum and Locke 2004; Wiklund and Shepherd 2005; Dobbs and Hamilton 2007; Greve 2008; Andersson and Tell 2009; Blackburn *et al.* 2009; Kirkwood 2009; Littunen and Niittykangas 2010).

The primary findings on how the three sets of internal factors impacted on small firm growth in the empirical study are briefly revisited as a forerunner to discussing their policy and research implications.

9.3.1 Firm Characteristics

The firm characteristics investigated in this study included firm age, size industry sector and its ownership structure. Consistently firm age and size were found to have a significant impact on higher firm growth in the survey of 80 firms and amongst the 10 high-growth firms. Of significance was that within the overall survey of 80 firms, the micro firm (these were not eligible for inclusion in the OECD definition of high-growth firms) was a major source of employment and revenue growth. These findings concur with the majority of studies (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996 Glancey 1998; Orser *et al.* 2000; Jensen *et al.* 2001; Taymaz 2002; Bullock *et al.* 2004) for firm age and firm size and with those of Kinsella *et al.* 1994; Storey 1994; Westhead and Storey 1994; Almus and Nerlinger 1999; Jensen *et al.* 2001; Barringer and Jones 2004) for industry sector. It is necessary that policy recognise the contribution of small firms beyond employment generation when assessing small firm eligibility for financial supports. Additionally, the results point to the positive performance of the younger firms for turnover per employee growth. As firms increase in size and get older turnover per employee growth declines quite substantially which concurs with those of Jensen *et al.* (2001) and Taymaz

(2002). These results direct attention to an important government policy issue that is, how to increase productivity in Irish Small firms (Small Business Forum 2006).

The existence of a team of owner-managers did not have a significant impact on business growth in the high-growth firms. This to some degree dispels the idea that with multiple ownership enhanced aggregate knowledge and expertise exists. Delving behind the number of owner-managers, the composition of the same technical expertise and the percentage ownership held by the partners and their roles contributed to explain this result. The findings of this study support the debate on such in studies by Hamilton and Lawrence (2001) and Barringer *et al.* (2005). It is argued that the team dynamic and the relative diversity of knowledge, skills and resources play an important role in determining the composite impact of multiple ownership on small firm growth.

9.3.2 Owner-Manager Characteristics

A number of owner-manager characteristics including their motivation to start the business, their age, education, career history and involvement in another small business were investigated within the empirical study. Two owner-manager variables, their age and educational profile were found to have a significant impact in the high-growth firms and concur with a number of studies reviewed (Kinsella *et al.* 1994; Storey 1994; Barkham *et al.* 1996; Orser *et al.* 2000; Bullock *et al.* 2004). In the overall survey, owner-managers aged between 24 and 34 years were associated with higher firm growth. In comparison the age profile of owner-managers in the 10 high-growth firms was slightly older (32 to 42 years). Notwithstanding these differences, the potential for younger owner-managers to achieve higher firm growth is clearly sign posted.

The significance of having a technical educational award was endorsed within the high growth firms. This finding is in accord with a number of studies (Kinsella *et al.* 1994; Storey 1994; Orser *et al.* 2000; Bullock *et al.* 2004) and shows that education is undoubtedly an important human capital dimension which assists the owner-manager in developing their business.

Furthermore, given that a combination of younger and more highly educated owner-managers in technical disciplines achieve greater levels of firm growth merits targeting this profile of owner-manager to develop how best their managerial skills and competencies can be enhanced to equip them grow a small business.

Factors such as the motivation to start the business, same industry experience, prior managerial experience and involvement in another small firm were not significant growth indicators in the high-growth firms. These results diverge from a number of studies reviewed (Kinsella *et al.* 1994; Storey 1994 Smallbone *et al.*1995; Davidsson and Wiklund 2000; Smallbone and Wyer 2000; Reynolds *et al.* 2001; Delmar and Wiklund 2008). The findings do however echo the issues which have emerged in more recent academic and conceptual studies which have questioned the comprehensiveness of researching motivation from a dichotomy of push or pull factors (Hamilton and Lawrence 2001; Dobbs and Hamilton 2007) For instance, the influence of ex post validation of information by the owner-manager must be borne in mind when examining this variable. Issues also arise on the ability of an individual to isolate the impact of the reason they started their business from other intervening learning and business experiences exposed to after the establishment of the business. This concern is further compounded in longer established firms. The deeper analysis of the profile of the 10 high-growth firms revealed that with regard to motivation, its examination through a neat dichotomy of positive or negative factors without consideration of personal, situational and external economic intervening factors is deemed insufficient and ignores the capacity of the owner-manager to change their behaviour or learn over time.

A possible factor weakening the impact of prior industrial experience and higher firm growth is that the experience was gained by the owner-manager when the dynamics of the industries were different (in particular the ICT sector) and the fact that the experience was predominately gained in a large firm scenario. This supports findings in research studies who indicated that the benefits of the experience was reliant on how the owner-manager could replicate it to a small firm context in a relevant manner (Turok 1991; Hamilton and Lawrence 2001; Papadaki and Chami 2002; Frankish *et al.* 2007).

Prior managerial experience was not an indicator of higher firm growth as only one of the high-growth owner-managers held managerial experience and the results run contrary to those of Kinsella *et al.* (1994). As the managerial experience was gained in a functional specialist discipline within a large firm the relevance of this experience to higher firm growth is questioned. Likewise, in the remaining high-growth firms managerial expertise was available through the employment of functional managers as was found to be the case in Storeys (1994) review of a number of studies. These findings deserve consideration when assessing the training and development needs of the owner-manager and the belief that seniority of experience will result in higher firm growth should be challenged.

9.3.3 Strategic Focus

The study investigated a number of aspects associated with strategy development which are of most concern to policy makers and more easily measured in a quantitative study. The objectives for firm growth, the existence of a strategic plan, the customer profile, type of strategy implemented, the level of export activity and the use of external assistance with strategy development were researched. The evidence did not produce a positive support for their impact on small firm growth showing a departure from the results of a number of studies (Kinsella *et al.* 1994; Storey 1994; Orser *et al.* 2000; Bullock *et al.* 2004; Delmar and Wiklund 2003; Poutziouris 2003). That said, some important findings emerge which require attention in the design of supports and in particular owner-manager training and development interventions targeted at enhancing the strategic capabilities of the owner-manager. Additionally, the findings in this section draw attention to the challenges encountered in researching the diverse range of content and process aspects of strategy as highlighted by Poutziouris (2003) and Frankish *et al.* (2007).

In essence the owner-managers in the high-growth firms were involved in a range of strategic activities. The majority of owner-managers had a strategic plan. Of concern is that despite this there was little evidence to support its positive impact on higher firm growth.

The findings suggest that there was a diversity of strategic practices at play in the high-growth firms without clear connections between the activities to establish how they collectively impacted on small firm growth. Given the above, policy makers face challenges in developing supports which progress the owner-manager to the role of strategist and planner to facilitate higher firm growth. Due to the heterogeneity of how the strategic variables investigated were adopted by respondents in the high-growth firms, the supports provided by policy makers and advisers need to be flexible and adjustable to accommodate the diverse needs of the growing small firm.

Moreover, the findings showed a higher dependency on the use of development agencies relative to accountants or commercial consultants as a source of assistance with strategy development. The results highlight the need for these agencies to ensure that they are active at the level of the small firm and engage in dialogue with the owner-manager to ensure that the advice given is demand-lead and relevant to the changing and temporal nature of growth in the small firm. This will ensure that the services provided are making more efficient use of government resources and will assist to clarify the cause and effect relationship between these two variables. This interaction will feed into more targeted management development training programmes. It is contended that due to the nebulous nature of the process and practice of strategy development in the small firm it is difficult to measure its direct impact on small firm growth and thus, makes it a less attractive policy undertaking. The findings in this study clearly argue that it should be a stronger policy priority with greater allocation of resources to support and assist owner-managers adopt a more embedded long term strategic orientation to their business.

From the researcher perspective the role of strategy as an enabler of small firm growth remains much debated and with many unanswered questions which must be addressed. These relate to how strategic planning as opposed to the existence of a strategic plan is linked with small firm growth and how strategy is implemented and evaluated in the small firm.

Overall, the empirical study confirms that small firm growth is indeed a complex issue challenging the development of a clearly distinguishable profile of a high-growth firm (as defined by OECD 2008). That said the high-growth firms in this study have a number of distinguishable features at the firm and owner-manager level. A firm employing between 11 and 50 persons, in operation for less than 10 years, is largely in the high technology sector, owned by a single owner-manager aged between 32 and 42 years with a Diploma or higher educational award most likely in the technical discipline contains the central characteristics of higher-growth firms. While some of the findings in this study support commonly held beliefs that firm age, size, industry sector, owner-manager age and education positively impact on higher small firm growth, the remaining findings suggest that some accepted concepts (motivation, career history and strategic focus activities) regarding small business growth need to be re-examined in the prediction of higher firm growth.

Ultimately, it is difficult to define a precise set of internal determinants of small firm growth. Firm growth is unpredictable and intermittent where the impact of internal factors will vary as the business develops. Furthermore, they are liable to vary in different industry sector and market conditions. In connecting these two areas of research, the assessment of the contribution of the small firm sector to the Irish economy and an identification of the main internal factors which impact on higher firm growth, they present a number of important suggestions for inclusion in small firm government policy.

9.4 Policy Implications

The development of small firm policy in Ireland occurs in a very changed economic environment with the termination of the boom that was the Celtic Tiger (FitzGerald *et al.* 2008). Furthermore, the limitations of FDI-led growth have been increasingly (if belatedly) recognised by government. While not diminishing the benefits of high-quality FDI in assisting economic development, this should not come at the expense of ignoring small firms where valuable lessons can be gleaned from Irelands over reliance on FDI as the primary source of employment creation.

Irish government industrial policy has at its core securing the enterprise economy and restoring competitiveness to stimulate the capability of business for growth (Forfás 2007; FitzGerald *et al.* 2008). However, within these documents enterprise is applied in a generic manner with only a cursory emphasis on the small firm sector. Small firms are fundamentally different to their larger firm counterparts therefore, it is imperative that government put in place appropriate responses to facilitate sustained firm growth in the small firm.

It is recommended that core to effective policy is an understanding of the characteristics of higher firm growth firms, a focus on increasing productivity, developing greater export activity and building the competencies and skills of owner-managers. Suggestions on how these can be achieved are further elaborated upon below.

In the current policy arena firm growth is predominately measured by an increase in employment numbers, where the provision of financial supports to small firms is generally conditional on job creation. This sole focus may underestimate the other areas that growth can occur in the small firm. As was the case in this study, 'jobless'growth or turnover growth and turnover per employee growth will occur in certain profiles of firms but may not simultaneously result in growth in employment. High growth in revenues may be different from those that will generate growth in employment. This requires recognition when considering the provision of financial and non-financial supports to the small firm sector.

Therefore, policy with a focus on creating employment growth should also introduce support for revenue generation activities where this investment can lead to employment indirectly (in areas such as R&D, innovation and export activities) which will in turn generate employment, albeit not immediately. This necessitates a change in funding eligibility criteria set by many government organisations and in the type of finance or venture capital investments made available for larger scale investment in areas such as R&D. This is particularly important in the high technology and added value industry sectors.

In a related manner, increasing firm productivity is at the core of Government policy (Forfás 2007; Building Ireland's Smart Economy Framework 2008). Despite this, these policy documents concentrate primarily on providing recommendations on how to improve productivity in the larger firms, who are predominately foreign owned. Attention should focus on assisting small firms to improve performance in productivity to successfully compete in more intense and cost competitive national and international business environments. For instance, notable differences existed in the study between industry sector and the levels of firm growth. Service firms compared less favourably to those in electronics/engineering and in the food/drinks/agribusiness sector, which in turn compared less favourably to firms in the software/ICT sector. Government agencies need to provide practical assistance to owner-managers on how they can improve productivity across all functions of their business, how to achieve cost efficiencies, increase the quality of their labour force, improve the use of technology, engage in more R&D and create more efficient systems and procedures. Mentoring and in-company training and development programmes are potential options that will achieve this.

Building an export led growth enterprise sector is a policy objective cited in Building Ireland's Smart Economy Framework (2008). This objective needs to be devised with a small firm focus separate to the broader population of larger indigenous firms and should act at two levels. The first is to encourage a greater level of export activity by non-exporting small firms and to encourage those exporting to expand this activity in a more efficient manner. In particular, the micro and small firms operating in high growth value-added sectors and in the services sector need to be strengthened in this area. Secondly, policies need to devise training and development interventions to enhance the export capabilities and competencies in Irish small firms and provide owner-managers with assistance in the development of adaptable strategies with appropriate sales skills and support structures to deliver sustained export growth. Policy should consider how they can create exposure to and facilitate the building of networks, alliances and business partnerships for small firms who wish to export.

An area of concern in the empirical study pointed to the lack of a significant impact of a number of aspects of strategy development on higher firm growth. The study confirms that competencies and skills for strategy development need to be strengthened across the small firm sector even if they are classified as high-growth firms. Owner-managers need to be facilitated in understanding the importance of engaging in core strategic activities to remain competitive and achieve sustainable growth. Furthermore, given the feedback by respondents on their use of, and the level of satisfaction with development agencies for advice on strategy development, agencies need to more actively communicate and engage with owner-managers to develop their strategic capabilities. The role of development agencies is essential in ensuring that the advice provided is relevant for the small firm given their individual context. Current management development programmes on offer from the City and County Enterprise Boards and Enterprise Ireland which contain a strong mentoring element should be developed with a strategy development focus where the learning can be experientially applied by the owner-manager.

Education is an important determinant of small growth. Of note were the higher levels of education in technical subjects which were linked to higher firm growth. Given, that individuals are starting a career in self employment younger and have higher levels of education (GEM 2006; 2007) it is important that educational policy integrates knowledge and skills for starting and managing a small business. This is particularly important at postgraduate level and in non-business disciplines.

The empirical research demonstrates the importance in recognising variations in firm performance across industry sectors. The assessment of the small firm sector presented in Chapter Two highlighted a decline in the service and the general engineering/electronics/manufacturing sectors, which were also those who underperformed in the empirical study. Relatedly, understanding the broader sectoral context of the small firm, for instance, requirements in terms of innovation, product development, export activity and their productivity levels provides a means of developing more tailored financial and non-financial supports which can enhance the performance of small firms in different sectors.

The development of government policy to accommodate the aforementioned recommendations must acknowledge the heterogeneity of small firm growth.

The development of a 'one-fits-all' inflexible approach will not work. Policy needs to obtain a flexible and pragmatic fit between the capabilities that exist in small firms and those that are required by the owner-manager and their business to achieve business growth in a changing national and international economic context. This requires a level of selectivity to identify and match the needs of higher growth small firms. The profile of the high-growth firms produced from this empirical study provides insights into the differentiating characteristics of these particular firms on which a more targeted policy approach should focus. Likewise, policy must also continue to assist those owner-managers who were not classified as high-growth firms but yet showed strong levels of firm growth with appropriate interventions and supports. With the profile of these high-growth firms government agencies can become more familiar with what to look for in screening newer firms and those showing potential for high-growth and thus, be better informed to develop appropriate supports to achieve sustainable firm growth.

Fundamentally, the above recommendations are contingent on having a good comprehension of the small firm sector in Ireland. While recent publications (Small Business Forum 2006; CSO 2008) provide much-improved information on the Irish SME sector, they undercount the number of small firms in Ireland as this data is collected at varying intervals by different government agencies. This demands the development of a small firm register with total firm size, sectoral and spatial coverage and export performance information. The inclusion of the following data will strengthen the level of profile information to provide a more composite register of Irish small firms:

- *Size profile* - add in detail on industrial firms with less than 3 employees, plus construction firms with less than 20 employees.
- *Regional distribution of small firms* – produce regional data on the numbers of SMEs, their employment numbers and their industry sector to: (a) determine if certain regions of the country are more dependent on the SME sector: (b) establish if particular industry sectors are more prevalent in particular regions; and (c) allow for comparisons between regions on a more equitable basis.
- *Data on the export performance of the SME sector* - to identify which business sector contributes most to export activity, what size of small firm exports and the regional location of small firms who export.

Core to understanding the Irish SME sector is a clearer marking out of the micro, small and medium firms as part of the overall SME sector. There should be a cut off point placed within the 50 plus employee category to distinguish between medium and large firms. The adoption of a common set of criteria to define small firms by government agencies will facilitate more equitable comparison of information and the reaching of an inclusive consensus as to the pivotal contribution of the SME sector to the Irish economy. This study, in addition to having policy implications also raises a number of points on how research on small firm growth should progress to address its heterogeneity and highlights opportunities for future research.

9.5 Research Implications

A consensus exists amongst the academic and the increasing number of conceptual studies that small firm growth is heterogeneous and multifaceted, rendering it difficult to arrive at an integrated perspective of what constitutes a higher growth small firm. The findings in this empirical study concur, and suggest that a greater emphasis should be placed on the issues relating to the process of firm growth, in particular at the owner-manager and strategic focus levels.

Conceptually, in developing a more insightful perspective of the process of firm growth, we need to deepen our understanding of the internal growth dynamics of the firm and owner-manager capabilities. Future research must extend beyond the pursuit of *who* is the ideal high growth firm to determine *why* and *how* owner-managers grow their business and *what* are the outcomes of the growth process. Within this research a central focus should rest with how the broader set of the human capital dimensions of the owner-manager (educational experience, work experience, formal and informal training and learning) transforms the behaviour of the owner-manager and their business operations to achieve firm growth.

The findings of this study also highlight the need to focus research on the process of strategy development, implementation and evaluation to give expression and meaning to how factors such as the objectives for firm growth, the existence of a strategic plan and the strategic decision making processes engaged in by the owner-manager impact on small firm growth. The inclusion of the above process issues in studies of small firm growth will provide a more integrated comprehension of the relationship between the owner-manager (characteristics and objectives for their business) and what they do (process of growth) to guide policy development.

Furthermore, it is important to extend the research beyond a focus on the higher growth firms to obtain detail on the process of growth in lower growth firms in recognition of the fact that only a minority of small firms reach high growth status, as important lessons can be learned on the barriers to growth which can be addressed in policy interventions.

The collection of the aforementioned information is difficult to unravel in quantitative studies as they hinder the ability to elicit the dynamics and the behaviour which typify the firm profiles that are linked with higher firm growth. Successfully capturing the process and behavioural issues core to small firm growth necessitates a more open acceptance of blended research approaches which combine the both positivist and non-positivist methodologies. Data collection methods using qualitative approaches should build on the findings in the predominately quantitative studies (such as this one) and include the more active participation of owner-managers in studies to capture how their human capital dimensions and their decision making processes change as the firm develops.

As more researchers now recognise that growth is patently a longitudinal phenomenon then research studies should reflect this. In contrast to the single snapshot, longitudinal studies provide data about how growth varies at different points in time allowing the researcher to track change at the individual firm level to accommodate the temporal order of business activities and to capture growth and strategy processes in the small firm.

Given the above, the study of small firm growth becomes more complex and time consuming for researchers who should focus on growth as a dynamic and longitudinal phenomenon, applying multiple measures of firm growth and utilising a combination of different methodologies – a challenge indeed for researchers.

From the point of view of advancing the empirical research on the internal determinants of firm growth in Irish small firms the study recommends the following areas for research.

Internationalisation provides a route to growth and expansion for many Irish small firms. Yet there is a lacuna of empirical research on understanding its role in the small firm or how it contributes to additional firm growth. It is necessary to build a more comprehensive body of empirical research on why owner-managers grow through internationalisation, the choice of markets, the process adopted and the challenges encountered in developing suitable market entry strategies. An examination of how owner-managers asses the return on investment of this activity will determine how it contributes to the growth of the small firm. This research will have value for informing policy on the most suitable interventions to create a more export led small firm sector.

Strategy development entails a number of interrelated activities embedded in the strategic thinking of the owner-manager. Therefore, understanding strategy as a process not as an activity is important to develop in the research. Furthering this line of inquiry in the small firm growth literature requires the inclusion of qualitative research questioning to include issues on the perception of the owner-manager of a strategic plan versus a business plan and the practice of strategy in the small firm which should include an identification of the stages involved in strategy development, its implementation and evaluation.

This research provides an important vantage point to position future research studies on the internal determinants of small firm growth. This study can be replicated in other regions of Ireland and broadened into a general Irish context to provide some useful regional comparisons. A repeat study in this current economic climate would highlight if the internal determinants of small firm growth have changed post the Celtic Tiger era.

9.6 Study Limitations

This study could be enhanced through the adoption of a longitudinal approach. In contrast to the single snapshot, longitudinal studies provide in-depth information about the process of growth and the underlying actions of the owner-manager in the achievement of firm growth. A longitudinal study would also have allowed for the tracking of changes in firm growth to identify why the changes occurred and how they were managed by the owner-manager.

A larger response rate would have facilitated more robust statistical multivariate analysis which would enhance the level of detail on the significance of relationships between the dependent and independent variables and for the controlling of certain factors.

The low response rates to certain questions rendered it problematic to conduct statistical analysis to determine their impact on small firm growth. This was evident in areas such as ownership in a second small business, previous managerial experience and the choice of strategy adopted for small firm growth.

The quantitative study could have benefited from more qualitative information. While efforts were made to elicit comments from respondents they were not forthcoming. The lack of detailed narratives from the owner-managers resulted in a shortage of detail on the rationale for decisions they made in areas such as strategy development, internationalisation and the type of growth objectives devised for their firm.

9.7 Concluding Remarks

These findings report the growth determinants of a sample of 80 small firms in the Mid-West region of Ireland and present the distinguishing firm and owner-manager characteristics of 10 high-growth firms. This research makes a number of important contributions to the policy and research domains.

Firstly, the completion of an assessment of the contribution of the SME sector to the Irish economy presents analysis not previously available in such a comprehensive and holistic manner in Ireland. This assessment draws attention to the profile of SME (size, industry sector) which are experiencing growth and indicates serious concerns in relation to the level of export activity of Irish small firms. In addition, the findings form the basis of a number of recommendations for the development of a more composite register of Irish SME activity and the type of information which should be contained therein as a central foundation on which to develop small firm policy.

Secondly, this is the only Irish empirical study undertaken post the Kinsella et *al.* (1994) study. Thus, it provides an important body of empirical research on the internal determinants of high-growth firms in Ireland in what was a very changed economic landscape (the Celtic Tiger era). It provides insights into the distinguishing internal characteristics of high-growth firms and how this understanding can inform policy.

The regional perspective is novel in that an individual regional context has not been used in empirical studies on the internal determinants of small firm growth in Southern Ireland. This provides valuable feedback to local development agencies on how to more effectively identify and target high-growth firms and develop more appropriate supports to facilitate the achievement of higher firm growth.

Finally, the completion of an Irish study adds value to the international literature on the internal determinants of small firm growth by developing the theoretical and empirical research on the topic. The findings challenge some of the commonly held findings in the literature and recommends how a number of internal variables merit re-examination in future research studies.

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Appendix

Copy of Research Instrument

Contact Name:	
Company Name:	
Company Address:	
Telephone / Fax Number:	
E-mail:	
Position within Company:	

SECTION ONE; Company Characteristics

1. What year was the firm established? _____

2. Were you involved in the establishment of the firm?

   Yes ☐ No ☐

3. Please indicate your age from the following categories

25– 34 years	
35 – 44 years	
45-54 years	
55 plus	

4. Pleases rank in order of importance, where 1 is most important, the factors which influenced your decision to establish or become owner-manager of the business.

Factors	*Rank*
Previous work experience	
Educational influence	
Family influence	
Redundancy	
Dissatisfaction with current job	
Other, please specify:	

5. Please indicate the industry sector the firm operates in.

   Electronics/Engineering/Manufacturing Sector ☐
   Software / Information Technology Sector ☐
   Food /Drinks Sector ☐
   Service Sector ☐
   Other (please specify)_______________ ☐

   Please list your ***primary products / services*** and indicate the contribution of each to total sales. (Primary products/services are those which contribute to the majority of your sales).

Product / Service	**Contribution**
1. ____________________	% Sales ______
2. ____________________	% Sales ______
3. ____________________	% Sales ______

6. How many partners **(excluding yourself)** are involved in ownership of the business? Please indicate the % ownership of each.

Partner Numbers	% Ownership of Each
1.	
2.	
3.	
4.	

7 (a) **Current Employment:**

Please provide details of the employment profile of your firm by inserting the number of employees that exist in each category in the relevant boxes

Category	Full Time	Part Time	Permanent	Total
Owner/manager				
Managerial Staff				
Supervisors				
Administrators				
Operators				
Others (please specify				

SECTION TWO: OWNER / MANAGER CHARACTERISTICS

8. Please list the highest educational achievement to date of each of the owner managers involved in the firm.

	Qualification / Award	*Subject Area*
Owner / Manager 1		
Owner / Manager 2		
Owner / Manager 3		

9. Please provide a brief description of the owner/managers careers prior to becoming involved with this firm. Provide details of experience, industry sector, levels of experience, etc.

	Owner / Manager 1	*Owner / Manager 2*	*Owner / Manager 3*
Industry sector worked in			
Position in firm(s)			
Description of experience obtained			

10. Are you involved in the ownership of another business?

Yes ☐ No ☐

If yes, please indicate the number and type of business interest involved in the following areas.

	Owner / Manager 1	*Owner / Manager 2*	*Owner / Manager 3*
Number of other business interests			
Industry Sector(s)			
Position in Firm			

SECTION THREE: MEASURES OF SMALL FIRM GROWTH

11. Please indicate detail for the following three aspects of your business for the period 1996 - 1999.

	1996	1997	1998	1999
a) Employment Numbers				
b) Turnover (IR£)				
c) Profit (Net)				

In your opinion, could higher levels of growth have been achieved in the above areas?

Yes ☐ No ☐ Don't Know ☐

If yes, please comment on the reasons why:

____

____

____

If no, please comment on the reasons why:

____

____

12. Do you review and monitor the output of your firm's growth activities?

Yes ☐ No ☐

If yes, how frequently do you assess firm growth?

6 months ☐
Yearly ☐
As needs arise ☐

STRATEGIC FOCUS OF THE BUSINESS

Customer profile

13 (a) Which of the following best describes your customer base? Please enter a response in one box only.

Customer Size		Customer Description e.g. type, location, manufacturer, retailer, end user
I depend on one major customer for over 50% of my business	☐	
I have a number of key customers who each account for over 20% of my business	☐	
I have a wide customer base none of whom accounts for more than 10% of my business	☐	
Combination(please specify)	☐	

13b) Has this customer profile change in the last four years?

Yes ☐ No ☐

If Yes, please describe the changes in the profile and why it has changed.

____

____

14. What is the percentage breakdown of your firm's sales from the following markets? Please provide examples of geographic locations.

Year	Local Markets % (within 60 mile radius)	National Markets % (rest of Ireland) (specify)	European Markets % (specify countries)	Non-European Markets % (specify countries)
1999				
1998				
1997				
1996				

15. Indicate which of the following statements best describes your position in the market for the period 1996-1999.

a) Defensive strategy *Maintain and defend existing position by securing a market niche with a limited range of products / services than competitors.*	
b) Reactor strategy *A 'wait and see' approach and respond then to competitive pressures to avoid losing customers*	
c) Prospector strategy *Firms who is one of the first in the market with new products, and adapts to changing customer needs on a proactive basis.*	
d) Analysor Strategy *Firm maintains a stable and limited line of products, while researching the market to identify potential.*	
Combination *of the above or other (please specify details)*	

16 (a) Does the firm have a strategic plan to guide the firm's activities?

Yes ☐ No ☐

(b)If not, please comment on how activities are guided in the firm.

____

____

(c) How is this plan used in directing the activities of the firm?

i) used as reference point only ☐
ii) guide day to day activities ☐
iii) used to check performance ☐
iv) used infrequently ☐
v) never referred to ☐
vi) other (please specify) ☐

17. What time frame does the strategy cover?

0 -1 year ☐ 2 -4 years ☐ 5+ years ☐

18. List the ***key objectives*** guiding the direction of this firm for the period 1996-1999. (Key objectives can be classed into objectives met by management both on an internal and external basis).

____
____
____
____

19. Comment on ***how*** your objectives have changed and ***why*** they might have changed over the period 1996-1999.

How Changed	Why Changed

20. Will the focus of these strategies change in the next year?

Yes ☐ No ☐

Please comment on your answer.

____
____
____

21. Please rank in order of importance the factors, which influenced your choice of the above strategies.

1 = most influential, 2 next most influential etc.

a) personal judgement and experience ☐
b) the need to innovate ☐
c) chosen strategy reduced risk ☐
d) financial resources dictated choice of strategy ☐
e) competitor influence ☐
f) changes in current market ☐
g) strategy emerged with no one influence ☐
h) influence of board of Directors ☐
i) other please specify ☐

22. What are the primary selling methods used to promote and sell to your customers?

a) Direct selling by sales team ☐
b) Agents ☐
c) Catalogue / Direct Mail ☐
d) Internet access ☐
e) Trade Unions / Exhibitions ☐
f) Other (please specify) ☐

How is the product distributed to the customer?

a) Wholesalers ☐ e) Control own distribution ☐
b) Retailers ☐ f) Licence agreements ☐
c) Agents ☐ g) Other (please specify) ☐
d) Internet ☐

23. Do you use external professional assistance for strategy development?

Yes ☐ No ☐

If yes, from whom do you get this advice and please indicate your level of satisfaction with the advice.

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Board of Directors					
Bank Manager					
Consultants (general)					
Accountant					
Professional Organisation					
Development Agencies					
Other (please specify)					

25. Please indicate the activities of your firm, which have received investment over the period 1996-1999.

Activity/Function	Level of investment (Ir. £)	Source of funds

26. What were the primary sources of finance obtained to finance the business activities over the period 1996-1999? Please **rank in order of importance,** where 1 was primary source, etc.

a) Source of Finance	Rank
b) Own finance	
c) Retained profits	
d) Commercial financial loans	
e) Government agency (please specify)	
f) Joint Venture	
g) Equity Sale	
h) Business Expansion Scheme	
i) Venture Capital	
j) Other (please specify)	

Thank you for your time and co-operation