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Portfolio Entrepreneurship - general and farm contexts

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PORTFOLIO ENTREPRENEURSHIP

General and farm contexts

by

Gry Agnete Alsos

Doctoral thesis submitted to the
Bodø Graduate School of Business
For the degree of Dr. Oecon.

ABSTRACT

Portfolio entrepreneurs stand for a substantial proportion of new business start-ups. These are current owner-managers who involve themselves in the start-up of new business ventures while still retaining their current business(es). The purpose of this composite thesis is to contribute to the knowledge on portfolio entrepreneurs concerning the role of their experience and resources, developed from their previous and current businesses, in the process of identifying or creating new business opportunities and exploiting these by starting new business activities. The opportunity-based view of entrepreneurship and the resource-based view of the firm were chosen as theoretical platforms.

This dissertation contains an introduction and six separate scientific articles. A triangulation approach has been chosen. The studies utilize four different datasets, of which two are longitudinal quantitative data, one is cross-sectional quantitative data and one is cross-sectional qualitative data. Two of the empirical studies are conducted in a multi-industry and four in a single industry context; the farm sector.

The evidence presented indicates that resource transfer from current businesses to new business activities is a key aspect of portfolio entrepreneurship. Prior knowledge and resources are utilized in the opportunity identification as well as exploitation process, which have consequences for behaviours related to the identification and exploitation of new business opportunities and subsequent venture performance. The resource transfer from current businesses may represent assets as well as liabilities for the new business venture, and may enhance or impair new venture performance.

Evidence from the studies within the farm context indicate that farmers' start-up of additional business activities are more likely to be pulled from entrepreneurial abilities and identified opportunities, than to be pushed from constraints related to farming. Their farm-specific resources and knowledge are often not applicable to new ventures, and therefore new resources have to be acquired. Too much reliance of existing resources are associated with less potential of the ideas identified and lower profitability in the business activities initiated. Policy makers should therefore encourage resource acquisition and learning related to other areas than farming to increase entrepreneurial abilities and opportunities of farmers.

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1 INTRODUCTION

1.1 Research focus

Existing business owners account for a considerable proportion of new business start-ups (Kolvereid & Bullvåg, 1993; Scott & Rosa, 1997; Westhead & Wright, 1998c). Many entrepreneurs own and are actively involved in more than one firm at the same time (Birley & Westhead, 1993; Donckels, Dupont, & Michel., 1987; Kolvereid & Bullvåg, 1993; Rosa & Scott, 1999b; Westhead *et al.*, 2003b). While maintaining their original firm, they seek to discover and exploit business opportunities through the start-up of new business ventures, and thereby build a portfolio of business activities. These individuals, classified as portfolio entrepreneurs, are the focus of this thesis. The aim is to discuss questions related to why some entrepreneurs continue to develop new business ventures and become portfolio entrepreneurs, and which role their experience and access to resources from their current business(es) plays in the process of starting ventures.

The incidence of multiple business ownership was noted in historical accounts of nineteenth century petty bourgeois groups (Jeremy, 1984), and continues to be discussed in contemporary studies (Birley & Westhead, 1993; Iacobucci, 2002; Rosa & Scott, 1999b; Storey, 1994; Ucbasaran, Westhead, & Wright, 2006). Though the use of varying terminology, the phenomenon of portfolio entrepreneurship has been discussed in various studies derived from a wide range of subject disciplines, such as cultural anthropology, agricultural economics and rural sociology (Carter & Ram, 2003). Recently, portfolio entrepreneurship has been recognized as an important topic in the field of entrepreneurial research (Ucbasaran, Westhead, & Wright, 2001). Moreover, media has drawn attention to entrepreneurs who are involved in several businesses simultaneously. A few, high-profile, portfolio entrepreneurs receive a large proportion of the media exposure of entrepreneurs (Ljunggren & Alsos, 2006). Policy makers have noted that existing business owners are important actors in the creation of new business activities, particularly in rural areas. For instance, the stimulation of farm business owners to

utilize farm resources to develop new business activities has recently become a central part of the Norwegian agricultural policy (LMD, 1999).

1.1.1 Portfolio entrepreneurs

Portfolio entrepreneurs are defined as existing owner-managers who engage in the start-up of new business activities while still maintaining their existing business(es).¹ Consequently, they have ownership stakes and a management position in more than one business simultaneously. Portfolio entrepreneurs are distinguished from novice entrepreneurs, who have no previous experience from owning and operating a business. Further, they can be differentiated from serial entrepreneurs, who also have prior experience as owner-managers, but they have sold or closed down their previous business(es) before engaging in a new one (Westhead & Wright, 1998c).

Although it has long been recognized that some individuals own and operate more than one business venture at the same time, it is only fairly recently that this type of behaviour has gained prominence in the entrepreneurship research literature (Carter & Ram, 2003). In particular, there has been limited conceptual and theoretical understanding of this phenomenon (Ucbasaran *et al.*, 2006). Research in this area has to a large extent been empirically based and exploratory (Rosa, 1998), focusing mainly on assessing the prevalence of portfolio entrepreneurship and on exploring the characteristics of portfolio as opposed to other types of entrepreneurs. Scholars have discussed the implications of multiple business ownership to the assessment of entrepreneurs' contributions to the economy and to the study of business growth, resulting in a suggestion to use the entrepreneur rather than the firm as unit of analyses in these types of studies (Birley & Westhead, 1993; Scott & Rosa, 1996; Storey, 1994).

At the individual level, it is well acknowledged that experience is a central factors to explain why some individuals and not others identify business opportunities (Corbett, 2007; Shane, 2000, 2003; Venkataraman, 1997) and exploit these

¹ In section 2.3, aspects concerning the definition of portfolio entrepreneurs are more thoroughly discussed.

opportunities through the start-up of new business activities (Shane, 2003; Shook, Priem, & McGee, 2003). Portfolio and serial entrepreneurs have experience from their prior business engagements which may be valuable for their new ventures as it is a source of experiential learning (Politis, 2005) and contributes to the development of their human capital (Ucbasaran *et al.*, 2006). Thus, these entrepreneurs can transfer knowledge gained from their previous experiences into the process of starting new business activities, potentially affecting their behaviours as well as the outcomes of these processes. Accordingly, some studies have investigated differences in behaviours and performance between portfolio, serial and novice entrepreneurs (e.g. Westhead, Ucbasaran, & Wright, 2005; Westhead *et al.*, 2005). While the research in this area is still scarce, there are some indications that portfolio entrepreneurs to a larger extent than serial entrepreneurs are able to utilize their experience based knowledge to modify their behaviours relating to opportunity identification and resource acquisition (Westhead, Ucbasaran, & Wright, 2004a; Westhead *et al.*, 2005; Westhead, Ucbasaran, & Wright, 2005; Westhead *et al.*, 2005).

In addition to bringing increased knowledge into the process of new venture start-up, portfolio entrepreneurs may utilize financial, physical and organizational resources of their current firm(s) in the process of starting new business activities. For instance, they can start to develop a new venture based on slack resources in an existing business, making their existing business serve as a seed-bed for the new venture (Carter, 1996; Scott & Rosa, 1997). It has been noted that there may be assets as well as liabilities associated with the transfer of knowledge and resources from previous businesses (Starr & Bygrave, 1992). However, conceptual development as well as empirical research concerning the influence of prior experience and access to resources from existing businesses in the process of new venture development is scarce. There seem to be a lack of studies on portfolio entrepreneurship taking a broad perspective to the transfer of immaterial and material resources from the previous or current to the new businesses of portfolio entrepreneurs. In fact, there is hardly any literature on how the different businesses of portfolio entrepreneurs are linked together.

Previous research has indicated that the motivations for portfolio entrepreneurship may be diverse (Carter & Ram, 2003; Rosa & Scott, 1999a; Wright, Robbie, &

Ennew, 1997a). However, questions regarding why some entrepreneurs continue to develop new businesses and become portfolio entrepreneurs, the processes related to the creation of multiple business ventures by portfolio entrepreneurs, as well as the consequences of different motivations to the outcomes of new business initiatives, are still scarcely explored (Carter & Ram, 2003; Rosa, 1998). As a consequence, we still have limited understanding of the phenomenon of portfolio entrepreneurship, including its explanations, contents and consequences.

1.1.2 Overall purpose and broad research questions

This composite thesis includes six scientific articles which all represent empirical studies on portfolio entrepreneurs. The thesis seeks to contribute to our knowledge of portfolio entrepreneurship. By investigating various aspects of portfolio entrepreneurship, the thesis will shed light on the motivations, resources and behaviours of portfolio entrepreneurs as well as the performance of their new business activities. The overall purpose is *to contribute to the knowledge on portfolio entrepreneurs related to the role of their experience and resources developed from their previous and current businesses, in the process of identifying or creating new business opportunities and exploiting them through the start-up of new business activities.*

The following broad research questions are addressed:

1. What are the differences in behaviours and performance of portfolio, serial and novice entrepreneurs?
2. What are the factors associated with the propensity to become a portfolio entrepreneur?
3. What are the role of prior knowledge and other resources of portfolio entrepreneurs in their process of identifying and exploiting new business opportunities?

A theoretical framework is built upon the opportunity-based view of entrepreneurship and the resource-based view of the firm. In accordance with the opportunity-based view, entrepreneurship is defined as the creation of new

business activities through the identification² and exploitation of new business opportunities. A new business activity may be organized as a new firm or within an existing firm. The acquisition and organization of resources constitute a vital part of the entrepreneurial process. The resource-based view of the firm is utilized for theoretical insights related to the role of resources developed and transferred from current and previous businesses of portfolio entrepreneurs in the process of creating new business ventures.

In the scientific articles, quantitative as well as qualitative data are utilized to empirically investigate the themes in question. The empirical studies are conducted in a multi-industry and in a single-industry context. The farm sector has been chosen as the single-industry context since it has been documented a long tradition of involvement in multiple businesses among farmers (Eikeland & Lie, 1999). Moreover, there has been a strong policy focus on entrepreneurial activities among farmers the recent years. Two articles are related to a multi-industry context while four articles are related to the farm context.

The remaining part of this chapter is structured as follows: The next section discusses the background for this study related to policy issues and practical problems. Thereafter, previous research related to portfolio entrepreneurship is briefly discussed to identify relevant gaps in the knowledge base for this study to address. Subsequently, a summary of the empirical studies included in this theses are presented. Finally, an overview is given regarding the structure of the thesis.

1.2 The practical case for studying portfolio entrepreneurs

Entrepreneurship is expected to positively influence economic growth both at national and regional levels (Davidsson, Lindmark, & Olofsson, 1994; Kirchoff, 1994; Schumpeter, 1934/1962). New business start-ups contribute to job creation, innovation, competitiveness, lower prices and wealth creation (Acs & Audretsch, 2003; Reynolds, Storey, & Westhead, 1994). Entrepreneurship can be seen as a mechanism through which temporal and spatial inefficiencies in an economy are

² Here, identification is used as a concept to cover both 'objective' recognition of opportunities and 'subjective' creation of opportunities. For a detailed discussion, see section 2.6.2.

discovered and reduced (Kirzner, 1973). Moreover, entrepreneurship plays an important role in economic development by reallocating resources from lower to higher value functions. New business activities challenge existing firms to improve product quality or reduce prices (Acs & Storey, 2004). The increased speed of change in society implies that entrepreneurship becomes even more important (Landström, 1999a). Entrepreneurship has, therefore, received increased interest in society.

Stimulating entrepreneurship is expected to be a promising way of increasing job creation and fostering economic growth (OECD, 1998). Promoting entrepreneurship is an important part of the Lisbon strategy of the European Union, which seeks to encourage a competitive and dynamic economy (NHD, 2004). In 2003, the Norwegian government presented their innovation policy, titled “From idea to value” (NHD, 2003), in which pursuing entrepreneurship is a significant part. The current Norwegian government continues these efforts. Particularly, encouraging business founders and entrepreneurial activities is seen as an important part of the rural and regional policy (St. meld. nr. 21, 2006), as well as the agricultural policy (St. meld. nr. 19, 1999/2000). In this thesis the focus is put on portfolio entrepreneurship in general as well as in farm contexts. Policy related arguments for studying portfolio entrepreneurs related to each of these contexts are discussed below.

1.2.1 Policy issues associated with the general context

An important part of the OECD job strategy, as well as the Norwegian innovation policy is to stimulate more individuals to become entrepreneurs (NHD, 2003; OECD, 1998). A goal of Innovation Norway, the major business support agency in Norway, is to speed up the pace of innovation and restructuring in the Norwegian business sector through increasing the quantity and quality of new business start-ups (Innovation Norway, 2005). Their main strategy is to focus upon start-ups and small and medium-sized businesses with potential and ambition for growth. The efforts introduced are intended to promote economic development as well as value creation (Innovation Norway, 2005). Usually, no distinction is made between different types of entrepreneurs based on their experience. Thus, there is no

targeted support reflecting that portfolio, serial and novice entrepreneurs may face different barriers to new business start-ups or may represent different potential regarding growth and value creation.

Previous studies have demonstrated that portfolio entrepreneurship is a widespread phenomenon.³ In fact, existing business owners seem to be over-represented among individuals starting new businesses (Rotefoss, 2001). Previous studies have shown that established business owners may have a greater role in enterprise and employment creation than earlier recognized (Carter, 1999; Iacobucci, 2002; Rosa & Scott, 1999b; Westhead *et al.*, 2003b). Moreover, there are some indications that portfolio entrepreneurs are more innovative and offer more attractive growth prospects than other entrepreneurs (Isaksen, 2006; Pasanen, 2003; Westhead, Ucbasaran, & Wright, 2003a; Westhead *et al.*, 2004b). Portfolio entrepreneurs have also been found to show stronger intentions of future engagement in entrepreneurial activities (Rotefoss, 2001; Westhead *et al.*, 2005). Consequently, current business owners may be a fruitful target group for initiatives aiming at stimulating new business start-ups. However, this is often neglected in policy discussions (Westhead *et al.*, 2003b).

At present we have limited knowledge about which factors encourage current business owners to engage in the start-up of additional ventures. In order to unleash the entrepreneurial potential among current business owners, we need more knowledge about the barriers they face when initiating entrepreneurial actions and their motivations to continue developing new business activities. Further, there is a need for a deeper understanding of the assets and liabilities associated with portfolio entrepreneurs as well as the value of utilizing their experience and resources in new ventures. With this type of knowledge it may be possible to more effectively target support incentive schemes to increase the number of additional business start-ups among existing business owners.

³ A review of reported prevalence of portfolio entrepreneurs is given in section 1.3.1.

1.2.2 Policy issues associated with the farm context

While the debates related to the general innovation and business development policies only to a limited extent is associated with the potential contribution of current business owners in the creation of new businesses, there has been some policy interest in promoting portfolio entrepreneurship related to rural and agricultural contexts. The government's report to the Norwegian Parliament on rural policies include means to promote spin-offs from existing firms as one strategy to increase the number of business start-ups (St. meld. nr. 21, 2006:44). In the agricultural policy, portfolio entrepreneurship has been given a central role. The aim is to encourage farmers to start new businesses in addition to their farm business (St. meld. nr. 19, 1999/2000). Due to comprehensive demand-side as well as supply side changes, traditional agriculture is facing extensive restructuring. The number of farm units has been more than halved since the 1970s, due to economic conditions resulting in reduced profitability of farming. Reductions in the extent of agricultural support, in addition to price reduction resulting from technology development and pressure on national import barriers, have pushed many farmers into seeking alternative sources of income. Demand side changes, for example related to increased markets for small scale food products and adventure tourism, have provided opportunities for farmers to move their business activities into new and more viable niches. As a consequence, farmers' involvement in additional business activities has received attention among practitioners and policy makers as well as researchers with interest in the farm sector (e.g. Borch & Rønning, 2003; Carter, 1998; Damianos & Skuras, 1996; Fuller, 1990; McNally, 2001).

In the agricultural policy, a particular focus has been put on the utilization of farm resources in the creation of new business ventures (St. meld. nr. 19, 1999/2000). National and regional governments have taken several initiatives to stimulate farmers to use farm resources to start new business activities within farm-related areas, such as food processing or farm-based tourism (Borch & Rønning, 2003). However, little knowledge exists regarding the viability of pursuing related diversification as a strategy in the building of business portfolio, or on the results from transferring farm resources into new business activities. Conversely, it has been argued that farmers, though they have the experience as owner-managers, lack vital competences related to identifying and exploiting market opportunities.

As a result of the distribution system of agricultural goods, they usually do not have the necessary closeness to the market, and therefore lack knowledge on customer needs, are inexperienced when it comes to customer segmentation, sales and marketing, and have little useful network or knowledge regarding the distribution of food products (Borch & Iveland, 1997). Accordingly, more knowledge is needed regarding how and when farm resources and farmers' knowledge can be successfully transferred into new business activities.

1.2.3 Practical purpose of the study

The practical purpose of this thesis is to contribute to our knowledge about portfolio entrepreneurship and thereby inform the policy debate related to the pursuit of portfolio entrepreneurship and resource transfer from current businesses into new ventures. The thesis will contribute to the debate related to new business activities in general as well as to the pursuit of entrepreneurial activities among farmers. By addressing questions related to factors influencing the extent to which current entrepreneurs identify and exploit new business opportunities and move into portfolio entrepreneurship, it will seek to contribute to knowledge for building more efficient means of the promotion of portfolio entrepreneurship among farmers as well as business owners in general. Further, questions related to the resource acquisition capabilities of portfolio as compared to other entrepreneurs as well as the consequences of such resource transfers will be addressed. More knowledge on the value of experienced based knowledge and resources of farms and other existing businesses can inform policy makers who are interested in promoting entrepreneurial activities as well as practitioners who evaluate entrepreneurs and their business start-up projects.

1.3 Prior knowledge on portfolio entrepreneurship

Within the entrepreneurship literature, portfolio entrepreneurs have been examined along to two lines of research. First, they have been considered as a subgroup of habitual or experienced entrepreneurs. Habitual entrepreneurs are defined as entrepreneurs with experience from starting and/or owning at least two independent businesses of which one is still partly or fully owned and managed by the

entrepreneur. This term covers both serial and portfolio entrepreneurs (Westhead & Wright, 1998c). Second, they have been considered as multiple business owners, defined as individuals with an ownership stake in two or more independent businesses (Scott & Rosa, 1996).

The phenomenon of portfolio entrepreneurship has also been covered within other disciplines, albeit using different terms. Within rural sociology, the term ‘pluriactivity’⁴ has been used to describe farmers’ engagement in gainful activities other than farming (Fuller, 1990). These activities may be waged jobs or additional businesses on or off the farm (Eikeland & Lie, 1999). The concept has also been adopted outside the farm context (Eikeland, 1999; Eikeland & Lie, 1999; Salmi, 2005). When limited to additional businesses, here called business pluriactivity, this literature gives insight into the phenomenon of portfolio entrepreneurship in a rural context.

In this section, prior research on portfolio entrepreneurship will be briefly accounted for, starting by a short review of the prevalence of portfolio entrepreneurship. Issues discussed in the literature are summarized, and gaps in the knowledge based are identified. This leads to the theoretical case for studying portfolio entrepreneurship as a phenomenon.

1.3.1 Prevalence of portfolio entrepreneurs

Previous studies have demonstrated that portfolio entrepreneurship is a widespread phenomenon. Several studies have shown a relatively high number of portfolio entrepreneurs among business owners (Schollhammer, 1991; Scott & Rosa, 1997; Westhead *et al.*, 2003a) as well as among new business founders (Kolvereid & Bullvåg, 1993; Westhead & Wright, 1998b). However, the reported share of experienced and, more specifically, portfolio entrepreneurs, varies extensively among different studies. A detailed overview of the prevalence of habitual, serial and portfolio entrepreneurs is given in Table 1.1. Studies have reported between 12 and 31 percent portfolio entrepreneurs among independent business owner managers and business founders. One reason for this variation may be the

⁴ Adopted from French ‘*pluriactivité*.’

inconsistency in the definitions used and variations in the sampling frames (see Table 1.1). Variations by country (Kolvereid & Oftedal, 2002; Kolvereid *et al.*, 1991) and region (Rosa & Scott, 1999a), industry (Westhead & Wright, 1998a), gender (Rosa & Hamilton, 1994) and ethnicity (Ram *et al.*, 2000) have been detected. The Global Entrepreneurship Monitor (Kolvereid & Oftedal, 2002) reported a share of portfolio entrepreneurs between 5 and 44 percent for the different participating countries. Studies carried out in Norway have reported a proportion of portfolio entrepreneurs ranging from 21 percent (Kolvereid & Oftedal, 2002; Spilling, 2000) to 34 percent (Kolvereid & Bullvåg, 1993). Thus, portfolio entrepreneurship is at least equally common in Norway as in other countries.

Some authors studying multiple business owners have taken a slightly different perspective to determine the magnitude of the phenomenon. They focus on business groups, explained as a set of businesses under control of the common entrepreneur (or entrepreneurial team) (e.g. Iacobucci, 2002; Iacobucci & Rosa, 2005; Rosa, 1998; Rosa & Scott, 1999b). Iacobucci (2002) found that 24.9 % of Italian manufacturing firms were members of a business group. Using secondary data on Italian businesses, Iacobucci and Rosa (2005) found business groups to be more usual among larger than among smaller firms, and to differ substantially between sectors. Rosa (1998) and Rosa and Scott (1999a) mapped out business clusters and demonstrated a complex picture of portfolio entrepreneurship, indicating that a 'correct' magnitude of this phenomenon may be difficult to determine, as it will depend on definitions and how you control for team members involved in joint as well as separate businesses.

Table 1.1 Definitions and reported prevalence of portfolio entrepreneurs and related concepts

STUDY	DEFINITIONS OPERATIONALIZED	NATIONAL CONTEXT	REPORTED PREVALENCE		
			Habitual	Serial	Portfolio
MacMillan (1986)	Habitual entrepreneur: individual who has had experience from multiple business start-ups, and simultaneously is involved in at least two businesses				
Ronstadt (1988)	Among persons with a career as independent founding entrepreneurs, those who had created more than one venture (practicing/ex-entrepreneurs)	US	63.5 %/ 39.9 %		
Kolvereid, <i>et al</i> (1991)	Persons that had created and still owned at least two businesses	Norway New Zealand Great Britain			34 % 18 % 13 %
Schollhammer (1991)	Multiple entrepreneurs: persons involved in the formation of and having an equity stake and managerial responsibility in two or more ventures, where each venture had independent legal identity	USA Southern California	51 %		
Starr & Bygrave (1992)	Prior start-up experience: prior participation in the formation of at least one independent start-up venture				
Birley & Westhead (1993)	Habitual founders: founders that had established at least one other business prior to the start-up of the current new independent venture Novice founders: individuals with no previous experience of founding a business	Great Britain	37.3 %		12 % ⁵
Kolvereid & Bullvåg (1993)	Experienced business starters: founders that had established at least one business prior to the current one Successful multiple business starters: experienced business starters who still owned the most recent of the prior established businesses (here: portfolio starters).	Norway	47.2 %		31 %

⁵ Calculated from information given in Birley & Westhead (1993).

STUDY	DEFINITIONS OPERATIONALIZED	NATIONAL CONTEXT	REPORTED PREVALENCE		
			Habitual	Serial	Portfolio
Starr, Bygrave & Tercanli (1993)	Experienced entrepreneurs: individuals with a track record of forming, managing and owning equity stake in at least two new ventures which eventually went public.				
Scott & Rosa (1997)	Multiple business owners: persons who have an ownership share in more than one independent business	Scotland			14 %
Westhead & Wright (1998c)	Serial founder: individual who sold their original business but at a later date established or purchased another business Portfolio founder: individual who retained the original business he/she established but at a later date established or purchased another business Habitual founder: serial or portfolio founder	Great Britain	37.4 %	25.3 %	12 %
Carter (1998)	Portfolio owners: farm owners who owned one or more additional firms Diversified activities at farms: farms with other business activities, or other businesses own by the farmer or located at the farm	England			21 % 59 %
Spilling (2000)	Multiple entrepreneurs: managers which have been involved in two or more start-ups Portfolio owners: managers who have owner interests in two or more companies	Norway	28 % of managers		13 % of managers ⁶
Iacobucci (2002)	Business group: set of companies, which are legally distinct, but are controlled by the same entrepreneur (or by members of the same family)	Italy			25 % of firms
Pasanen (2003)	Portfolio owners: individuals who own more than one business at a time. Serial owners: individuals who own one business after another but effectively only one business at a time Multiple entrepreneurs: SME owner-managers who are both serial and portfolio owners simultaneously	Finland	50 %	10 %	40 %

⁶ This represents 21 % of owner-managers.

STUDY	DEFINITIONS OPERATIONALIZED	NATIONAL CONTEXT	REPORTED PREVALENCE		
			Habitual	Serial	Portfolio
Westhead, <i>et al</i> (2003a)	<p>Habitual entrepreneurs: individuals with prior minority or majority business ownership experience either as business founder, inheritor or purchaser of an independent business who currently own a minority or majority equity stake in an independent business that is either new, purchased or inherited</p> <p>Serial entrepreneurs: individuals who have sold/closed a business which they had a minority or majority ownership stake in, and they currently have a minority or majority ownership stake in a single independent business that is either new, purchased or inherited</p> <p>Portfolio entrepreneurs: individuals who currently have minority or majority ownership stakes in two or more independent businesses that are either new, purchased and/or inherited</p>	Scotland	43.5 %	24.9 %	18.6 %
Haynes, 2003	Prior entrepreneurial experience: prior experience from launching a new venture	USA	29.2 %		
Ucbasaran, Westhead & Wright (2006)	<p>Novice entrepreneurs: individuals with no prior (majority or minority) business ownership experience, either as a business founder or a purchaser of an independent business, who currently own a minority or majority equity stake in an independent business that is either new or purchased.</p> <p>Habitual entrepreneurs: individuals who hold or have held a minority or majority ownership stake in two or more businesses, at least one of which was established or purchased.</p> <p>Serial entrepreneurs: individuals who have sold or closed at least one business in which they had a minority or majority ownership stake, and currently have a minority and majority ownership stake in a single independent business.</p> <p>Portfolio entrepreneurs: individuals who currently have a minority or majority ownership stake in two or more independent businesses.</p>	Great Britain	51.8%	22.2%	29.6%

The pluriactivity literature has demonstrated that the combination of farming with non-farm income generating activities is a distinctive feature of the farm sector. Edmond and Crabtree (1994) presented statistics on business pluriactivity related to tourist enterprises and other enterprises for different regions of Scotland. Business pluriactivity varied between 3 and 19 percent related to tourist enterprises, and in addition between 3 and 11 percent related to other types of enterprises. In her study of farmers in Cambridgeshire in England, Carter (1996) found that 59 percent of farms operated business activities other than farming or had other businesses located at the farm. Moreover, 21 percent of farm owners owned one or more additional firms. Eikeland (1999) found between 27 and 31 percent of entrepreneurs in ten rural municipalities in Norway to be involved in at least two business activities (of which 10 and 26 % respectively had one activity in the farm sector).

Irrespective of the type of measure or definition chosen, this account shows that portfolio entrepreneurs constitute a substantial share of entrepreneurs in Norway as well as other national contexts, and in the farm sector as well as in other sectors. We have to acknowledge that the business emergence process is heterogeneous. One important source of heterogeneity is the variation in entrepreneurial experience (Ucbasaran *et al.*, 2006). This has lead researchers to call for studies of subgroups of entrepreneurs to better understand entrepreneurship as a phenomenon. Portfolio entrepreneurs constitute an important and prevalent subgroup. Thus, in order to understand the emergence of new business activities, opportunity identification and exploitation among portfolio entrepreneurs needs to be investigated and understood.

1.3.2 Research issues and knowledge gaps related to portfolio entrepreneurs

While there are examples of studies from the 1970s and 1980s focusing on entrepreneurial activities among experienced entrepreneurs (Lamont, 1972; Ronstadt, 1988), it is only fairly recently that this issue has been noticed by the entrepreneurship research community. During the last decade, there has been a marked increase in the number of studies in this area. Table 1.3 gives an overview

of published articles on habitual entrepreneurship and multiple business ownership within the entrepreneurship literature. The early studies typically aimed at documenting the incidence of the phenomenon (See 1.3.1). Later studies have focused more on the differentiating characteristics of portfolio, serial and novice entrepreneurs and their firms. Studies have explored potential distinctive characteristics of types of entrepreneurs related to personal background and motivation (Birley & Westhead, 1993; Carter, Tagg, & Dimitratos, 2004; Westhead *et al.*, 2005; Westhead & Wright, 1998b, 1998c; Wright *et al.*, 1997a), human capital (Ucbasaran, Howorth, & Westhead, 2000; Ucbasaran *et al.*, 2002), cognitive mindsets (Ucbasaran *et al.*, 2000; Westhead *et al.*, 2004a), resources (Westhead *et al.*, 2003a; Westhead *et al.*, 2005), information search and opportunity identification behaviour (Rosa & Scott, 1999a; Ucbasaran *et al.*, 2003a; Ucbasaran *et al.*, 2002; Westhead *et al.*, 2004a, 2005), business characteristics (Westhead *et al.*, 2005), as well as firm and entrepreneur performance (Kolvereid & Bullvåg, 1993; Westhead *et al.*, 2003a, 2005; Westhead & Wright, 1998b, 1998c).

Characteristics

Several differences have been found between types of entrepreneurs regarding personal background, human capital, resources and behaviour. Habitual and particularly portfolio entrepreneurs have often been found to possess more and more diverse resources, human capital as well as other resources, than novice entrepreneurs. However, studies have seldom discussed where these resources come from or the consequences of the better access to resources. It has been suggested that serial and portfolio entrepreneurs may transfer resources from their previous or current businesses (Starr & Bygrave, 1992; Westhead *et al.*, 2003a), but hitherto the nature and extent of such resource transfer has not been explored. While it is acknowledged that transferred resources may represent assets as well as liabilities, there has been little research into the types of resources which promote or restrain the development of the new venture. This represents an important gap in our knowledge-base related to the processes of portfolio entrepreneurship.

Motivation

While it has been noted that motivations for new business start-ups vary between first and subsequent ventures (Wright *et al.*, 1997a), only a few studies have

investigated motivational aspects of portfolio entrepreneurship. The findings of these studies indicate that motivations vary across portfolio entrepreneurs (Carter *et al.*, 2004; Wright *et al.*, 1997a). Moreover, this variation appear to have an impact on entrepreneurial behaviours (Wright *et al.*, 1997a) and strategies (Carter *et al.*, 2004; Rosa, 1998). Consequently, variations in motivation may constitute a source of heterogeneity among portfolio entrepreneurs resulting in different behaviours, types of business activities created and the subsequent performance of these efforts (Carter & Ram, 2003). The impact of motivational aspects on the development of new business activities of portfolio entrepreneurs and the outcomes of these activities represent an important knowledge gap.

Behaviour

Previous studies have found types of entrepreneurs to differ with regard to their opportunity identification behaviour. As a result, portfolio entrepreneurs are found to identify more opportunities than serial and novice entrepreneurs. This is in line with other studies indicating that prior knowledge affect opportunity identification (Ardichvili, Cardozo, & Ray, 2003; Shane, 2000). However, it is likely that experience from previous start-ups and/or ownership influence behaviour also in other areas, including start-up activities, resource acquisition behaviour and strategic actions. So far, there is limited research related to the behaviours of portfolio, serial and novice entrepreneurs, which is another gap in our knowledge base.

Performance

The idea of potential performance differences between the firms of habitual and novice entrepreneurs have been a driving force for research interest into habitual entrepreneurship (Carter & Ram, 2003). Studies have continued to explore differences in performance between habitual (portfolio, serial) and novice entrepreneurs at the firm as well as at the entrepreneur level through the last 15-20 years (Dyke, Fischer, & Reuber, 1992; Kolvereid & Bullvåg, 1993; Ronstadt, 1988; Schollhammer, 1991; Westhead *et al.*, 2003a, 2005; Westhead & Wright, 1998b, 1998c). Very few studies have investigated performance at the level of the entrepreneur. The results related to firm performance have been rather disappointing. There has been very limited support for the suggestion that habitual entrepreneurs achieve superior firm performance in their newest businesses. Some

studies have found differences in some of the variables related to firm performance indicating that portfolio entrepreneurs achieve better performance in some aspects in their businesses (e.g. Schollhammer, 1991; Westhead *et al.*, 2003a, 2005; Westhead *et al.*, 2005), while many did not find any performance differences at all (Birley & Westhead, 1993; Kolvereid & Bullvåg, 1993; Westhead & Wright, 1998b, 1998c). Consequently, this issue needs further inquiry. In particular, there is a need for studies guided by theoretical perspectives which can indicate why and how performance differences will occur and to identify the most relevant performance indicators.

1.3.3 Research issues and knowledge gaps related to business pluriactivity

Pluriactivity is a concept used within agricultural studies to describe farmers' engagement in 'other gainful activities' than farming (Fuller, 1990). 'Other gainful activities' include waged jobs off the farm, as well as other business activities on or off the farm (Eikeland & Lie, 1999). Though many studies focus on wage-earning pluriactivity only or do not distinguish between waged jobs and business activities, some studies have focused specifically on business pluriactivity⁷ (see Table 1.4). Most often, such studies have examined the incidence and spatial variations in the extent of business pluriactivity (Edmond & Crabtree, 1994; Eikeland, 1999; Ilbery, Healey, & Higginbottom, 1997; Ilbery *et al.*, 1996), and factors associated with the propensity to undertake business pluriactivity strategies (Bowler *et al.*, 1996; Damianos & Skuras, 1996; Daskalopoulou & Petrou, 2002; Eikeland & Lie, 1999; Evans & Ilbery, 1992; McNally, 2001). These studies have typically been conducted at the regional level, investigating the proportion of pluriactive farms in one or more regions. Further, some studies have used the farm household as the unit of analysis, focusing on income generating activities of all household members. A few studies have examined characteristics of the additional enterprises (Ilbery *et al.*, 1998) and factors relating to their performance (Chaplin, Davidova, & Gorton, 2004; Skuras *et al.*, 2005), using the new business activity as the unit of analysis.

⁷ Business pluriactivity has been studied using concepts such as 'farm diversification', 'alternative farm enterprises' and 'industrial pluriactivity'.

Often, the focus has been put on pluriactivity as a response recession and constraints within the farm sector. There has been an assumption that farm households were pushed into pluriactivity as a necessary adaptation to external conditions that did not allow full-time employment on the farm (Daskalopoulou & Petrou, 2002; Eikeland & Lie, 1999). Although several studies have found that business pluriactivity can be associated with ‘accumulation’ strategies and not only ‘survival’ strategies of the farms (Bowler *et al.*, 1996; Evans & Ilbery, 1992), most of this research as generally failed to appreciate income diversification as an active and intended strategy (Rønning & Kolvereid, 2006). Indeed, business pluriactivity can be viewed as an active portfolio strategy taken by farm households in order to facilitate the farm business and new entrepreneurial ventures (Carter, 1998; Carter *et al.*, 2004). Further, there is no need to assume that the farm business is the most important business activity of the farm household (Rønning & Kolvereid, 2006), nor that business pluriactive households exist only in a farm context (Carter *et al.*, 2004; Eikeland & Lie, 1999).

There seem to be a need for studies taking into account that business pluriactivity can be a result of a deliberate entrepreneurial strategy of farm households. Bringing in this perspective can lead to a better understanding of the choices made by farm households when pursuing a pluriactivity strategy, and of the abilities and other factors needed to successfully implement new business activities. In particular, an important knowledge gap is related to the role of business opportunities to business pluriactivity among farmers.

Moreover, there is still need for more studies investigating the viability of the additional businesses created and the contributions made by pluriactive farmers to wealth creation. Policy makers promote the utilization of farm resources in new entrepreneurial ventures to increase wealth-creation in rural areas. However, we still have very limited knowledge of the applicability of these resources and the contribution they give to new business development. In order to advice farmers, their advisers as well as policy makers on the viability of putting farm resources in use for the purpose of new ventures, there is a need for studies of the consequences of resource transfer related to different types of resources.

1.3.4 The theoretical case for studying portfolio entrepreneurs

There is a growing consensus among entrepreneurship scholars that the research in the field must become more theory driven, and that entrepreneurship research should take advantage of theoretical progress made in other disciplines and fields (Davidsson, Low, & Wright, 2001). However, in stead of using theories in a dogmatic way, good research should scrutinize phenomena using different theoretical lenses (Weber, 2003). One theory provides only a limited view of the world. It is therefore often sensible to illuminate different perspectives of the same phenomenon by alternative theories. Theoretical integration is pointed out as an important area for further theory development (Davidsson *et al.*, 2001).

As illustrated in Table 1.3, previous studies of portfolio entrepreneurship have often not been theoretically grounded. While these empirically based studies have been vital to explore the phenomenon of portfolio entrepreneurship in a phase where we had little knowledge in this area, more theoretically based studies are now needed. Moreover, while different perspectives and insights can be derived from the pluriactivity literature, there is a lack of theoretically grounded research also in this area (see Table 1.4).

The overall purpose of this thesis is to contribute to the knowledge on portfolio entrepreneurs related to the role of their experience and resources developed from their previous and current businesses, in the process of identifying or creating new business opportunities and exploiting them through the start-up of new business activities. The focus is put on the identification and exploitation of business opportunities and the transfer of experience-based knowledge and other resources from current to new ventures of portfolio entrepreneurs. For this purpose, the opportunity-based view of entrepreneurship and the resource-based view of the firm have been chosen to give theoretical insights to guide the research.

There is a recognized need to focus on the discovery and exploitation of opportunities as a key aspect of the entrepreneurial process (Davidsson *et al.*, 2001; Shane & Venkataraman, 2000). The opportunity-based perspective put the business opportunity as the focal point. According to this view, opportunities are identified by individuals based on their alertness (Kirzner, 1973) and their prior knowledge

(Shane, 2000). Current entrepreneurs have been suggested to be better able to identify new opportunities since their experience give them better access to information about potential opportunities and increased abilities to process this information (McGrath, 1996; Politis, 2005; Ronstadt, 1988). Ucbasaran et al. (2001) observed that while opportunity recognition and information search are critical first steps in the entrepreneurial process, research in this area is limited, especially in the relation to how entrepreneurs use the knowledge they have acquired. The usefulness of knowledge gained from entrepreneurial experience in relation to the identification of new business opportunities is still underexplored. Moreover, Gartner, Carter and Hills (2003) argued that opportunities may emerge from the day-to-day activities of an entrepreneur. The daily activities of current business owners may open up for different, and potentially more, opportunities than the daily activities of non-entrepreneurs. However, there is still limited understanding on how and from which activities opportunities emerge.

When it comes to converting identified business opportunities into viable business activities, it has been speculated that habitual entrepreneurs may have learned the craft of new business start-ups from earlier experiences and therefore are more competent entrepreneurs (MacMillan, 1986). Politis (2005) found that successful entrepreneurs had learned from their prior career experiences. They had developed networks and knowledge which seemed to play a crucial role for their ability to handle the entrepreneurial process from opportunity identification to opportunity exploitation. Lamont (1972) argued that entrepreneurial experience is reflected in strategies, resources and skills of entrepreneurs starting their second or more venture. Thus, there seem to be a case for studying the business start-up behaviours of habitual entrepreneurs.

The acquisition and organization of resources are vital activities related to new business start-ups (Aldrich, 1999; Brush, Greene, & Hart, 2001). The resource-based view of the firm suggests that the combinations of resources acquired are crucial to building a competitive advantage for the new business venture, and hence for subsequent business performance (Barney, 1991). The knowledge resources attained from previous owning and operating a business may be valuable and unique as parts of it can only be learned by experience. Recently, the human capital perspective has been successfully applied to the study of habitual

entrepreneurs to account for the development of knowledge and skills from experience (Ucbasaran *et al.*, 2006; Ucbasaran, Wright, & Westhead, 2003b; Westhead *et al.*, 2005). This research has contributed to our knowledge on the differences in characteristics, behaviours and performances of novice, serial and portfolio entrepreneurs related to their profiles of general, entrepreneurship-specific and venture-specific human capital resources (Ucbasaran *et al.*, 2006). However, this perspective does not take into account the wider spectre of resources that portfolio entrepreneurs may access as a result of their involvement in current businesses, such as financial, physical, social and organizational resources. According to the resource-based view, these types of resources may give portfolio entrepreneurs a resource advantage to other types of entrepreneurs when starting new businesses (Brush *et al.*, 2001; Starr *et al.*, 1993).

However, it has been pointed out that experience-based knowledge and resources transferred from current or previous businesses may not solely represent assets to new business ventures (Rerup, 2005; Starr & Bygrave, 1992; Ucbasaran *et al.*, 2000). The value of resources may be highly context specific and the resources transferred may not always be applicable to the new situation. Recently, some resource-based theorists have discussed potential dysfunctional resources (Leonard-Barton, 1992; Mosakowski, 2002). These are resources which may impair the ability to successfully identify and exploit new business opportunities (Mosakowski, 2002). For portfolio entrepreneurs, too much use of resources transferred from their current businesses may actually restrain the development of a new and relevant resource base of the new business. This discussion suggests that there is a case for exploring the role of resource transfer from the current business(es) of portfolio entrepreneurs into the process of identifying and exploiting new opportunities in order to create new business activities.

According to the opportunity-based view of entrepreneurship, entrepreneurship research should focus on explaining the entrepreneurial process of identifying and exploiting opportunities (Shane & Venkataraman, 2000; Venkataraman, 1997). According to the resource-based view, research should focus on the role of resources of the firm to understand its competitive advantage and performance (Barney, 1991; Mosakowski, 1993). Integrated, these perspectives urge us to focus at the role of resources in the processes of identifying and exploiting new business

opportunities. The theoretical aim of this thesis is to explore this role, related to portfolio entrepreneurs.

1.3.5 The methodological case for this research

Entrepreneurship scholars have called for a larger variety of methods and data sources in entrepreneurship research (Davidsson, 2003; Davidsson *et al.*, 2001; Hofer & Bygrave, 1992; Westhead & Wright, 2000). The development of more sophisticated theoretical models and subsequent analysis, and more longitudinal research have been suggested (Chandler & Lyon, 2001). Specifically, the need for studies using a variety of methods and perspectives has been noticed in relation to research on the complex phenomenon of portfolio entrepreneurship (Westhead & Wright, 1998b).

Table 1.3 summarizes the methods adopted by previous empirical studies on habitual entrepreneurs. It is apparent that most of these studies have used a quantitative method, gathering data through cross-sectional surveys. The same is the case for studies of pluriactivity, summarized in Table 1.4. There appear to be a case for more qualitative as well as more longitudinal studies related to portfolio entrepreneurship. Particularly, a triangulation approach where more than one method and more than one data source is utilized within the same research, may be useful to address different aspects of the phenomenon of portfolio entrepreneurship. This thesis will combine qualitative and quantitative methods. Qualitative data are utilized in explorative studies related to aspects of portfolio entrepreneurship for which little theory is developed so far, related to the role of prior knowledge in the process of identifying new business opportunities and to the motivations of portfolio entrepreneurs. Quantitative data are used to identify more 'general' relationships between a limited set of variables related to behaviours, resources and performance. Moreover, qualitative data give context to and facilitate the interpretation of results from the quantitative analyses related to the farm sector.

A key advantage of the studies included here which relate to the general context, is their utilization of longitudinal data. There is a time lag between the first and second data collection from the same respondents of 12 and 19 months

respectively. This time lag between independent and dependent variables provides a stronger argument for the direction of the relationships identified in these studies.

A key advantage of the studies included here which relate to the farm context, is their focus upon a single industry of the initial businesses of portfolio entrepreneurs. Calls have been made to focus upon contextual issues of portfolio entrepreneurship (Carter & Ram, 2003; Rosa, 1998; Westhead & Wright, 1998c). By focusing on a distinct industrial context (i.e. farming) and environmental context (i.e. rural areas) the role of this context to the process of opportunity identification and exploitation can be accounted for. Moreover, the possible resource transfer from the initial farm venture is less heterogeneous when limiting the study to a single context. As a result, the consequences of different types of resource transfer from this particular context can be assessed.

1.4 The studies included in the thesis

This thesis consists of six separate studies, each accounted for in a scientific article. These articles represent the groundwork of this thesis, and can be divided into two parts. The first two articles investigate the characteristics in behaviour, resource access and performance of portfolio, serial and novice entrepreneurs in a multi-industry context. The next four articles focuses on portfolio entrepreneurship related to a particular industrial context; farmers starting new businesses in addition to the farm and hence becoming portfolio entrepreneurs. Each study addresses a distinct research aim, which is linked to one of the three broad research questions referred to in section 1.1.2. An overview of the six articles is given in Table 1.2.

The first question, related to the differences in behaviours and performance of portfolio, serial and novice entrepreneurs, is examined in articles 1 and 2. Article 1 examines the behaviours of novice, serial and portfolio nascent entrepreneurs in the process of starting a new business, and the consequences for this process of actually resulting in a new firm. Article 2 examines the resource acquisition of fledging new businesses started by novice, serial and portfolio entrepreneurs, and the consequences for subsequent early business growth. The next four articles

focus on portfolio entrepreneurs only. The second question concerns factors associated with the propensity of becoming a portfolio entrepreneur, and is examined in article 3 and 4. Article 3 explores the variation in motivation of portfolio entrepreneurs in the farm sector and discusses its consequences for how the new business develops. Article 4 looks at the push and pull factors affecting farmers to intend, prepare and start additional business activities. The third question, related to the role of prior knowledge and other resources of portfolio entrepreneurs to the identification and exploitation of new business opportunities, is considered in article 5 and 6. Article 5 focuses at the role of prior knowledge in the opportunity identification processes of current business owner-managers in the farm sector. Finally, article 6 focuses on opportunity exploitation, investigating the extent of resource transfer from the originating farm business to the new venture of farm-based portfolio entrepreneurs, and its consequences for new venture profitability. Each of the six articles is accounted for in detail in chapter 4.

As indicated in table 1.2, the six scientific articles represent qualitative as well as quantitative studies, longitudinal as well as cross-sectional studies, various theoretical perspectives and various units of analysis. This reflects the triangulation approach to the research design of this thesis, including method, data, theoretical and investigator triangulation (see chapter 3).

1.5 Overview of chapters

This composite thesis consists of two parts. The first part represents an introductory overview, and includes five chapters. The theoretical framework guiding the thesis is presented in the next chapter. Methodological issues and methods applied are summarized in chapter 3. In the following chapter, evidence from the six articles is discussed with regard to the presented research questions. The key findings are summarized in chapter 5. The theoretical contribution of the thesis is highlighted, limitations are discussed and directions for additional research are presented. Implications for policy and practice are presented. In the second part, each of the six scientific articles is presented. Chapter 6 presents two articles related to the general context while chapter 7 presents four articles related to the farm context.

Table 1.2 Overview of scientific articles included in the thesis

#	ARTICLE TITLE	CO-AUTHORS	BRQ*	INDUSTRY CONTEXT	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY				UNIT OF ANALYSIS	DEPENDENT VARIABLE	ISSUES STUDIED
							Quant.	Qual.	Longit.	Cr.-sec			
1	The business gestation process of novice, serial and parallel business founders	Kolvereid	1	Multiple industries	How do the business gestation processes reported by novice, serial and parallel business founders differ with regard to a) the start-up activities they carry out during the process, b) the number of such start-up activities cited, c) the timing of start-up activities, and d) the sequence of the start-up activities? Do serial and parallel founders have a higher probability of actually starting new businesses than novice founders?	Weick's theory of organizing	X		X		Start-up venture	Result of start-up process	
2	New business early performance: novice, serial and portfolio entrepreneurs	Kolvereid Isaksen	1	Multiple industries	Do novice, serial and portfolio entrepreneurs differ when it comes to their ability to identify opportunities and acquire resources when starting a new business? Do such differences lead to different performance in new businesses started by novice, serial and portfolio entrepreneurs?	Resource-based view	X		X		New firm	Firm size (sales turnover, employment)	

#	ARTICLE TITLE	CO-AUTHORS	BRQ*	INDUSTRY CONTEXT	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY				UNIT OF ANALYSIS	DEPENDENT VARIABLE	ISSUES STUDIED
							Quant.	Qual.	Longit.	Cr.-sec			
3	Farm-based entrepreneurs : What triggers the start-up of new business activities?	Ljunggren Pettersen	2	Farming	What are the motivations of farmers starting new business activities, and how are differences in motivation related to the characteristics of the new business venture?	Opportunity based view Resource based view Rural sociology view		X		X	Household Business activities	-	Start-up motivation, goals, source of idea, relation to farm, characteristics of new venture
4	Farmers as portfolio entrepreneurs : necessity pull or opportunity push?	Ljunggren Pettersen	2	Farming	Is the likelihood of farmers to consider, prepare and establish new business activities in addition to their farms associated with a) the institutional environments for farming, b) the institutional environments for new business start-ups, and c) farmers' entrepreneurial abilities and/or their access to business opportunities?	Rural sociology view Opportunity based view	X			X	Household	Entrepreneurial status of household	

#	ARTICLE TITLE	CO-AUTHORS	BRQ*	INDUSTRY CONTEXT	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY			UNIT OF ANALYSIS	DEPENDENT VARIABLE	ISSUES STUDIED
							Quant.	Qual.	Longit.			
5	Opportunities and prior knowledge. A study of experienced entrepreneurs	Kaikkonen	3	Farming	Can the four suggested types of opportunity generation processes be identified empirically? What characterizes and differentiates the four types of processes? In what way is prior knowledge and experience of the entrepreneur related to the four types of processes?	Opportunity based view	X	X	X	New business opportunity	-	Opportunity generation processes,
6	Multiple business ownership in Norwegian farm sector: Resource transfer and performance consequences	Carter	3	Farming	To what extent are different types of resources transferred from the farm business into the new venture? To what extent does the resource richness of the farm influence the resources that are transferred? Which transferred resources, if any, are associated with enhanced performance in the new venture?	Resource based view	X			New business activity	Profitability (self-assessed scale)	

* BRQ indicates which of the three broad research questions referred to in section 1.1.2 each of the articles addresses.

Table 1.3 Overview of published empirical studies on habitual entrepreneurs*

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Lamont (1972)	Behaviour differences between first and second time entrepreneurs Reasons for performance differences	a	X			X	Data from technology-based enterprises	24	Descr. statistics	Firm characteristics: Experiences entrepreneurs have learned. Experience is reflected in product orientation, substantial initial financing and balance of business skills.
Ronstadt (1988)	Prevalence of habitual entrepreneurs Characteristics of entrepreneurial careers	b	X			X	Database College alumni, practicing/ex- entrepreneurs	1,537	Descr. statistics	Prevalence: Substantial number of multiple venture entrepreneurs. Second venture often created early in entrepreneurial career. The existence of a corridor principle: The act of starting a new venture allows an entrepreneur to see new opportunities. Entrepreneur performance: Multiple ventures produce longer entrepreneurial career.
Stuart & Abetti (1990)	Impact of entrepreneurial and management experience on early business performance	a	X			X	Personal interviews with chief executives of new technical ventures	52	Factor analysis, general linear model	Firm performance: Entrepreneurial experienced measured as the number of previous new venture involvements and the level of the management role played in such ventures, were significantly related to early business performance.

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS			
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis				
Scholl- hammer (1991)	The incidence of multiple entrepreneurs The impact of experience on new venture performance Industry relatedness of multiple ventures	a					X		X	Survey	138	Descr. statistics, correlations	Prevalence: Multiple entrepreneurs are frequent, but incidence rate declines rapidly. Successive venture formations are predominantly in same or related industry as prior ventures. Firm performance: The two years survival rate of multiple venture initiatives is lower than for single venture initiatives. Successful prior experience improves survival rate, while prior failures reduce survival rate. Unrelated diversification of successive venture initiatives tends to improve subsequent venture success.
Dyke, Fischer & Reuber (1992)	The impact of seven kinds of owner experience on firm performance	a					X		X	Survey among businesses from five industries	386	Multiple regression	Firm performance: Number of previous start-ups positively related to performance. Number of years of previous business ownership not related to performance. Industry differences in relationships between experience and performance
Birley & Westhead (1993)	Differences in characteristics between habitual and novice entrepreneurs	a					X		X	Postal survey Matched samples	284	Bivariate analyses, discriminant analysis	Entrepreneur characteristics: Habitual entrepreneurs start younger, have heroes as role models and rely more upon financial support of family and friends Firm performance: No differences regarding performance
Kolvereid & Bullvåg (1993)	Differences between novice and experienced founders in personal characteristics, resource acquisition ability, and business performance	a					X		X	Postal survey	209 (24%)	Descr. statistics Chi-sq.	Entrepreneur characteristics: Experienced founders are more resourceful than novices. Experienced founders tend to get involved in more complicated environments with their new businesses. Firm performance: No performance differences found.

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Starr, Bygrave & Tercanli (1993)	Negative and positive consequences of entrepreneurial experience to subsequent ventures	a		X		X	Case studies based on IPO prospectuses and media exposure	3	Com- parative descrip- tives	Process performance: Different types of process milestone achievements may be related to prior entrepreneurial experience, including fund raising capacity and initial start-up resources, time required to achieve milestones, resource expenditures, returns to investors and the entrepreneur's personal investment and financial gains.
Reuber & Fischer (1994)	The role of expertise in the relationship between experience and performance	Situated learning approach	X			X	Postal survey, biotech/telecom firms	304	Corre- lations, multiple regres- sion	Firm performance: Owners' expertise is more strongly correlated with firm performance than owners' experience. Some direct association of experience on firm performance, in addition on the association through expertise.
Scott & Rosa (1997) Rosa & Scott (1999b)	Assess the quantitative importance of multiple business ownership to new firm formation	a				X	D&B data for new Scottish firms, Survey data, Registrar of Scottish high growth companies	7,316 600 209	Descript. statistics	Prevalence: Large prevalence of multiple business owners – across business types, and substantial linkages between businesses. Higher number of multiple owners in incorporated and larger businesses. Men are more likely than women to be multiple business owners. Motivation: A significant number of new companies are part of growth strategies rather than de novo start-ups.

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD		KEY FINDINGS	
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size		Type of analysis
Wright, Robbie & Ennew (1997a)	Motivations and characteristics of types of serial entrepreneurs The role of professional advisers and financiers to serial entrepreneurs	a		X		X	In-depth interviews with serial entrepreneurs	13		<p>Motivation: Motivations vary between first and subsequent ventures, implications for subsequent managerial behaviour and entry mode Search process vary across serial entrepreneurs, and reflects differences in entrepreneurial motivation</p> <p>Firm performance; Performance of subsequent ventures can be positively or negatively affected by experience</p> <p>Resources: The role of active investors changes between first and subsequent ventures</p>
Wright, Robbie & Ennew (1997b)	The role of serial entrepreneurs to the venture capitalist industry	b	X			X	Postal survey of VCs + Postal survey of VCs with experience of serial entrepreneurs	55 (48.7%) 23 (57.5%)	Bivariate and multi-variate analyses	<p>Resources: VCs relatively seldom funded again previously funded entrepreneurs, but used serial entrepreneurs as consultants or to lead management buy-ins. Variations among VCs in how the value entrepreneurial experience. Some indication that VC assess both assets and liabilities of entrepreneurial experience</p> <p>Firm performance: No evidence of better performance of serial compared to novice entrepreneurs</p>

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY		METHOD		KEY FINDINGS			
			Quant	Qual	Longit	Cross-sec		Data collection method	Valid sample size	Type of analysis
Carter (1998)	Enumeration of enterprises created by farmers. Characteristics of portfolio, diversified and monoactive farm owners.	a	X		X		Postal survey of farm owners	296 (29,6%)	Bivariate analyses	<p>Prevalence: High extent of portfolio entrepreneurship in the farm sector, particularly among younger and better trained farm owners. Additional business activities can be viewed as a continuum from diversification to ownership of a portfolio of businesses.</p> <p>Entrepreneur characteristics: Portfolio farm owners were younger and better trained in agriculture, management, marketing and finance.</p> <p>Firm characteristics: There was an increase in strategic complexity within the businesses owned by the portfolio group.</p> <p>Entrepreneur characteristics: Identified dimensions of habitual entrepreneurs: background and nature of habitual entrepreneur, nature of venture started, strategies used to create and manage businesses. Business clusters were complex and often involved partnerships between different owners</p> <p>Behaviour: No homogenous association of entrepreneur type with entrepreneurial behaviour.</p> <p>Process/strategies: The process of multiple business ownership is generally an entrepreneurial one. Strategies were variable and diverse in building business clusters, but entrepreneurial diversification predominated.</p>
Rosa (1998)	Creation/acquisition of multiple ventures as entrepreneurial process vs. management process of diversification. Characteristics of processes. Relationship between prior entrepreneurial experience and performance	a				X	Case studies, incl. personal interviews & secondary data	23	Business genealogies, Life history analyses	

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Westhead & Wright (1998b)	Characteristics and performance of novice, serial and portfolio entrepreneurs in rural and urban areas.	b	X			X	Postal survey	621	Bivariate analyses Discriminant analysis	Entrepreneur characteristics: Several differences between novice, serial and portfolio entrepreneurs regarding personal background, work experience, motivations, personal attitudes and financing. More differences between the types in urban than in rural areas. Firm performance: No performance differences between types of founders in neither rural nor urban areas.
Westhead & Wright (1998c)	Characteristics and behavioural differences between novice, serial and portfolio founders	b	X			X	Postal survey	621	Bivariate analyses Discriminant analysis	Entrepreneur characteristics: Habitual entrepreneurs not a homogeneous group: Differences between portfolio and serial founders with regard to parental background, work experience, age at first business start-up, motivation, attitudes to entrepreneurship and sources of funds utilized. Firm performance: No performance differences between types of founders.
Carter (1999)	Incidence of portfolio entrepreneurship in the farm sector. Contribution of portfolio farmers to enterprise and employment creation	a	X			X	Postal survey of farm owners	296 (29.6%)	Descr. statistics	Prevalence: Many farmers are involved in a wide range of entrepreneurial activities. Outcomes: Additional business activities make a substantial contribution to both numbers of enterprises and employment creation in rural areas.

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Rosa & Scott (1999a)	Diversification as growth strategy Types of diversification strategies	a								<p>Strategies: A number of diversification strategies were identified among high-growth firms, indicating that growth often happens through the formation of multiple businesses. The most successful entrepreneurs pursued related diversification, while unrelated diversification was associated with hobbyist kinds of diversion or with succession plans. Further, some business clusters were built by investor entrepreneurs who also became managerially involved in the firms in which they invested. New business creation was more usual strategy of cluster growth than acquisition. Survivalist diversification, i.e. diversification out of trouble, was also observed.</p> <p>Behaviour: Serendipity played a role in opportunity identification among expansion motivated entrepreneurs who were consciously open to new business activities. Entrepreneurs faced with difficulties were more proactively in seeking out diversification opportunities.</p>
Carter (2001)	Differences between farmers regarding their propensity to participate in additional business activities: Differences between monoactive farmers, structural diversifiers and portfolio business owners.	a								<p>Entrepreneur characteristics: Portfolio business owners were younger and better trained in agriculture, management, marketing and finance than monoactive farmers. They were also more positive to new market opportunities, had stronger appreciation and sensitivity to customer needs, and were more willing to engage in new ventures.</p> <p>Firm characteristics: Increased strategic complexity in businesses owned by portfolio owners. They owned larger farms and additional businesses.</p>

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Iacobucci (2002)	Assessing importance of business groups in Italian manufacturing sector Causes of growth through business group formation	a		X		X	Database of manufactur- ing firms Survey of business groups	424 21	Descr. statistics	Prevalence: Business groups are widely present among SMEs in Italy. Strategy/motivation: Business group formations are most often a result of the firm's growth policy, and less often result of entrepreneurial dynamics or capital accumulation process of the entrepreneur/family. Low degree of diversification in business activities of groups, high coherence in their growth processes. Entrepreneurial dynamics more important in early stages.
Haynes (2003)	The relationships among prior job dissatisfaction, the use of entrepreneurial and other types of experience, and outcomes	b		X		X	Telephone interviews with business founders.	195	Bivariate analyses	Resources: Experienced entrepreneurs who stayed in the same sector were most likely to make use of their prior experience. Their businesses reported more initial employees, greater use of multiple sources of capital, and use of a corporate form. Firm performance: Experienced entrepreneurs obtained higher sales levels in their new ventures.
Pasanen, (2003)	Prevalence of multiple entrepreneurs among successful SMEs in peripheral locations. Characteristics of firms owned by multiple entrepreneurs and single business owners	a		X		X	Postal survey	100	Bivariate analyses	Prevalence: Multiple entrepreneurs are common among successful SMEs. Firm characteristics: Higher growth in firms owned by multiple entrepreneurs. Multiple entrepreneurship most frequent among entrepreneurs of innovative growth firms. Firms within an entrepreneur's portfolio may or may not be related

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Ucbasaran et al. (2003a)	Differences between habitual and novice entrepreneurs in opportunity identification behaviour	a	X			X	Postal survey of independent firms	773 (17.9%)	Bivariate analyses	Behaviours: Habitual entrepreneurs identify more and more innovative opportunities. They utilize different info sources, more often financiers, employees and consultants. They show different attitudes to opportunity identification, emphasizing that opportunities emerge in connection with problems, that one opportunity leads to another, and enjoyment of opportunity search.
Ucbasaran, Wright & Westhead (2003b)	Impact from prior business ownership experience on information search behaviour and business opportunity exploitation. Differences between habitual starter and habitual acquirer entrepreneurs.	Human capital perspective		X	X		Case studies	8		Behaviour: Prior business ownership can impact on the resources accumulated, and on their information search and opportunity recognition behaviour. The impact differs between habitual starters and habitual acquirers. Resources: The stock of ownership experience related human capital may involve assets and liabilities. Further, they must be able to learn from their experience to increase their human capital. Differences between habitual starters and habitual acquirers.
Westhead, Ucbasaran & Wright (2003a)	Financing resources, organizational capabilities and performance distinguishing novice, serial and portfolio entrepreneurs	Resource-based view	X			X	Postal survey of independent firms	354 (12.2%)	Bivariate analyses	Resources: Portfolio entrepreneurs have more diverse experience and more resources than either serial or novice entrepreneurs. They also gave greater importance to certain organizational capabilities, and to managerial competence and human capital resources. Firm performance: Portfolio entrepreneurs reported higher business growth

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY			METHOD		KEY FINDINGS	
			Quant	Qual	Longit	Cross-sec	Data collection method		Valid sample size
Carter, Tagg & Dimitratos (2004)	Prevalence, contextual factors, and strategic use of multiple income sources and portfolio activities. Types of entrepreneurs differentiated by degree of engagement in portfolio activities.	^a	X		X	Postal survey of business owners	18,561 (14.3%)	Latent class analysis	<p>Prevalence: Multiple income sources are widespread, and prevalent across all industry sectors and across the SME size spectrum</p> <p>Multiple income sources take different forms and perform different functions for small firms depending upon circumstances and context.</p> <p>Motivation: Some use portfolio activities for the purpose of growth and wealth accumulation; others use them as a survival mechanism.</p> <p>Multiple incomes facilitate business entry and exit, but also exist within stable enterprises.</p> <p>Behaviour: Differences in information search behaviour and opportunity identification. Portfolio entrepreneurs identified more opportunities.</p> <p>Entrepreneur performance: Some indications that novice entrepreneurs drew less from their business than portfolio entrepreneurs. Else, no significant performance differences.</p> <p>Policy: Marked differences in characteristics and behaviour between novice, serial and portfolio entrepreneurs. Indications that policy makers should consider moving resources from businesses to serial and portfolio entrepreneurs as they have the will and ability to be significant wealth and job creators. Need to address barriers to subsequent business ownership, and to develop targeted assistance based on differences between types of entrepreneurs.</p>
Westhead, Ucbasaran & Wright (2004a)	Behaviour and outcome differences between novice, serial and portfolio entrepreneurs	Reuber & Fischer's founders' experience conceptual framework	X		X	Postal survey	354 (12.2%)	Bivariate analyses	<p>Behaviour: Differences in information search behaviour and opportunity identification. Portfolio entrepreneurs identified more opportunities.</p> <p>Entrepreneur performance: Some indications that novice entrepreneurs drew less from their business than portfolio entrepreneurs. Else, no significant performance differences.</p> <p>Policy: Marked differences in characteristics and behaviour between novice, serial and portfolio entrepreneurs. Indications that policy makers should consider moving resources from businesses to serial and portfolio entrepreneurs as they have the will and ability to be significant wealth and job creators. Need to address barriers to subsequent business ownership, and to develop targeted assistance based on differences between types of entrepreneurs.</p>
Westhead, et al. (2004b)	Differences between novice, serial and portfolio entrepreneurs and their policy implications	^a	X		X	Postal survey	354 (12.2%)	Bivariate analyses	<p>Behaviour: Differences in information search behaviour and opportunity identification. Portfolio entrepreneurs identified more opportunities.</p> <p>Entrepreneur performance: Some indications that novice entrepreneurs drew less from their business than portfolio entrepreneurs. Else, no significant performance differences.</p> <p>Policy: Marked differences in characteristics and behaviour between novice, serial and portfolio entrepreneurs. Indications that policy makers should consider moving resources from businesses to serial and portfolio entrepreneurs as they have the will and ability to be significant wealth and job creators. Need to address barriers to subsequent business ownership, and to develop targeted assistance based on differences between types of entrepreneurs.</p>

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY			METHOD		KEY FINDINGS		
			Quant	Qual	Longit	Cross-sec	Data collection method		Valid sample size	Type of analysis
Iacobucci & Rosa (2005)	Explore group formation through entrepreneurial diversification: the direction of growth and diversification and the relationship between diversification policy and business group formation.	a	X		X		Secondary data of independent large firms	66	Descr. statistics	<p>Strategy: The running of a group of companies by the same entrepreneur is not only induced by the geographical extension of their operation and by diversification, but also by the differentiation policy aimed at serving different market segments within the same sector. This is different from the diversification policy of large, managerial firms.</p>
Westhead, Ucbasaran & Wright (2005)	Differences between novice, serial and portfolio entrepreneurs with regard to their decisions, actions, performance and aspirations.	Reuber & Fischer's founders' experience conceptual framework	X			X	Postal survey	354 (12.2%)	Bivariate analyses	<p>Behaviour: Portfolio and serial entrepreneurs used more information sources, and used their prior business ownership experience to lever information from networks. Differences in search and opportunity recognition behaviour. Experienced entrepreneurs focus more on customer needs and indicate that they more alert to additional business opportunities. Portfolio entrepreneurs identified more opportunities.</p> <p>Entrepreneur performance: Portfolio entrepreneurs drew out more money from the business than novice entrepreneurs. Portfolio entrepreneurs more often intended to establish/acquire an additional business in the future.</p>

	RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Westhead, Ucbasaran & Wright (2005)	Assets and liabilities of prior business ownership experience of serial and portfolio entrepreneurs. Differences in cognition between novice, serial and portfolio entrepreneurs.	Cognitive theory Human capital perspective	X			X	Postal survey	354 (12.2%)	Bivariate analyses	<p>Resources: No differences between serial and portfolio entrepreneurs regarding assets and liabilities of prior business ownership. Portfolio entrepreneurs have more equity partners.</p> <p>Entrepreneur characteristics: Some differences regarding attitudes to entrepreneurship. Indications that portfolio entrepreneurs perceive themselves as more creative and innovative than novice entrepreneurs. No differences between serial and portfolio entrepreneurs regarding creativity and innovation.</p>
Westhead, et al (2005)	Differences between novice, serial and portfolio entrepreneurs in characteristics, behaviours and performance contributions.	a				X	Postal survey	354 (12.2%)	Bivariate analyses	<p>Entrepreneur characteristics: Portfolio entrepreneurs had more diverse experiences, more often team starts, and were more innovative. They were more motivated by the challenge of starting a business and less by personal prospects or perceiving joy in starting a business.</p> <p>Behaviours: Portfolio entrepreneurs used a wider range of information sources and identified more opportunities. They showed more positive attitudes towards opportunity identification, and considered their own abilities in this area as a strength.</p> <p>Resources: Portfolio entrepreneurs acquired more initial financial capital than serial and novice entrepreneurs, but invested a lower share of personal savings than serial entrepreneurs. They were less likely to perceive financing as easy. They focused more on organizational capabilities.</p> <p>Firm performance: Portfolio entrepreneurs offer more attractive growth prospects than other entrepreneurs.</p>

RESEARCH QUESTIONS	THEORETI- CAL PERSPEC- TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
		Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Number of empirical studies in total					32				Summary method issues
Summary theoretical perspectives									Number of quantitative studies 27
Number of studies with specified theoretical perspective				6					Number of qualitative studies 5
Number of studies with no specific theoretical perspective stated				26					Number of cross-sectional studies 30
									Number of longitudinal studies 2

Abbreviations: Quant=Quantitative study, Qual=Qualitative study, Longit=Longitudinal study, Cr.sec= Cross-sectional study.

* Empirical studies published in journals or as book chapters. Google scholar search was used to identify studies, using the following search terms: habitual entrepreneur, serial entrepreneur, portfolio entrepreneur, multiple entrepreneur, multiple business owner, repeat entrepreneur, ownership experience and entrepreneurial experience.

^aNo specific theoretical perspective stated.

^bHypotheses/propositions derived without linkage to specific theoretical perspectives.

Table 1.4 Overview of published empirical studies on business pluriactivity in the farm sector*

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY			METHOD		KEY FINDINGS		
			Quant.	Qual.	Length	Cr. sec	Data collection method		Valid sample size	Type of analysis
Champagne, Carrère & Valceschini (1990)	The forms and role of pluriactivity in different regions, depending upon demography, technical and social forms of production	^a	X				Case studies	3	Comparative cases	Pluriactivity often played a positive role in agricultural and rural development, and is not only a survival mechanism for households facing poor conditions in agriculture. Different regional characteristics resulted in different forms of pluriactivity, and the forms of pluriactivity relates differently to rural development. Business pluriactivity was a result of farms operating as family businesses.
Ilbery (1991)	The development of farm diversification in the urban fringe	^a	X				Survey	120	Descr. statistics	The need to generate extra income is the main reason for diversified business activities at large beef/sheep farms. Both 'accumulation' and 'survival' behaviours are found. Diversification was seen as a source of pin money only and constrained by resistance factors.
Evans & Ilbery (1992)	Motives behind farm-based accommodation strategy, the significance of accommodation to the overall family business, financing of accommodation activities	Political economy approach	X				Survey	212	Descr. statistics	Financial reasons were the main driving force behind the initiation of accommodation enterprises. This is part of an accumulation strategy on larger farms, but a survival strategy on smaller farms. Outside organisations are increasing their financing involvement with accommodation.
Edmond & Crabtree (1994)	The influence of farm characteristics and regional socio-economic conditions on non-farming activities	^a	X				Survey	1763	Multi-variate analysis	The proportion of farms with on-farm enterprises in a region is related more strongly to regional opportunities in non-agricultural markets than to low average farm income or small farm size. This is in contrast to the extent of off-farm waged work.

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY		METHOD			KEY FINDINGS		
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method		Valid sample size	Type of analysis
Ilbery, <i>et al.</i> (1996).	Nature and incidence of business diversification by farm households in three regions	Pathways of farm business development	X			X	Survey	1256	Descr. statistics	Spatial variations in the extent and nature of business diversification Differences in farm size, farm type, occupancy and household composition provide indirect explanations of the development of business diversification
Bowler et al. (1996)	Factors affecting the start-up of alternative farm enterprises, compared to paths of other gainful activities or traditional farming	Stress tolerance threshold model, pathways of farm business development	X			X	Interviews	200	Multi-variate analysis	The start-up of alternative enterprises was almost as important as combining farming with waged job. Farm families choosing to start alternative farm enterprises can be divided between those that display 'accumulation' and 'survival' behaviours. Characteristics of farmer and farm household were not found to be related to the start-up of enterprises
Damianos & Skuras (1996)	Factors related to the choice of path of farm business development, including the development of alternative farm enterprises	Pathways of farm business development	X			X	Survey	200	Multi-variate analysis	Alternative enterprises were more likely to be adopted by farms with less arable land, and those closer to main roads and urban centres. No impact of age of farmer. Higher number of children led to earlier development of alternative farm enterprises.
Ilbery, Healey & Higginbottom (1997)	Factors affecting business diversification of farm households	a	X			X	Survey	1256	Descr. statistics	Geographical variations in the extent and nature of business diversification. Adoption of diversification strategies was related to household composition, farm size and farm type

	RESEARCH QUESTIONS	THEORETICAL PERSPECTIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Ilbery, <i>et al.</i> (1998)	Explore farm-based tourism conceptualized as an alternative farm enterprise pathway and factors influencing this choice. The role of institutions in supporting farm-based tourism.	Pathways of farm business development	X			X	Survey	200	Descr. statistics	Farms with alternative enterprises within tourism had lower levels of family labour than those with other types of enterprises. Different types of tourist enterprises are dominated by different farm and household characteristics. The reasons for starting tourism enterprises are often complex and specific to the particular farm. The institutions concerned with farm-based tourism in the studied area tend to behave reactive and lack understanding of the problems facing farm households when starting tourism enterprises. There was a growth inter-agency networking among these institutions.
Eikeland (1999)	The incidence of industrial pluriactivity Social processes conducive to industrial pluriactivity	a	X			X	Survey	3059	Descr. statistics	A majority of business owners in peri-urban areas base their income on managing several businesses concurrently. Households combine several business activities with waged work. There is a gender division, where men develop and run the speciality enterprises
Eikeland & Lie (1999)	The effect on pluriactivity of the integration of rural areas into urban labour markets, international systems of production, and changes in sectorial mix	a	X	X		X	Register data Inter-views	13137 3059 c	Descr. statistics	High level of business pluriactivity among working population in rural areas. Pluriactivity strategies were adopted among farmers as well as other business owners. Often, more than one industrial activity is combined in one enterprise. Business pluriactivity is a male dominated activity.
McNally (2001)	How diversification has evolved over the last 10 years. Probability of diversification related to characteristics of the farm business.	a	X			X	Survey	28900	Multi-variate analysis	Rate of exit is similar to rate of entry for most diversification activities. Most types of diversification make a relatively small contribution to average business income. The probability of diversification is strongly related to farm size and type.

	THEORETICAL PERSPECTIVES	TYPE OF STUDY			METHOD		KEY FINDINGS	
		Quant.	Qual.	Cr.-sec	Data collection method	Valid sample size		Type of analysis
RESEARCH QUESTIONS								
Daskalopoulou & Petrou (2002)	Identify potential adopters of alternative farm enterprises using a ideal typology of farms and linking survival strategies to the adoption of alternative farming.	X		X	Survey	c	Descr. statistics	Three types of farm households identified: subsistence, survivalist and productivist. Potential adopters of alternative farm enterprises were most likely among survivalist households. Alternative farm enterprises served as a 'middle strategy' between exiting farming and adjust through enlargement and modernisation of the farm enterprise.
Walford (2003)	Identification of serial diversifiers among large-scale farms, the sequence of various forms of diversification,	X		X	Survey, register data	154	Bi-variate analysis	Diversified farms have tended to favour business activities most closely allied with conventional agriculture or which demanded least movement away from traditional farming role. Development towards less related activities based on a gradual decline in the importance of traditional farming. The level of diversification is relatively small.
Chaplin, Davidova & Gorton (2004)	Identify the degree of non-agricultural farm diversification in Hungary, Poland and Czech republic and factors facilitating or impeding it. Effects of diversification on rural job creation and household incomes.	X		X	Survey	780	Multi-variate analysis	Diversification by farmers generates few new jobs. Some evidence that enterprise diversification by corporate farms is more likely to create new jobs. Diversification is linked to level of general education and availability of public transport.

	RESEARCH QUESTIONS	THEO-RETICAL PERSPEC-TIVES	TYPE OF STUDY				METHOD			KEY FINDINGS
			Quant.	Qual.	Longit.	Cr.-sec	Data collection method	Valid sample size	Type of analysis	
Skuras, <i>et al.</i> (2005)	Processes of entrepreneurial human capital accumulation and its impact on rural business growth	Human capital perspective	X			X	Survey	513	Multi-variate analysis	Human capital accumulation related to education and training or to work and managerial experience (fully or partly codified knowledge) is most strongly related to business success. Human capital accumulation processes leading to the acquisition of mainly tacit knowledge do not contribute as much. The value of different types of human capital accumulation varies between countries.

Abbreviations: Quant=Quantitative study, Qual=Qualitative study, Longit=Longitudinal study, Cr.sec= Cross-sectional study.

* Selected empirical studies published in journals or as book chapters. Google scholar search was used to identify studies, using the following search term: business pluriactivity, farm diversification, and alternative farm enterprises.

^a No specific theoretical perspective stated.

^c Sample size not specified.

2 THEORETICAL INSIGHTS

This work aims to contribute to our knowledge in the area of portfolio entrepreneurship by investigating the behaviours of portfolio, serial and novice entrepreneurs and the performance of their firms, the factors associated with the propensity to become a portfolio entrepreneur, as well as the role of prior knowledge and other resources to the process of identifying and exploiting new business opportunities. These aspects of portfolio entrepreneurship are studied through six separate articles. This chapter will account for the theoretical insights guiding these studies. In addition to relying on previous research within the area of portfolio entrepreneurship, these articles are guided by the opportunity based view of entrepreneurship and the resource based view of the firm.

2.1 View of entrepreneurship

Entrepreneurship is a research field which involves multiple definitions, perspectives and disciplines. Lately, there has been a growing debate on the boundaries of entrepreneurship as a research field, including a search for the distinctive domain of entrepreneurship research (Bruyat & Julien, 2000; Davidsson, 2003; Phan, 2004; Shane & Venkataraman, 2000; Venkataraman, 1997). There have also previously been attempts to define the distinctiveness of entrepreneurship (Bull & Willard, 1993; Gartner, 1988; Gartner *et al.*, 1994). While there still is no general agreement on how neither the societal phenomenon nor the scholarly field of entrepreneurship research should be defined, there has recently been considerably progress towards a conceptual clarity of the distinctiveness of entrepreneurship research (Davidsson, 2003).

Three different, but partly overlapping, views of entrepreneurship can be identified. *The innovation-based perspective* to entrepreneurship relates to the work of Schumpeter (1934/1962). Schumpeter viewed entrepreneurship as the creation of an imbalance in the market based on a *new* combination of resources, in the form of new products, new processes, new markets, and/or new organizational solutions (Johannisson & Landström, 1999). He saw the entrepreneur mainly as an

innovator, who by combining resources in new ways creates innovations and introduces them to the market and thereby differentiating himself from other companies (Landström, 1999a). This entrepreneurial action disrupts stability and creates discontinuity (Bull & Willard, 1993). The focus is here put on novelty and innovation with *new* information as the starting point for the entrepreneurial process. Entrepreneurship can be pursued by individual entrepreneurs or by entrepreneurial firms (Brazeal & Herbert, 1999; Bull & Willard, 1993).

The business formation perspective views entrepreneurship as the creation of new business organizations. Entrepreneurship is here seen as the process from entrepreneurial intention, development and establishment of new organizations. This process is defined as organizational emergence (Gartner, 1993), or the entrepreneurial process (Bygrave & Hofer, 1991; Reynolds *et al.*, 1994). This line of research has focused on the individuals, ventures and environments of new business start-ups, as well as the start-up process and its outcomes (Davidsson, 2006a; Ucbasaran *et al.*, 2001). In the early phase, the research centred much on identifying the special characteristics of an entrepreneur. Around 1990 the focus shifted towards the behaviour of entrepreneurs with reference to the entrepreneurial process (Carter, Gartner, & Reynolds, 1996; Gartner, 1988; Reynolds & Miller, 1992; Ucbasaran *et al.*, 2001). In this view, entrepreneurship involves the creation of new businesses that may or may not be innovative. Innovative and imitating new businesses are both result of entrepreneurial action, even though they may play different roles in society (Aldrich & Martinez, 2001). Innovation is thus not a necessary condition for entrepreneurship, but may be a characteristic of the entrepreneurial action (Gartner, 1988). Entrepreneurship is viewed as being pursued by individual entrepreneurs or business founders, alone or in teams.

The opportunity-based perspective places the pursuit of an opportunity as the core of entrepreneurship (Brazeal & Herbert, 1999; Shane & Venkataraman, 2000; Stevenson & Jarillo, 1990; Venkataraman, 1997). Many studies take as a starting point, explicitly or implicitly, Kirzner's (1973; 1997) view of the "alert entrepreneur". He/she identifies business opportunities as imperfections in the market and coordinates resources to exploit these opportunities, hereby restoring the balance in the market (Landström, 1999a). In this perspective, entrepreneurship is defined as the discovery and exploitation of business opportunities (Shane &

Venkataraman, 2000; Venkataraman, 1997). This definition ties entrepreneurship close to the individual, as opportunities only can be recognised through cognitive processes by individual persons (Dew, Velamuri, & Venkataraman, 2004; Shane, 2003). However, these individuals may be independent entrepreneurs or persons acting on behalf of existing firms. This allows for different modes of exploitation of entrepreneurial opportunities, through new business start-ups or through existing firms (Davidsson, 2003; Dew *et al.*, 2004; Shane, 2003; Shane & Venkataraman, 2000; Shook *et al.*, 2003; Ucbasaran *et al.*, 2001).

The opportunity-based view is distinct from the innovation-based view in that it does not necessarily consider Schumpeter's view on entrepreneurship as an innovative and pattern-breaking activity as a required condition for entrepreneurship (Landström, 1999b). Business opportunities are not only the result of new information (e.g. new technology), but may be based on market inefficiencies resulting from information asymmetry or on shifts in the relative costs and benefits of alternative uses for resources (Drucker, 1985). This allows not only for innovative but also for imitative opportunity identification and exploitation to be included in the entrepreneurship concept (Aldrich & Martinez, 2001; Davidsson, 2003; Shane, 2003). Davidsson (2003) even argued that including innovativeness as a criterion in the definition of entrepreneurship is not necessary. He suggests that a new business start-up in the market is always entrepreneurship, as it is adding a competitor and thereby drives the market process in the Kirznerian sense. This may seem contradictory to for instance Shane (2003) who put some form of innovation as a necessary condition for entrepreneurship. However, Shane specified this condition to be related to the milder form of innovation associated with Kirzner (1997). He exemplified placing a new restaurant on a different corner or using different recipes or employees as innovative enough to be included (Shane, 2003:8). Thus, in practical sense, the views of Davidsson and Shane do not differ particularly.

Further, the opportunity-based view differs from the business formation view in that it suggests a broader framework than firm creation (Shane & Venkataraman, 2000). While the start-up of a new business organization is one possible mode of opportunity exploitation, there are other possible modes. The opportunity can be exploited by selling or licensing it to an established firm, or pursued by employees

on behalf of existing organizations, sometimes leading to the start-up of spin-off organizations and sometimes not (Shane, 2003; Shane & Venkataraman, 2000). It may be pursued by voluntary organizations or by several cooperating firms as a joint venture or other type of joint operation. In other words, the entrepreneurial process can exist independently of organisational boundaries, and entrepreneurship does not imply the status of a particular legal entity (Landström & Johannisson, 2001). However, spokespersons for the opportunity-based view acknowledge that the entrepreneurial process requires organizing (Davidsson, 2003; Shane, 2003). Shane (2003:7) asserted that “it does require the creation of a new way of exploiting the opportunity (organizing) that did not previously exist”. Organizing efforts are needed to transform opportunities into wealth generation (Busenitz et al., 2003; Shook et al., 2003). As Davidsson (2003) pointed out, organizing here relate to the Weickian meaning of the concept (Gartner, 1985; Gartner & Carter, 2003). Weick defined the concept to organize as to assemble ongoing interdependent actions into sensible sequences to create sensible outcomes (Weick, 1979, cited from Gartner, 1985). It involves the coordination and establishment of routines, structures and systems (Gartner & Carter, 2003). In Davidsson’s (2003) view, entrepreneurship involves the creation of *new business activities* in terms of organizing new means-ends relationships or new goods/services, but not necessarily new legal firms. Entrepreneurship can then be viewed as emergence of new business activity (Davidsson *et al.*, 2001) through the identification and exploitation of business opportunities.

A central element of the creation of new business activities is the acquisition, organizing and leverage of the resources needed (Landström, 1999a; Landström & Johannisson, 2001; Shane, 2003). Individual entrepreneurs typically do not possess all the resources required to identify, pursue and exploit the opportunity into a profitable business activity (Shook et al., 2003). In stead, they have to acquire resources from other people and institutions (Stevenson & Jarillo, 1990; Venkataraman, 1997). Human, social, physical and financial resources need to be considered. The importance of resources to the entrepreneurial process has lead several scholars to include resource acquisition explicitly in the definition of entrepreneurship (Landström & Johannisson, 2001; Ucbasaran *et al.*, 2001). However, one might argue that the acquiring and organizing of resources is a

fundamental part of opportunity exploitation (Shook et al., 2003), and therefore does not need to be mentioned in the definition explicitly.

The opportunity-based view of entrepreneurship is utilized to guide this study. Entrepreneurship is seen as *the creation of new business activities through identification and exploitation of opportunities, of which the organizing of resources constitutes a vital part*. The focus on new business activities implies that the results of the entrepreneurial process may be a new firm or a new business activity within an existing firm. In two of the articles constituting this thesis, there is a particular focus on new business start-up as mode of exploitation. In the four articles discussing entrepreneurship in agriculture, however, the entrepreneurial activities studied may be organized as new businesses or within existing business organisations, i.e. different modes of exploitation. In both cases, the start-up of new business activities is at the centre of attention.

2.2 Previous research on portfolio entrepreneurship

The research interest into the phenomenon of portfolio entrepreneurship includes at least two distinct, but interlinked lines of research within the entrepreneurship literature, as well as one line of research related to rural sociology literature. Within the entrepreneurship field, one line of research refers to *habitual entrepreneurs*, defined as individuals who have made careers out of starting businesses (McGrath & MacMillan, 2000) or as entrepreneurs who have experience from starting and/or owning more than one business. Portfolio entrepreneurs are here the subgroup of habitual entrepreneurs who still retain their previous business when establishing⁸ a new business start-up (Westhead & Wright, 1998c). The other line refers to *multiple business owners*, defined as persons with ownership stakes in more than one business at the time (Rosa & Scott, 1999b). The rural sociology line of research has discussed portfolio entrepreneurship in terms of *pluriactivity* related to additional business activities among farmers. The main focus of these three lines of research is reviewed in this section.

⁸ May also include inheritance or acquisition of a business (Westhead & Wright, 1998c), see section 2.3.

2.2.1 The habitual entrepreneurship line of research

The habitual entrepreneurship line of research originally stems from research on new business start-ups with a focus on individual characteristics, such as previous business founding or management experience. The focus is put on the particular characteristics and behaviours of habitual entrepreneurs. Habitual entrepreneurs are generally seen as particularly successful entrepreneurs, and therefore worth studying and learning from (De Koning & Muzyka, 1996; MacMillan, 1986; McGrath & MacMillan, 2000). They may operate within an existing firm or through independent start-ups (McGrath & MacMillan, 2000). Their proposed success stems from their unique experience from several business generation processes. Repeated experience from entrepreneurial processes leads them to build an “experience curve” for entrepreneurship (MacMillan, 1986). They may learn how to overcome the obstacles during the start-up process (MacMillan, 1986; Stuart & Abetti, 1990), and develop a lens through which they perceive and evaluate opportunities (De Koning & Muzyka, 1996; McGrath, 1996; Ronstadt, 1988).

Portfolio entrepreneurs have been identified as an important ‘type’ of habitual entrepreneurs (Ucbasaran *et al.*, 2001; Westhead *et al.*, 2003a). It has been suggested that they are more alert to business opportunities and conduct more effective opportunity search (Ucbasaran *et al.*, 2003a; Westhead *et al.*, 2005). They put more emphasis on innovativeness (Westhead *et al.*, 2004a) and possess more individualistic and goal oriented personal attitudes (Westhead & Wright, 1998b, 1998c). It may seem that portfolio entrepreneurs are suggested to be more ‘entrepreneurial’ than other types of entrepreneurs.

2.2.2 The multiple business ownership line of research

The multiple business ownership line of research arises out of the perspective on entrepreneurship stemming from small business research. The focus is put on ownership stakes, and the fact that some persons are involved as owners in several independent businesses simultaneously (Rosa & Scott, 1999b; Scott & Rosa, 1997). This line of research has dealt with the estimation of the prevalence of serial and portfolio entrepreneurs or multiple business owners (Carter & Ram, 2003;

Hall, 1995; Schollhammer, 1991; Scott & Rosa, 1997; Westhead & Wright, 1998c). The aim has partly been to show that the phenomenon is widespread, and, thus, is worth studying more closely. In particular, this research has put forward arguments that one should put more focus on the individual rather on the firm as unit of analysis (Scott & Rosa, 1996; Westhead & Wright, 1998a). As a consequence, the question of small firm growth should be seen as a complex one, as growth can be manifested as an increase in the size of an existing firm or through the start-up of new firms (Scott & Rosa, 1997). This has led to some research into the formation of business groups, i.e. a set of companies run by the same entrepreneur or entrepreneurial team (Iacobucci, 2002; Iacobucci & Rosa, 2005; Rosa, 1998). Iacobucci and Rosa (2005) showed that growth through the formation of business groups could be a strategy to organize geographical extension, product diversification or market differentiation. The formation of groups of several businesses that are separate formal entities is seen as different from diversification of business activities within a single unit.

2.2.3 The pluriactivity line of research

Within studies of the farm sector, the concept of 'pluriactivity' (Fuller, 1990) has been developed during the last two decades to describe farmers' engagement in income generating activities in addition to farming. Until the 1980s farmers who also participated in gainful activities outside the farm, were largely recognized as 'part-time farmers' (Fuller, 1990). Taking the household as the social and economic unit of analysis, the focus of research shifted towards the 'pluriactive farm households' which are allocating resources between farm and non-farm activities (Efstratoglou-Todoulou, 1990). Research within rural sociology⁹ has particularly focused upon how new business activities may be a response to changes within agrarian and rural community changes. Pluriactivity has generally been seen as a response to recession and constraints within the agriculture sector and as a survival strategy for the farm household (Benjamin, 1994; Bowler *et al.*, 1996; Champagne *et al.*, 1990; Damianos & Skuras, 1996; Daskalopoulou & Petrou, 2002; Ilbery, 1991).

⁹ The concept is also used within agricultural economics and rural geography.

Studies in the field of pluriactivity have just as much been concerned with off-farm wage-earning as with having other businesses besides the farm, and have often not distinguished between the two. Eikeland & Lie (1999) argued that it may be useful to differentiate the concept of pluriactivity, and used Fuller's (1990) separation between 'making jobs' (operating enterprises) and 'taking jobs' (being a wage earner). In their study, they found that pluriactivity is an important strategy of persons living in rural Norway, and that about half of these strategies are based on 'making jobs', and not only 'taking jobs'. Some studies on pluriactivity have focused at the start-up of new businesses in particular, interpreted as alternative farm enterprises (Bowler *et al.*, 1996; Damianos & Skuras, 1996) or diversification (Edmond & Crabtree, 1994; Gasson, 1988; Ilbery, 1991; McNally, 2001). In this thesis, 'business pluriactivity' is used as a concept to describe this phenomenon within the pluriactivity line of research.

Studies have investigated push and pull factors related to business pluriactivity. Starting additional business activities have often been seen as pushed by the need to maintain or increase the income generated by the farm (Bowler *et al.*, 1996; Evans & Ilbery, 1992; Ilbery, 1991), particularly in sparsely populated areas where other employment opportunities than self-employment is scarce (Eikeland & Lie, 1999). However, pull factors related to 'accumulation' strategies have also been identified (Bowler *et al.*, 1996; Evans & Ilbery, 1992), and regional opportunities in non-agricultural markets have been found to pull business pluriactivity among farmers (Edmond & Crabtree, 1994).

2.2.4 Three lines of research – similarities and differences

As shown in the previous subsections, the three lines of research related to portfolio entrepreneurship differ regarding focus and perspectives can be identified. Table 2.1 summarizes the three perspectives. Studies related to habitual entrepreneurship place the core of interest in the phenomenon of portfolio entrepreneurs on their particular (start-up and/or ownership) experience, studies related to multiple business ownership focus on ownership, while business pluriactivity studies place their core of interest on the new, income generating activities. The phenomenon is in all three research lines defined according to involvement in more than one business. However, while the multiple business

ownership perspective focus on firms as formal entities, the business pluriactivity perspective focus on business activities which may be organized as firms, but more usually as a branch of the existing farm business. The habitual entrepreneurship perspective most often put the focus on firms, but some of the research within this area focuses on business activities or start-up processes without distinguishing between different modes of organization (e.g. McGrath & MacMillan, 2000). Both the habitual entrepreneurship and the multiple business ownership perspective argue that the individual entrepreneur should constitute the unit of analysis. The business pluriactivity line of research takes a somewhat different view, putting the farm household as the unit of analysis. The three research lines also vary in terms of the main research issues or themes covered in the studies, as summarized in Table 2.1.

Table 2.1 Three lines of research related to portfolio entrepreneurship

	Habitual entrepreneurship	Multiple business ownership	Business pluriactivity
Core of interest	Experience	Ownership	Income generating activity
Definition based on involvement in at least two:	Firms (business activities)	Firms	Business activities
Unit of analysis	Individual entrepreneur	Individual entrepreneur	Farm household
Main research issues	Entrepreneur characteristics Experience-based learning Expertise	Prevalence Motivation Strategies Growth	Prevalence Distribution Push/pull factors

However, while there are some differences, the three perspectives are also interlinked. In particular, the habitual entrepreneurship and multiple business ownership lines of research have a relatively high frequency of mutual citations. A few studies also combine insights from the multiple business ownership and the pluriactivity perspectives (Carter, 1998, 1999, 2001; Carter & Ram, 2003). In this thesis, the focus is mainly put on the habitual entrepreneurship perspective. However, insights from the multiple business ownership and business pluriactivity perspective are also utilized. Amongst other things, this combinatory approach is

has implications for the definition of the phenomenon of portfolio entrepreneurship. Definitional issues are discussed in the following section.

2.3 Definitional issues

MacMillan (1986:241) defined a habitual entrepreneur as an individual “who has had the experience in multiple business start-ups, and simultaneously is involved in at least two businesses”. Today, habitual entrepreneurs are usually broader defined, often equalized with experienced entrepreneurs, and MacMillan’s definition lies more closely to that of portfolio entrepreneur. In chapter 1, table 1.1 summarized definitions of portfolio entrepreneurs and related concepts utilized in previous studies. This review showed that there has been considerable inconsistency in the definitions adopted. The variations are mainly related to three dimensions.

First, one can distinguish between the focus on start-up experience from previous entrepreneurial processes and the focus on ownership or owner-management experience¹⁰ as the central criteria for the definition. Obviously, these two perspectives are overlapping as persons with start-up experience often, but not always, will have had an ownership stake in the business they started. Similarly, persons with previous ownership experience may also have participated in the start-up of this business. Some definitions require both start-up and ownership experience as criteria for habitual entrepreneurs (Kolvereid & Bullvåg, 1993; MacMillan, 1986; Starr *et al.*, 1993). Taking a different approach, Spilling (2000) differentiated between those with multiple start-up experience and those with ownership interests in more than one firm. However, the focus on ownership or owner-management is more compatible with a distinction between serial and portfolio entrepreneurs, since current ownership is the most applicable way to separate the two. The start-up phase is temporary in nature. Eventually this experience will therefore become past tense, and is therefore not suitable to separate portfolio from serial entrepreneurs

¹⁰ This includes experience as owner and major decision-maker in the firm, used by e.g. Westhead *et al.* (2003b)

Second, there is a distinction between involvement in multiple firms or multiple business activities. As indicated in Table 2.1, both criteria have been used within studies of portfolio entrepreneurs. Related to the discussion of the definition of entrepreneurship in section 2.1, this distinction concerns whether one should demand one specific mode of exploitation of the opportunities identified (a new firm) to define it as portfolio entrepreneurship, or not.

Third, definitions vary with respect to their exclusion or inclusion of ownership in acquired (purchased or inherited) businesses. While some definitions focus on founded businesses only (Birley & Westhead, 1993; Kolvereid & Bullvåg, 1993; Kolvereid *et al.*, 1991; Ronstadt, 1988; Westhead & Wright, 1998c), others include ownership stakes in founded, purchased and inherited businesses when habitual, portfolio and serial entrepreneurs are defined (Ucbasaran *et al.*, 2006; Westhead & Wright, 1998c; Wright, Westhead, & Sohl, 1998).

The definition of portfolio entrepreneurship used in this thesis focus upon owner-management. Portfolio entrepreneurs are seen as a distinct type based on their position as current owner and managers of existing businesses, while being involved in new business start-ups. Consequently, the focus is put on new business start-up, but allowing for that previous businesses may be founded or acquired (purchased or inherited) by the entrepreneur. Entrepreneurship is in this thesis seen as the identification and creation new business opportunities, organising the resources necessary and exploiting these business opportunities in the market through the creation of new business activities (see section 2.1). According to this view of entrepreneurship, new business activities may be organized within the existing formal entities (e.g. existing firms) or as new formal entities (e.g. as new firms). Hence, portfolio entrepreneurs are here defined as *existing owner-managers who discover new business opportunities and exploit them through organizing new business activities*. The domain of portfolio entrepreneurs as distinguished from other types of entrepreneurs is illustrated in Table 2.2 below.

Table 2.2 Types of entrepreneurs and business acquirers

Organized as:	New business activity start-up		Business activity acquisition	
	As separate firm	Within current firm	As separate firm	Within current firm
No previous owner-management experience	Novice entrepreneur	N/A	Novice acquirer	N/A
Previous owner-manager	Serial entrepreneur	N/A	Serial acquirer	N/A
Current owner-manager	Portfolio entrepreneur		Portfolio acquirer	

2.4 Key themes of portfolio entrepreneurship

The purpose of this chapter is to review previous literature and theoretical perspectives to for the theoretical framework for the thesis. This remaining part of the chapter is organized according to key themes or aspects of portfolio entrepreneurship, related to the gaps in the knowledge base identified in chapter 1. An overview of these themes and how they are interlinked is given in Figure 2.1 below.

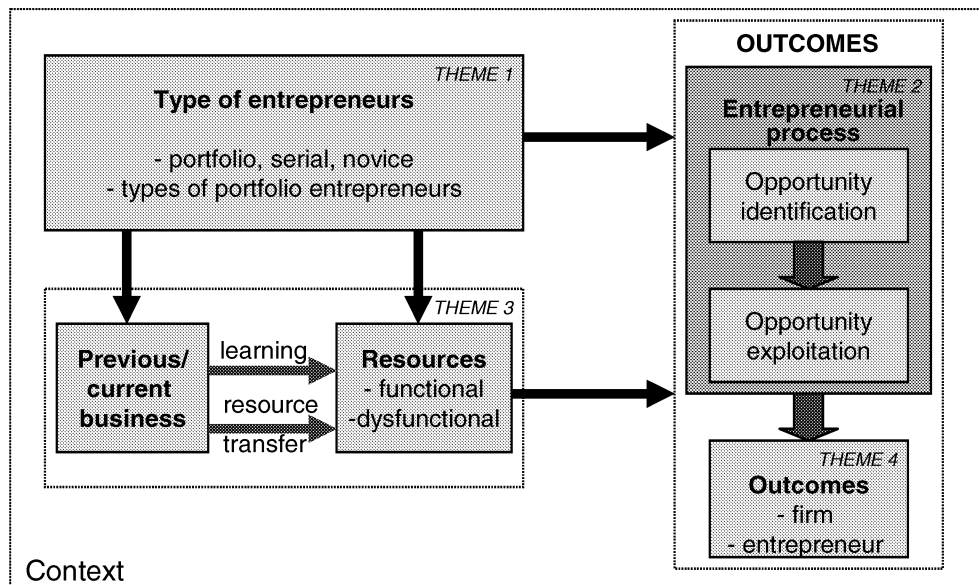


Figure 2.1 Overview of aspects of portfolio entrepreneurship

First, the identification of portfolio, serial and novice entrepreneurs as distinct types of entrepreneurs need to be acknowledged. Moreover, I argue that one should appreciate that there may be subtypes, implicating that various types of portfolio entrepreneurs may be identified (Theme 1). Second, different types of entrepreneurs may undertake different processes during their efforts to create new business activities (Theme 2). The entrepreneurial process is here seen as the process of identifying and exploiting new business opportunities.

Third, different types of entrepreneurs may have different access to resources, particularly because serial and portfolio entrepreneurs may have access to resources from their previous, and for portfolio entrepreneurs in particular, from their current other businesses, which may be transferred to new business activities. These resources may include financial, physical, organizational and social resources, as well as human resources developed through learning from previous experiences. Such resource transfer and learning may influence on the entrepreneurial process and its outcomes, functionally as well as dysfunctionally (Theme 3).

The influence of entrepreneur types and resource access to the identification as well as exploitation of business opportunities is a key issue which deserves further inquiry. Further, this may have consequences for the outcomes of the entrepreneurial process at the firm/business activity and entrepreneur levels (Theme 4). The specific context in which portfolio entrepreneurship takes place may impact on the resources available, the extent of and value of resource transfer and learning, as well as the entrepreneurial process and its outcomes, and is thus relevant for all the four themes..

2.5 Theme 1: Types of entrepreneurs

2.5.1 Portfolio entrepreneurs as a distinctive type

Several studies have explored the distinctive characteristics of portfolio entrepreneurs as compared to other entrepreneurs. Studies have revealed that portfolio entrepreneurs are more often male (Kolvereid & Bullvåg,

1993; Rosa & Hamilton, 1994; Westhead & Wright, 1998b), start their first business at a younger age (Birley & Westhead, 1993; Kolvereid & Bullvåg, 1993; Westhead & Wright, 1998b), more often have parents with business ownership experience (Westhead *et al.*, 2005), and are more likely to have higher education than novice entrepreneurs (Donckels *et al.*, 1987; Kolvereid & Bullvåg, 1993). Results related to prior work experience of portfolio as compared to novice and serial entrepreneurs are inconclusive (Westhead & Wright, 1998a). However, Westhead et al (2005) found that a larger proportion of portfolio entrepreneurs than other entrepreneurs had a managerial position in their last job and they had also worked in more organizations than novice entrepreneurs.

Portfolio entrepreneurs have also been found to differ from other entrepreneurs regarding opportunity identification behaviour. They are more alert to business opportunities and use a wider range of information sources than novice entrepreneurs (Westhead *et al.*, 2005). Experienced entrepreneurs identify more opportunities than novice entrepreneurs, and they also differ regarding their attitudes and perceptions of opportunity identification (Ucbasaran *et al.*, 2003a). Further, Westhead et al. (2004a) found portfolio entrepreneurs to put more emphasis on creativity and innovativeness than other entrepreneurs.

Further, Westhead & Wright (Westhead & Wright, 1998a, 1998c) suggested that portfolio entrepreneurs may differ from serial and novice entrepreneurs in terms of their personal attitudes towards entrepreneurship. They may for instance be more individualistic, more influenced by a desire to be in a powerful role and more concerned with accumulating wealth and gaining recognition from their entrepreneurial endeavours.

In conclusion, research indicates that portfolio entrepreneurs are characterized as being more resource rich in terms of human capital resources than other entrepreneurs. Some of these characteristics may be

inherited. Differences in these factors result from particular types of people being more likely to choose to become portfolio entrepreneurs than others (e.g. men). However, some distinctive characteristics may stem from the particular experience of portfolio entrepreneurs. Starr and Bygrave (1992) identified a set of variables that may change with entrepreneurial experience; enthusiasm/energy, motivation, financial resources, career anchor, management style, ethics, expertise, wisdom, network, and reputation. Likewise, Ucbasaran, Wright and Westhead (2003b) suggested that prior business ownership experience may facilitate learning within areas such as how to negotiate with financiers, the importance of planning, the need to identify the appropriate levels of leverage, and the need to identify factors that are beyond the control of the entrepreneur. It has also been suggested that entrepreneurs from experience will develop more effective information search behaviour techniques (Westhead *et al.*, 2005), their way of organizing information (Ucbasaran *et al.*, 2003b), and their cognitive abilities to process information (McGrath, 1996; Ucbasaran *et al.*, 2003a). The distinctive characteristics of portfolio entrepreneurs may therefore also be developed, for instance as a result of learning from experience.

The view that the skills and knowledge of portfolio entrepreneurs may be *developed* from their prior experience, lets us view this not only as distinctive characteristics but also as (developed) capital resources of portfolio entrepreneurs (see section 2.7). From their prior, and ongoing, entrepreneurial experiences, portfolio entrepreneurs may have developed a variety of resources that might be drawn upon in the process of starting a new business and constitute advantages to them as compared to inexperienced entrepreneurs (Scott & Rosa, 1996; Westhead *et al.*, 2003a). However, not all portfolio entrepreneurs control a similar pool of resources. Rather the resource base developed from prior experience is likely to be idiosyncratic. Consequently, there may be variations in the characteristics and resources of portfolio entrepreneurs.

2.5.2 Types of portfolio entrepreneurs

Several authors have suggested that motivations for portfolio entrepreneurship may be diverse (Carter & Ram, 2003; Rosa & Scott, 1999a; Wright, Robbie, & Ennew, 1995). Since motivation is likely to influence on the strategies chosen, the processes as well as the outcomes of the entrepreneurial initiatives can vary according to the diversity in motivations of the entrepreneurs involved. Entrepreneurs' motivation to start business activities have been key theme within entrepreneurship research for a long time. However, until recently, this literature has failed to reflect on the possibility that the motivations for the start-up of subsequent ventures may differ from the motivations for the initial one (Ucbasaran *et al.*, 2003b; Wright *et al.*, 1995). For instance, Westhead *et al.* (2005) found that portfolio entrepreneurs more often were motivated by the possibility to generate personal wealth and by the challenge offered by the problems and opportunities of starting new business activities than other entrepreneurs. Further, they were found to more seldom start a new business because of unemployment/redundancy or to gain greater flexibility for personal and family life.

Iacobucci (2002) discussed reasons why some entrepreneurs start a group of businesses in stead of growing their first business, and hence become portfolio entrepreneurs. He identified three main reasons; the firm's growth policy, entrepreneurial dynamics and capital accumulation on the part of the entrepreneur or his/her family. While growth policy seemed to be the most dominant reason, other reasons were also present for some portfolio entrepreneurs. Rosa and Scott (1999a) interviewed habitual entrepreneurs regarding how and why each business was added to the business group. The motivations given included the wish to diversify into a new market, to spread risk or to overcome potential adversity, business creation as a challenge or a hobby, to protect a new area or brand name, to ring fence a geographical diversification, to ring fence risk, to add value to existing

ventures owned by the entrepreneur, to assist a friend or relative, to launder money, profits and/or family assets, to avoid paying taxes, and to cut costs and enhance internal efficiencies.

From their literature review, Carter and Ram (2003:375) concluded that motivations for portfolio entrepreneurship can “range from entrepreneurs who invest in several sectors at once and who are thus able to move their capital between various enterprises as the market conditions require; to small scale traders who diversify their economic activities to cover both productive and distributive functions; to the only survival strategy available to marginal businesses”. It is likely that new business that are started to utilize new opportunities along the opportunity corridor or to increase capacity to be able to take more of fast growing market, may be quite different from those started because the first business do not give enough income for the family or to save the first business from closure. It may therefore be useful to be able to differ between these different types of business portfolios, in particular when discussing performance consequences of portfolio entrepreneurship.

2.6 Theme 2: Identification and exploitation of opportunities

2.6.1 The opportunity based view of entrepreneurship

As mentioned earlier, the opportunity based view of entrepreneurship focuses at the identification and exploitation of business opportunities. This view emphasizes business opportunities as the main source of entrepreneurial activities and an important trigger of new business start-ups, and thus as the fundamental aspect of the entrepreneurial process. (Eckhardt & Shane, 2003; Stevenson & Jarillo, 1990; Venkataraman, 1997). The entrepreneurial process involves the functions, activities and actions associated with the identification of opportunities and the creation of business activities to pursue these opportunities (Bygrave & Hofer, 1991).

Entrepreneurial opportunities are those situations in which new goods, services, raw materials, and organizing methods can be introduced through the formation of new means, ends, or means-ends relationships (Casson, 1982; Eckhardt & Shane, 2003). An opportunity may appear as an imprecisely-defined market need, or as un-employed or under-employed resources or capabilities (Kirzner, 1997). The existence and identification of opportunities is seen as a result of an economic system in which information is unevenly distributed across people (Eckhardt & Shane, 2003; Kirzner, 1997). However, knowledge is not sufficient to identify an opportunity; the value of this knowledge needs to be recognized (Alvarez, 2003), and the means-ends relationship needs to be developed (Ardichvili *et al.*, 2003; Eckhardt & Shane, 2003).

Entrepreneurial activities can be understood as the nexus of opportunities and enterprising individuals (Shane, 2003). Access to opportunities may pull individuals to create new business activities. On the other hand, whether the individuals decide to pursue the opportunity depend on their evaluation of the opportunity (Ardichvili *et al.*, 2003). The exploitation of an opportunity refers to the process where activities and investments are committed to build or organize an efficient business system in order to be able to gain returns from the business concept arising from the opportunity (Choi & Shepherd, 2004). This process can be understood as the start-up of a new business activity, organized within an existing firm or through the formation of a new firm (Davidsson, 2003).

This section will first give a brief account of the process of opportunity identification. Following, the opportunity identification process are discussed in relation to portfolio entrepreneurs. Thereafter, the process of opportunity exploitation will be briefly reviewed, followed by a section discussing opportunity exploitation processes of portfolio entrepreneurs.

2.6.2 The process of opportunity identification

One of the main puzzles that research relating to entrepreneurial opportunities has dealt with why, when and how some individuals generate opportunities while others do not (Shane & Venkataraman, 2000). There seem to be an agreement that some persons are more able to identify particular opportunities than others (Gaglio

& Katz, 2001; Krueger, 2000; Ronstadt, 1988; Shane, 2000; Ucbasaran *et al.*, 2003a; Venkataraman, 1997). The ability to discover these opportunities demands the possession of the necessary information as well as the cognitive ability to evaluate this information (Corbett, 2007). Kirzner (1973; 1997) argued that opportunities are discovered by individuals who are alert; that is they have “an attitude of receptiveness to available (but hitherto overlooked) opportunities” (Kirzner, 1997:72).

Opportunities vary largely in complexity and characteristics, and so do the processes through which they are identified. The literature has discussed at least three dimensions of such variations. First, opportunities may be of a Schumpeterian or Kirznerian type (Shane, 2003). In Schumpeter’s (1934/1962) argument, entrepreneurs use *new* information to recombine resources into more valuable forms. In this view, opportunities may come as a result of research and generation of new knowledge. In contrast, Kirzner (1997) argued that opportunities exist due to differences in access to *existing* information. In particular, knowledge on markets, how to serve markets, and customer problems will influence on peoples ability to see or create opportunities (Shane, 2000). Opportunities can therefore either be seen as ‘pushed’ from new innovations, such as research and technological development, or ‘pulled’ from changes in markets and customer needs.

Second, opportunities may be the result of serendipity or deliberate search (Chandler, Dahlquist, & Davidsson, 2002; Gaglio & Katz, 2001). Caplan (1999) argued that opportunity identification is the outcome of a successful rational search process. Entrepreneurs identify opportunities as a result of superior information processing ability, search techniques, or scanning behaviour (Shaver & Scott, 1991). This view places the investment in information at the centre of opportunity discovery (Fiet, 1996). Kirzner (1997), however, argued that discovery of opportunities is neither a result of deliberate search for information nor a result of pure chance. Instead it is something in between: the result of alertness to possible opportunities. Even though opportunities are seldom the result of pure luck, it might be argued that the process of opportunity discovery may be more or less pushed by an active search. As a consequence, we might identify different types of such processes (Chandler *et al.*, 2002).

Third, there is also a debate whether opportunities objectively exist and needs to be discovered by the entrepreneur or whether opportunities are subjectively created by the entrepreneur (Gartner *et al.*, 2003). The first view is apparent in the work of both Schumpeter and Kirzner who both discusses how opportunities are discovered. Further, Shane & Venkataraman (2000) argued that opportunities themselves are objective phenomena but that they are not known to all parties at all times. In contrast, De Koning (1999) hold the view that opportunities are formed. They exist in the mind of the entrepreneur as creative constructions (Hench & Sandberg, 2000). Gartner *et al.* (2003) saw opportunities as enacted, as outcomes of the sense-making activities of individuals. These two views result from different ontological paradigms. While realists conceive opportunities as, at least partly, being 'out there' awaiting discovery, evaluation and exploitation, social constructionists consider opportunities as only existing within the mind of the entrepreneur.

However, regardless of whether social environments are objective or subjective phenomena, the impact they have on individuals' perceptions and intentions are real (McMullen & Shepherd, 2006). According to Sarason, Dean and Dillard (2006), entrepreneurial ventures are created by purposeful actions through a unique co-evolutionary interaction between the entrepreneur and the socio-economic system. This view emphasise the ability of entrepreneurs to reflect upon and shape the environment, while they at the same time are an integrated part of their environment. Ardichvili *et al.* (2003) assessed that elements of opportunities may be recognized as objective phenomenon, but that opportunities as such are created. Opportunity identifications are not instant happenings. Recently, the identification of opportunities has been viewed as a process which involve elements of both 'objective' recognition and 'subjective' creation (Ardichvili *et al.*, 2003; Corbett, 2007; McMullen & Shepherd, 2006). Opportunities begin as simple concepts that become more elaborate as entrepreneurs develop them (Ardichvili *et al.*, 2003). Taking this perspective, opportunities may vary with regard to the extent to which they involve recognition and creation.

2.6.3 Opportunity identification and the portfolio entrepreneur

It has been argued that portfolio entrepreneurs may be particularly good at discovering new business opportunities (MacMillan, 1986; McGrath, 1996; McGrath & MacMillan, 2000; Ronstadt, 1988). Founding, owning and operating a firm gives access to information and knowledge which can become the basis of other valuable business ideas. Ronstadt (1988:31) introduced “the corridor principle” and suggested that “the mere act of starting a venture enables entrepreneurs to see other venture opportunities they could neither see nor take advantage of until they had started their initial venture”. Shane (2000) argued that entrepreneurs discover opportunities because prior knowledge triggers recognition of the value of information. Hills, Shrader and Lumpkin (1999) saw the opportunity identification process as starting in the base of experience and knowledge of the entrepreneur. If being an owner-manager of an existing firm gives access to information unavailable to others, existing owner-managers may possess information about business opportunities that are hidden for others. Shane & Venkataraman (2000) suggested that this prior information necessary to identify an opportunity may be about user needs or about specific aspects of the production function.

In addition to giving access to information that forms the basis of new opportunities, entrepreneurial experience may also develop skills and capabilities that increase the ability to identify opportunities from this information (McGrath, 1996; Ucbasaran *et al.*, 2003a). McGrath (1996) advocated that experienced entrepreneurs often have larger ability to identify and take advantage of opportunities, since experience increases their sense-making ability (Weick, 1979). Ucbasaran, *et al.* (2003a) investigated information search and opportunity identification among novice and habitual entrepreneurs. They found that while there were no differences in the intensity of information search and number of sources used, habitual entrepreneurs identified more opportunities given a certain amount of information. They also found that habitual entrepreneurs had different attitudes to opportunity identification than their less experienced counterparts. Habitual entrepreneurs put more focus on problem solving activities as a source of opportunities, they enjoyed opportunity identification more and they assessed that

one opportunity often lead to another. The latter is in congruence with Ronstadt's (1988) 'corridor principle'.

The above discussion indicates that identification of opportunities is a path dependent process, rooted in the knowledge and abilities of the individual entrepreneurs. However, a broader perspective can be taken to this path dependency, opening for that opportunity identification may be influenced by the broader set of resources controlled by the entrepreneur. Alvarez (2003) argued that heterogeneity of resources, which is a basic condition to the resource-based view (see 2.7.1), also is central to entrepreneurship since opportunities are discovered when some persons have insight into the value of resources that others do not (knowledge asymmetry). For instance, through their existing businesses, portfolio entrepreneurs may have knowledge of for instance a machine not fully employed, or somebody's skill which could be better utilized, or a surplus stock which can be drawn upon during an interruption of supplies. Such knowledge can be quite useful as basis for identification of business opportunities (Swedberg, 2000). Network contacts related to the current businesses of portfolio entrepreneurs can help expand the boundaries of the entrepreneur's thinking by offering access to knowledge and information, and may in this way expose the entrepreneur to new venture ideas and opportunities (Hills, Lumpkin, & Singh, 1997; Singh *et al.*, 1999). Also Mosakowski (2002) argued that entrepreneurial alertness may be facilitated by resources of the firm or the entrepreneur. Entrepreneurial knowledge and the coordination of this knowledge lead entrepreneurs to identify opportunities (Alvarez, 2003). The developed capital resources of experienced entrepreneurs may thus lead to new business opportunities not equally available to inexperienced entrepreneurs.

2.6.4 The process of opportunity exploitation

Opportunity identification is necessary but not sufficient for a new business activity to be created. Not all identified opportunities are exploited (Shane & Venkataraman, 2000). Someone must decide to pursue the opportunity and be able to do this successfully. The decision to pursuit and the process of establishing a new business activity are the central elements of opportunity exploitation.

The decision to pursue an opportunity

Whether the individuals decide to pursue the opportunity depend on their evaluation of the opportunity (Ardichvili *et al.*, 2003), and on choices related to their career (Lee & Venkataraman, 2006). First, the opportunity has to be seen not only as an opportunity for someone, but as an opportunity for the individual in question (Craig & Lindsay, 2001; McMullen & Shepherd, 2006). This evaluation is dependent on how individuals perceive their own abilities and aspirations and how they perceive their alternative options (Lee & Venkataraman, 2006), their knowledge and motivation (McMullen & Shepherd, 2006), how they perceive the risk associated with pursuing the opportunity (Choi & Shepherd, 2004; Keh, Foo, & Lim, 2002), and the type of opportunity identified (Samuelsson, 2001).

Second, based on this evaluation the individuals have to decide to take an initiative to exploit the opportunity. Lee and Venkataraman (2006) saw this decision as a career choice for the individual. They argued that individuals with excellent human and intellectual capital that cannot be easily observed or verified are more likely to pursue opportunities, particularly if their competences are generalist, highly situational and dynamic competences rather than specialist, not highly situational and static competences. Further, they argued that individuals, with rich social networks or a high social position, are more likely to engage themselves in opportunity exploitation, as their social relations help them verify the information of the opportunity better than others. These arguments can be related to an opportunity cost perspective, where individuals are assumed to consider the opportunity cost of pursuing alternative activities in reaching their decision to pursue an identified opportunity (Ucbasaran *et al.*, 2006). They will try to exploit the opportunity when the opportunity cost is lower (Amit, Muller, & Cockburn, 1995; Reynolds, 1987). However, Lee and Venkataraman (2006) do not take into consideration that opportunities may be pursued by individuals who are current owner-managers and therefore don not only choose between employment and careers as an entrepreneurs. They also have an option to continue developing their current business(es).

The decision to pursue an opportunity is related to individual as well as contextual factors (Lee & Venkataraman, 2006; Shane, 2003). Ucbasaran *et al.* (2006) argued that the decision to pursue an opportunity is related to the human capital resources

of the individual. Ajzen's (1991) theory of planned behaviour have been utilized to explain individual factors influencing the decision to start a new business activity (Kolvereid, 1996; Krueger & Carsrud, 1993; Tkachev & Kolvereid, 1999). According to this theory, intention to start a new venture is a strong predictor of behaviours aiming at start-up. Entrepreneurial intentions are again influenced by the individual's attitudes towards this behaviour, social norms and perceived behavioural control. These factors are related to how desirable and feasible the start-up of a business activity is perceived by the individual (Krueger & Brazeal, 1994). Both perceived desirability and perceived feasibility are likely to be influenced by prior exposure to entrepreneurial activities (Krueger, 1993), and thus vary between novice, serial and portfolio entrepreneurs.

The institutional environments, including the economic, political and cultural context, influence people's willingness to engage in entrepreneurial activities (Shane, 2003). According to Krueger and Carsrud (1993) environments can be viewed as exogenous factors affecting perceived desirability and feasibility. Favourable environments for starting business activities may increase the possibility that identified opportunities actually are exploited acting as pull mechanisms. On the other hand, lack of other income sources and other environmental constraints may push individuals to pursue entrepreneurial opportunities. In the Global entrepreneurship monitor's (Kolvereid, Alsos, & Åmo, 2004; Reynolds *et al.*, 2003) distinction between necessity and opportunity based entrepreneurship can be viewed as a simplified version of a push and pull framework. The results indicate that push as well as pull factors are associated with engagement in entrepreneurial activities, and that the contextual environments influence on extent to which push or pull factors are dominating.

The process of starting a business activity

The exploitation of an opportunity through the creation of a new business activity can be seen as an evolutionary process in which resource acquisition and organizing are the central elements (Samuelsson, 2001; Weick, 1979). This is an iterative, non-linear, and feedback driven process which may vary extensively between entrepreneurs (Bhave, 1994; Bygrave & Hofer, 1991; Carter *et al.*, 1996). Katz (1990; 1992) suggests there are several phases which an entrepreneur has to address to establish a new firm, however not necessarily in a certain chronological

order. A number of milestones have been identified (Block & MacMillan, 1985; Katz, 1992; Starr *et al.*, 1993).

Nascent entrepreneurs undertake activities and address milestones to be able to start the new business activity based on the opportunity identified (Carter *et al.*, 1996). They may move backwards and forwards through different phases and activities, but reaching certain milestones may be the necessary demonstration to themselves and to others that the process is in progress. This is in line with Weick's (1979) theory of organizing. According to Weick, an organization can be seen as an ongoing process of interactions among individuals. The creation of an organization (i.e. business activity) implies initiation of interaction processes. This can be seen as an 'enactment' process where undertaking activities which demonstrate to others that the emerging business is 'real' makes it more likely that a new business activity is established (Carter *et al.*, 1996).

Gartner and Starr (1993) argued that the specific patterns of behaviour in the start-up process influence the creation of a new business. Kolvereid and Bullvåg (1994) found that implemented businesses had experienced a higher number of events than abandoned business plans. Carter, *et al.* (1996) found that the number and kinds of activities nascent entrepreneurs became involved in and the sequence of these activities during the business start-up process, had a significant influence on their ability to successfully create a new business. Their findings suggest that nascent entrepreneurs who are able to start a business are more aggressive in making their business tangible for other individuals than those who fail to start a business. Taken together, results from previous studies indicate that the actual behaviours of nascent entrepreneurs trying to exploit a business opportunity, significantly influences the likelihood that they succeed in establishing a new business activity.

2.6.5 Opportunity exploitation and the portfolio entrepreneur

Based on a human capital perspective, Ucbasaran, *et al.* (2006) suggested that portfolio entrepreneurs will pursue a greater proportion of identified opportunities than serial and novice entrepreneurs. Portfolio entrepreneurs can draw on information transferred from their previous entrepreneurial careers and knowledge developed from experience. This may make them more able to assess the wealth

creating potential in the opportunities as well as to realize that wealth cannot be created unless the opportunity is exploited (Ucbasaran *et al.*, 2006). Cooper, Woo, and Dunkleberg (1989) found that people are more likely to *exploit* opportunities if they have developed useful information for entrepreneurship from their previous career.

Further, portfolio entrepreneurs may have access to a greater variety of resources, including networks, finance, premises and organizational routines, which can facilitate an eventual exploitation of additional resources (Ucbasaran *et al.*, 2006). They may therefore perceive the pursuit of an opportunity as more feasible. People consider their abilities to exploit the opportunity when they consider whether to pursue it or not. The more transferable the information or knowledge is, the more likely is it that the entrepreneurial opportunity will be exploited, since learning reduces its cost (Shane & Venkataraman, 2000). The same can be argued related to access to social, physical and organizational resources. Thus, the transferability of resources from current and prior business activities is important. This can imply that business opportunities which lie 'close to' the current business activities are more likely to be pursued than opportunities which are more deviant when it comes to the competence and other resources needed.

Moreover, the experience of entrepreneurs is also likely to influence on their behaviour when the decision to pursue the opportunity is taken. MacMillan (1986) even suggested that habitual entrepreneurs may develop an 'experience curve' which make them able to utilize experience based knowledge in new start-up processes. Accordingly, Starr and Bygrave argued that experienced entrepreneur are likely to meet milestones and conduct activities related to establishing a new business activity more efficiently than novice entrepreneurs (Starr & Bygrave, 1992). If these arguments hold, we would expect habitual entrepreneurs to carry out somewhat different start-up processes compared to novice entrepreneurs. Portfolio entrepreneurs can also rely on resources and activities of current firms in the new business start-up process (see section 2.7.4). Consequently, some activities in the start-up process can be postponed to later in the process (e.g. rent premises, establish relationships with accountants, etc.). Portfolio entrepreneurs can also have the possibility to 'wait and see' since they already have other organizations up and running. They can make smaller investments in terms of time and money and wait

for additional information before they complete the start-up process, at a time when the uncertainty is reduced (McGrath, 1996). As a result, behaviours in the start-up process can be expected to be different for portfolio entrepreneurs compared to other entrepreneurs.

2.6.6 Summary

In this section, insights from the opportunity based view of entrepreneurship have been discussed in relation to portfolio entrepreneurs. The knowledge and resources of portfolio entrepreneurs are assumed to influence on opportunity identification as well as opportunity exploitation. In the next section, insights from the resource based view are discussed in order to build a broader framework to consider the impact of learning and research transfer between previous, current and new business activities of portfolio entrepreneurs.

2.7 Theme 3: Learning and resource transfer

2.7.1 Resources of portfolio entrepreneurs

Previous literature has suggested that habitual entrepreneurs may learn from their previous experience and therefore bring superior competence into the process of starting new business activities. This experience-based competence may include knowledge and skills, as well as developed cognitive schemas and capabilities for instance related to opportunity search (Ucbasaran *et al.*, 2002), information processing (McGrath, 1996), or networking (Singh *et al.*, 1999). This literature builds on various theoretical arguments, for instance related to human capital theory, cognitive theory and real option theory (see table 1.3). This thesis builds on this literature. However, the competence developed from previous entrepreneurial experience is seen as one among several types of resources which portfolio entrepreneurs may ‘transfer’ from previous/current businesses into new ventures.

According to the Oxford Advanced Learner’s Dictionary resource is defined as (Hornby, 1989:1076):

Resource *n* **1** supply of raw materials, etc which bring a country, person, etc wealth. **2** thing that can be turned to for help, support or consolation when needed. **3** ingenuity or quick wit.

Accordingly, broad definition of resources covering the different understandings of the concept will include input factors such as raw materials, as well as resources tied to human beings, such as knowledge and skills. Resourceful is defined as “clever at finding ways of doing things” (Hornby, 1989:1076), which indicates that abilities and ways of thinking may be a part of the resource concept. Thus, what is learned from experience may be perceived as resources controlled by the entrepreneur, which, like the other resources s/he control, can be transferred to and utilized in new business ventures.

A resource based view of the firm is utilized to discuss how different types of resources may influence on the process of identifying new business opportunities and exploiting them through the start-up of new business activities. The broad definition of resources taken in this thesis is applicable to the resource-based view. Resources are here defined as material as well as immaterial assets controlled by the firm (Penrose, 1959; Wernerfelt, 1984). Firm resources are generally seen as including all assets, capabilities, organizational processes, firm attributes, information, and knowledge controlled by the firm which makes the firm able to generate and implement strategies that gives it competitive advantage (Alvarez & Barney., 2000; Barney, 1991). However, it can be argued that the entrepreneur is the primary resource of a new enterprise (Brush *et al.*, 2001; Venkataraman, 1997), at least until an organization is well developed and other central resources are acquired or created. For most new firms, the entrepreneur or business owner will presumably continue to be a vital resource for the firm in the foreseeable future.

This section will first give a brief general account of the resource based view of the firm. Thereafter, this view is discussed particularly in relation to portfolio entrepreneurs and their potential resource transfer. Different types of resources and resource transfer are then highlighted. Finally, potential dysfunctional aspects of resource transfer are considered.

2.7.2 The resource based view of the firm

The resource based view of the firm (Barney, 1991; Conner, 1991; Wernerfelt, 1984) suggests that organizations consist of heterogeneous bundles of resources. By combining such bundles in specific ways, a firm can create unique capabilities and develop a (sustainable) competitive advantage. The perspective originates from Penrose's (1959) theory of the growth of the firm. She asserted that firm growth depend on the creation of an organization that structures the growth of knowledge, and that the rate and direction of growth are both strongly influenced by the organisation and its bundles of resources.

In the resource based view each firm is seen as unique in the sense that it consists of resource combinations different from those of other firms. If the firm's resources are valuable, rare, and hard to copy, they can be the foundations of sustainable competitive advantage (Barney, 1991). As generic resources are combined, they may constitute capabilities, which are interactions among resources that enhance the capacity of the firm to deploy resources to affect a desired end (Amit & Shoemaker, 1993). Capabilities which are crucial to the firm's performance over time are seen as core competences, that is the things the firm does particularly well which contribute to its competitive advantage (Amit & Shoemaker, 1993; Brush *et al.*, 2001). However, the value of resources depends on the fit to the environment (Chandler & Hanks, 1994). The firm can build a competitive advantage if it controls unique resources that the competitors have no or smaller access to, and build its strategies on these resources, at the same time as factors in the environment largely value these specific resources or their results.

It is often argued that knowledge resources more likely will be important to the development of competitive advantage than other resources (Foss, 1997). Knowledge resources more often satisfy the criteria related to value, rareness, inimitability and insubstitutability. Knowledge resources are also seen as central to the utilization of other resources. They are therefore central elements of the resource bundles which create competitive advantage. Penrose (1959) suggested that valuable resource bundles often consist of superior resources combined with a specific competence to exploit these resources (see also Mahoney & Pandian, 1992).

Widding (2003) pointed at the special characteristics of knowledge as a resource: Knowledge is not reduced by usage, in stead it can grow. Further, knowledge can be shared, for instance between businesses, without reducing the amount of it for the one who shares it. Alvarez and Busenitz (2001) argued that knowledge resources are particularly important for entrepreneurship since business opportunities emerge when individuals possess insights and knowledge which others do not have about the value of specific resources or combination of resources. Alvarez and Barney (2004) discussed entrepreneurial knowledge as a conceptual, abstract knowledge of where to obtain undervalued resources and how to employ these resources. Entrepreneurial knowledge can be explicit or tacit, and can be one of the types of knowledge entrepreneurs may learn from experience. Dew, *et al.* (2004) asserted that the entrepreneur-opportunity nexus is vital for the creation of business opportunities. They suggested that knowledge is dispersed and therefore idiosyncratic to each individual, and that this is creating opportunities which constitute the basis of new business activities.

Lichtenstein and Brush (2001) pointed at the need for acknowledging that resource bundles develop and change over time. Conner (1991) asserted that the discerning of appropriate resources is a matter of entrepreneurial vision, and that this matter has scarcely been discussed within the resource-based view. Alvarez (2003) suggested that an entrepreneurship perspective could inform the field of strategic management about the process of how resources are discovered and recombined to provide more complex and unique resources or capabilities that lead to competitive advantage.

There have recently been substantial efforts to unite the views of the resource-based view and the opportunity-based view of entrepreneurship (e.g. Alvarez & Barney, 2002; Alvarez & Busenitz, 2001; Hitt *et al.*, 2001; Hitt *et al.*, 2002). Several authors within the resource-based view have highlighted the entrepreneur's role within firm strategy (Alvarez & Barney., 2000; Conner, 1991; Mosakowski, 2002). Moreover, entrepreneurship researchers have adopted a resource-based view to understand outcomes of entrepreneurial activities (Brush & Chaganti, 1998; Brush *et al.*, 2001; Haber & Reichel, 2006; Lichtenstein & Brush, 2001; Rotefoss, 2001).

2.7.3 The resource based view and portfolio entrepreneurs

That the development and composition of initial resources are vital to a new venture's success is often overlooked or underestimated (Alvarez, 2003; Brush *et al.*, 2001). To construct an initial resource base in a new business activity, the entrepreneur needs to identify, assemble and acquire resources to meet a perceived opportunity. Further, this often has to be done before a specific business idea is developed and can be easily communicated to others. Further, at this point it may be difficult to decide which type and amount of resources that will contribute to a competitive advantage of the new business. Each resource choice may have significant implications for survival and growth (Brush *et al.*, 2001). Constructing an initial resource base may therefore be an exceptional challenge for the entrepreneur. Brush *et al.* (2001) identified four initial resource challenges faced by entrepreneurs: assembling, attracting and combining various resources, and transforming personal resources into organizational ones.

Brush, Greene and Hart (2001) compared the development and composition of an initial resource base of two different venture of the same entrepreneurial team. They noted:

“Though the same people were involved, and the defining technologies were very similar, the resource bases on which Hawkins and Dubinsky built the Palm [first venture] and Handspring [second venture] ventures were very different. The assets they created in Palm provided a rich resource legacy that they were able to bring to Handspring. (...) In the Handspring venture, Hawkins started with a much deeper and broader array of resources. While the venture was new, it imported many more complex organizational resources (systems, relationships) from Palm. Because Handspring began life with a wealth of knowledge-based resources, it was able to develop its own organizational system, routines, and product very quickly. The founders also possessed sufficient financial capital to fund the seed round of development, and were in a very strong negotiation position when they later decided to seek venture capital partners.” (Brush *et al.*, 2001:67-68).

At the first venture these founders brought few resources. At the second venture, on the other hand, they possessed substantial social and human resources developed from their entrepreneurial experience, financial resources attained from their prior success, organizational capabilities from bringing in members of a previously organized team, and a reputation as successful entrepreneurs. Brush et al. further notes:

“The cooperative learning that took place in another environment allowed them to import a greater level of tacit knowledge that leveraged capabilities (relationships with suppliers, potential customers, and capital providers), quickly producing competencies that supported an integrated work process for both organizational and technological development” . (Brush et al., 2001:69)

It can be argued that portfolio entrepreneurs may bring a great variety of resources from their previous and current ventures, including human and social capital resources developed through experience, as well as physical, financial and organizational resources which can be made available or transferred from the other business(es) which the portfolio entrepreneur currently own and manage.

2.7.4 Types of resources of portfolio entrepreneurs

Resources can be of different types. Brush, et al (2001) suggested that resources can be more or less simple (i.e. tangible, discrete, property-based) or complex (i.e. intangible, systemic, and knowledge-based), and more or less utilitarian (i.e. can be applied directly to the productive process) or instrumental (i.e. can be used to provide access to other resources). Typologies of resources have been suggested both within and outside the resource based view. Barney (1991) classified resources in three categories; physical capital resources, including geographic location, premises, equipment, physical technology and access to raw materials; human capital resources, including training, experience, judgment, intelligence, relationships, and insights of the individuals; and organizational capital resources, including the firm’s structure and systems, as well as informal relations among groups within the firm and between the firm and its environment. Dollinger (1995) added financial and reputational resources to this list, and also argued to treat technological resources as a separate category, understanding technology as

embodied in a process, system or physical transformation. Greene and Brown (1997) argued that social capital resources, representing the knowledge and norms resulting from the social structure the individuals are part of, should be included as a resource category. This category encompasses actual and potential resources flowing through a relationship network (Greene, Brush, & Hart, 1999).

Alvarez and Barney (2000) argued that entrepreneurial capabilities explicitly should be added to the list of firm resources. They saw entrepreneurial assets as learning, knowledge, and creativity, and argued that these are intangible and may be unknown to the firm. “Entrepreneurial knowledge is the ability to take conceptual, abstract information of where and how to obtain undervalued resources, explicit and tacit, and how to deploy and exploit these resources.” (Alvarez, 2003:254). Entrepreneurial capabilities can thus be seen as talent to recognize which resources are or will be valuable, acquire and develop such resources, combine resources in productive bundles and deploy them to the tasks where they will make best use. As Penrose (1959) suggested, the existence of valuable resources alone are not sufficient to create competitive advantage. How these resources are used is also important (Mosakowski, 2002).

Experience-based competences including knowledge, skills and abilities developed from previous business ownership experience, may be seen as human capital resources. Human capital resources may also include more latent resources such as heuristics and cognitive abilities (Ucbasaran *et al.*, 2003a). It has been argued that persons with entrepreneurial experience have developed skills or expertise on how to start and run a business (MacMillan, 1986). For instance, in a study by Kolvereid & Bullvåg (1993), portfolio entrepreneurs reported that the domain in which they started their business was characterized by more competitors and harder competition compared to the responses from novice entrepreneurs. This may indicate that portfolio entrepreneurs are more aware of competition than novice entrepreneurs, and may therefore be better able to choose the relevant strategy to meet it. Some of the knowledge necessary for starting a new business is probably “tacit knowledge” (Polanyi, 1983), i.e. not explicit knowledge which can only be transmitted and learned through practical experience. Further, Starr and Bygrave (1992) suggested that a substantial part of the knowledge needed for *running* a business (production, management, marketing, etc.) can be learned only through

practice. Entrepreneurial experience can therefore give access to knowledge which is difficult to obtain elsewhere.

The knowledge and skills which portfolio entrepreneurs obtain from their experience can be valuable, rare and inimitable resources as defined within the resource-based view. It is likely that some of the knowledge learned from entrepreneurial experience is tacit knowledge. This is knowledge that is not explicit and therefore only can be learned from hands-on experience (Polanyi, 1983). Moreover, existing business owner-managers have access to other assets which may be useful during the start-up of a new business. Carter (1999) pointed out that owner-managers of a businesses usually have availability of physical assets in the form of for instance land and buildings. These are resources that may be crucial in further exploitation of business opportunities. Existing business owners may have an advantage in that they often possess many of the capital resources required (Carter, 1996). In addition, they may have relations to accountants, other entrepreneurs, banks and other sources of finance, governmental bodies, and so forth which may be of value to a new business start-up. They may have routines for business management, including production planning, financial management, inventory management, and so forth, that may be transferred to a new business.

Further, experienced entrepreneurs might also have developed an entrepreneurial mindset or way of thinking which affect their judgment and processing of available information in the future (McGrath & MacMillan, 2000). This might, for instance, make them evaluate opportunities differently than others. Current entrepreneurs may have access to information which are hidden for other, and may therefore be able to identify opportunities others cannot see (Ronstadt, 1988) (see section 2.6.3). Ucbasaran, Howorth, and Westhead (2000) suggested that previous entrepreneurial experience provides a framework for processing information which allows experienced entrepreneurs to discover and take advantage of business opportunities before others. Moreover, they argue that experienced entrepreneurs may have developed cognitive biases and heuristics which may guide their decision-making under conditions of environmental uncertainty and complexity. Such biases and heuristics may be effective and efficient, enabling experienced entrepreneurs to act faster. However, they may also lead to the wrong decision, and hence represent a limitation of experienced entrepreneurs (see section 2.7.5).

Experienced entrepreneurs with a well developed social network can be better able to establish start-up teams for developing new business opportunities. Previous studies have found that experienced entrepreneurs, and in particular portfolio entrepreneurs, are more likely to start a new business with partners (Birley & Westhead, 1993; Kolvereid & Bullvåg, 1993; Westhead & Wright, 1998c). For instance, Westhead et al. (2005) found that firms owned by portfolio entrepreneurs had more equity partners than firms owned by serial or novice entrepreneurs. They suggest that entrepreneurial teams help portfolio entrepreneurs avoid biases from previous experience, to increase awareness in decision-making, to provide the skills and resources needed, and access to greater depth of expertise and wider network. Moreover, experienced entrepreneurs may also be invited to be part of start-up teams of other lead entrepreneurs. Having earned a reputation as a successful entrepreneur, financiers, advisers and other entrepreneurs may bring business projects to the experienced entrepreneurs (Westhead & Wright, 1998a). In general, increased human capital resources can impact on the extent to which other resources such as network contacts, physical and financial resources can be accessed (Löwegren, 2006; Ucbasaran *et al.*, 2003b).

Westhead and Wright (1998a) argued that the experience of the entrepreneur can have a considerable influence on the ways the new business is financed, and that successful habitual entrepreneurs can have a greater access to funds than novice entrepreneurs. For instance, successful habitual entrepreneurs may have more financial resources available to invest in equity capital than novices do. In their study of independent business owners in Great Britain, Westhead and Wright (1998b) found that serial entrepreneurs were more likely to use finance from personal sources (perhaps because they have large financial assets after sale of the previous business), and that portfolio founders were more likely to obtain finance from customers and suppliers (perhaps because they have ties to them through their existing business). Moreover, experience from previous or current business ownership may have developed their network when it comes to investors, banks and other sources of finance. A track record as a successful entrepreneur may attract more investors to new business projects.

Hart, Greene and Brush (1997) found that both the depth and breath of entrepreneurial experience were important contributors to success in getting and

maintaining access to resources. For instance, the knowledge gained from experience may enable portfolio entrepreneurs to select organizational routines that give better access to critical resources from the external environment (Westhead *et al.*, 2003a). Further, experienced entrepreneurs with successful track records in business might attract resources of a type and amount normally not available to other entrepreneurs (De Koning, 2003). Ucbasaran, et al. (2000) suggested that these entrepreneurs are more credible and have developed better negotiation skills. They may therefore have better access to financial resources from external sources. In addition, prior successes may have lead to larger personal financial resources available to invest in a new business (Westhead *et al.*, 2003a), which again makes these entrepreneurs more attractive to financiers.

As noted earlier, the existing businesses of portfolio entrepreneur may serve as a seed-bed for the development of new business activities (Carter, 1996, 1998; Scott & Rosa, 1997). Portfolio entrepreneurs can start to develop new business activities based on the resources controlled by their existing business, which may reduce the challenges related to the construction of an initial resource base extensively. It gives access to resources such as organisational routines, employees, suppliers and customers, as well as physical resources such as buildings and equipment, which the new start-up may utilize (Carter, 1996, 1999). This may give portfolio entrepreneurs a substantial advantage as opposed to entrepreneurs which have to acquire the necessary resources externally from the start. It would be a less expensive and risk-reducing way to develop a business idea into an independent business. While this option for portfolio entrepreneurs is noted by several authors (Carter, 1998; Scott & Rosa, 1997; Westhead *et al.*, 2003a), the extent to which portfolio entrepreneurs actually transfer resources from existing to new businesses, and the consequences of such transfer, is hitherto an unexplored area of research.

The resources “seed-bed” which current businesses of portfolio entrepreneurs may constitute for new ventures may also include immaterial resources such as knowledge, routines and reputation. For instance, gaining legitimacy in the business community is necessary for a business founder to obtain the resources necessary to create a viable firm. Business founders therefore engage in a number of legitimating activities (Delmar & Shane, 2004). Portfolio entrepreneurs, however, can rely on the legitimacy of their existing business. The formal entity of

the existing business can be used when organizing resources, hiring employees, establishing contacts with customers and suppliers, etc. These are also ways in which the existing business can function as a seed-bed for a new business.

Summarized, I have argued that portfolio entrepreneurs may possess resources from their experience and existing firm(s), which may be transferred to and utilized during the start-up of new business activities. These resources may consist of expert knowledge, physical, financial, organizational or social resources. Whether the resources transferred are valuable, rare and inimitable, and hence can contribute to competitive advantage of the new firm, remains to be seen. I have argued that such resources have the potential to create advantage, compared to other entrepreneurs, but, as will be discussed in the following subsection, resources may be dysfunctional as well as functional.

2.7.5 Dysfunctional resources: Liabilities of resource transfer

The resource based view implies that resources are perceived as assets, even though it is recognised that not all resources are capable of creating a competitive advantage. However, it is rarely discussed that particular resources also may be dysfunctional and costly (Mosakowski, 2002), and they may therefore constitute a liability for the new business. Starr and Bygrave (1992) argued that experienced entrepreneurs starting their second business face both assets and liabilities resulting from their first business start-up.

Mosakowski (2002) argued that a firm's resource endowments may favour, but equally may also impair the ability to discover and exploit new business opportunities. She identifies four costs associated with large resource endowments: core rigidities, reduced experimentation, reduced intensive intensity, and increased strategic transparency. Thus, drawing from a larger resource-base is not necessarily a competitive advantage. Also Lichtenstein and Brush (2001) noted that there might be "negative resources", and that to retain the right fit of resources to changes in product/market strategy and in the environment, firms must spin off these resources. Equally, existing resources must be transformed and developed to sustain a successful business.

Starr and Bygrave (1992) argued that entrepreneurial experience does not only represent capital resources or assets to new start-up processes. Rather, experienced entrepreneurs starting new business activities may also face liabilities resulting from their first business start-up. For instance, they claimed that what is learned through specific cases often is very context dependent, and therefore not necessarily applicable for the new business. Decisions made on the basis of prior experience that may not be relevant in the new context, can reduce the probability of succeeding with a new venture (Ucbasaran *et al.*, 2000). An entrepreneur's previous investments and repertoire of routines can constrain future behaviour (Minniti & Bygrave, 2001). Further, liabilities of experience may stem from stagnated networks, less willingness to learn, fixed capital and other resources and less time available (Starr & Bygrave, 1992). Reuber and Fisher (1999:31) argued that certain experiences can be both an asset and a liability at the same time:

“For example, a long tenure in a particular industry may enable an individual to perform more efficiently or effectively when starting a new venture in that industry, but also may inhibit that individual from seeing new opportunities or alternatives.”

The specialized knowledge gained from prior entrepreneurial experience may be seen as (part of) an entrepreneurs core competences. Core competences are generally seen as important to generate rents for the firm or the entrepreneur. However, core competences may also produce inertia in the sense that it reduces the entrepreneur's ability to respond and adapt to changed situations or changed environments (Leonard-Barton, 1992; Mosakowski, 2002). This is similar to what Levinthal and March (1993) described as a “competence trap”. This can for instance occur when successful entrepreneurs are unable to look beyond paths created by past successes (Mosakowski, 2002). Experienced entrepreneurs may choose to repeat actions which they believe have produced the success. But what is learned through specific cases often is very context dependent, and therefore not necessarily applicable for the new business (Starr & Bygrave, 1992). Since entrepreneurs operate in uncertain and dynamic environments, these actions will not necessarily generate success in the future. Because of the specialized competence, the framing of problems and search for solutions may become narrower, channelled by past experience (Rerup, 2005).

As a consequence of learning from prior experiences, portfolio entrepreneurs may have developed heuristic principles and decision-making processes which may not necessarily be appropriate in new situations, especially in changing environments (Ucbasaran *et al.*, 2000; Westhead & Wright, 1998a). The value of experience depends not only on the knowledge gained, but also on how this knowledge is used. Rerup (2005) suggested that mindless use of prior knowledge can lead to bad decisions. Experienced entrepreneurs may suffer from biases and blind spots which influence their decisions (Starr & Bygrave, 1992). When entrepreneurs utilize what they learned from their past experiences, it becomes harder for them to notice and react to new factors, recognize industry, technology or market changes, and thus modify heuristics that worked in the past (Rerup, 2005). They may have developed “inertia of conventional wisdom” (Starr & Bygrave, 1992:354). Rather, what is needed is mindful use of prior experience, which includes the ability to adapt by generalizing and discriminating between past experience and the current situation (Rerup, 2005).

Leonard-Barton (1992) identified core rigidities as the dysfunctional flip side to core capabilities. Core rigidities occur when a deeply embedded knowledge set inhibits innovation and change within the firm. This may influence the entrepreneurial process by impairing the entrepreneurs’ ability to identify new business opportunities and/or to develop business models and strategies for exploiting these opportunities (Mosakowski, 2002). Starr and Bygrave (1992) suggested that former experiences sometimes can lead to a “liability of staleness”, since the experience and the feeling of “knowing how it is done” can be a barrier to new and potentially useful perspectives. Even though knowledge or expertise in a field usually is regarded as positive, strong expertise in one area may take the focus away from other areas where one possess less knowledge. Also the physical or organizational resources available through the existing business may not be the most applicable for the new business. Those entrepreneurs who are forced to invest in resources at the time the business development demand it, may end up with better suited and “up-to-date” resources, which can give these entrepreneurs a competitive advantage. In this sense, available resources may be an excuse for doing nothing for the portfolio entrepreneur which in fact makes him/her fall behind. The “liability of staleness” may also be applicable when it comes to resource acquisition (Starr & Bygrave, 1992).

2.7.6 Summary

In this section, I have argued that the resource-based view can contribute to our understanding of the phenomenon of portfolio entrepreneurship by giving a framework to understand the value of the resources portfolio entrepreneurs may bring into new business ventures. These resources may be material or immaterial, and may constitute physical, financial and organizational resources tied to the current businesses of the portfolio entrepreneurs, as well as human and social resources which the entrepreneur has developed from his/her previous entrepreneurial experiences, including, knowledge, skills, legitimacy, reputation, etc. Further, I have suggested that these resources can constitute assets or liabilities for the new business venture. Consequently, the utilization of these resources may influence positively or negatively to the entrepreneurial process including identification and exploitation of opportunities, as well as exportation, as well as to the outcomes of this process.

2.8 Theme 4: Outcomes of the entrepreneurial process

The outcomes of the entrepreneurial process may be many. Entrepreneurs pursue a wide variety of goals, including personal, social as well as financial goals. (Cooper, 1993). Consequently, studies within the field of entrepreneurship have measured outcomes in a large variety of ways (Brush & Vanderwerf, 1992; Murphy, Trailer, & Hill, 1996). In this thesis, the focus is put on performance. A fundamental presumption of the resource based view is that more valuable resources will lead to competitive advantage and, consequently, better firm performance (Barney, 1991). Previous owner-management experience is generally viewed as a positive contributor to an entrepreneur's human capital (Ucbasaran *et al.*, 2006). It is therefore generally assumed that habitual entrepreneurs will achieve better performance in their businesses (Carter & Ram, 2003; Ucbasaran *et al.*, 2006; Westhead & Wright, 1998a). While research has been able to identify distinct characteristics and capital resources of portfolio entrepreneurs as compared to serial and/or novice entrepreneurs as referred to above, differences in performance between the businesses of portfolio, serial and novice entrepreneurs have been harder to find.

Table 2.1 summarizes results from studies reporting on performance differences between portfolio, serial and novice entrepreneurs. No performance differences were detected in the British (Birley & Westhead, 1993; Westhead & Wright, 1998b, 1998c) or in the Norwegian SARI study (Kolvereid & Bullvåg, 1993). The Scottish habitual entrepreneur study detected no differences between the types of entrepreneurs measured by profitability, but portfolio entrepreneurs were found to have larger businesses in terms of sales and employment and larger growth in their businesses as compared to serial and novice entrepreneurs (e.g. Westhead *et al.*, 2003a; Westhead *et al.*, 2005; Westhead *et al.*, 2003b).¹¹ The Norwegian study on farm owners found that portfolio farmers with non-farm related enterprises and farmers with external employment reported higher household income than other farmers (Rønning & Kolvereid, 2006).

Studies reporting entrepreneurial experience as one, among several, independent variables have generally found entrepreneurial experience to be positively associated with performance in one way or another. Stuart and Abetti (1990) found entrepreneurial experience to be positively associated with a composite scale firm performance measure. Reuber and Fisher (1994) reported positive association between start-up experience and firm performance in terms of financial results and employment growth. Further, Haynes (2003) found a positive relationship between entrepreneurial experience and annual sales. Dyke, Fischer and Reuber (1992) conducted separate analysis for industry sectors. They found positive relationships between entrepreneurial experience and firm performance for four of five sectors. However, it varied between sectors which of the firm performance measures that were associated with entrepreneurial experience. Finally, Delmar & Shane (2004) found that new ventures pursued by more experienced firm founders have a lower hazard of disbanding than new ventures pursued by less experienced founders. In particular, prior start-up experience was found to reduce the hazard of completing product development, of initiating marketing and promotion and for obtaining inputs.

¹¹ For some of these measures, serial entrepreneurs were in addition found to have larger and higher growth in their businesses compared to novice entrepreneurs.

Table 2.1 Overview of studies reporting performance differences between portfolio, serial and novice entrepreneurs

STUDY	SUB-SAMPLES	PERFORMANCE MEASURES	FINDINGS
<i>British SARI</i>			
Birley & Westhead, 1993	Novice vs. habitual founders	Sales level, percentage increase in sales, level of profitability, percentage increase in profit, assessed profit performance relative to competitors.	No statistically significant difference between novice and habitual founders
Westhead & Wright, 1998b	Novice, serial and portfolio founders	Sales level, percentage increase in sales, level of profitability, percentage increase in profit, assessed profit performance relative to competitors, export. No. total employees (nominal and standardized) at start-up and today, standardized absolute employment change.	No statistically significant differences between the three types of founders
Westhead & Wright, 1998a, 1999	Rural vs. urban areas Novice, serial and portfolio entrepreneurs	Sales revenue, sales revenue change, profitability, profitability change, performance relative to competitors, share of export.	No statistically significant differences between the three types of founders in rural nor urban sample
<i>Norwegian SARI</i>			
Kolvereid & Bullvåg, 1993	Novice vs. portfolio founders	Full time employment at start-up and today, employment growth, sales level, sales growth (%), profit growth (%) and assessed profit performance relative to competitors.	No statistically significant differences between the two types of founder
<i>Scottish habitual entrepreneurs study</i>			
Westhead, et al., 2003	Novice, serial and portfolio entrepreneurs	Gross sales (1996 & 1999), absolute and percentage change in gross sales, and the same measures standardized by business age, percentage of gross sales exported, weighted subjective performance score. No. full time and total employees (1996 & 2001), absolute and percentage employment change, as well as the same measures standardized by business age	Portfolio entrepreneurs reported higher gross sales (1996/1999) and standardized gross sales (1996) than novice and serial entrepreneurs, as well as higher gross sales (1999 stand) and greater absolute change in gross sales (nom/stand) than novice entrepreneurs. No statistically significant differences on other measures. Portfolio entrepreneurs reported higher employment (1996 nom & 2001 nom/stand) for full time and total employees, as well as higher absolute and percentage employment growth (nom/stand, full time/total) than other entrepreneurs.

STUDY	SUB-SAMPLES	PERFORMANCE MEASURES	FINDINGS
Westhead, et al. 2004	Novice, serial and portfolio entrepreneurs	Amount drawn out of business by entrepreneur previous 12 months, reported change in standard of living.	Portfolio entrepreneurs were more likely to draw more than £75,000 and less likely to draw less than £5,000 out of the business, compared to novice entrepreneurs. No significant differences in reported change in standard of living.
Westhead, et al. 2005	Novice, serial and portfolio entrepreneurs	Gross sales, change in gross sales, absolute and percentage employment change, amount drawn out by entrepreneur, and rated profit performance relative to competitors	Portfolio entrepreneurs reported significantly higher gross sales, employees and employee growth than other entrepreneurs, and significantly higher sales growth than novice entrepreneurs. Portfolio entrepreneurs were more likely to take out more than £75,000 and to rate their performance higher than competitors compared to novice entrepreneurs
<i>British habitual entrepreneurs study</i>			
Ucbasaran, et al. 2006	Novice, serial and portfolio entrepreneurs. Habitual entrepreneurs with previous failure, habitual entrepreneurs with previous success	Weighted performance based on importance attached to 6/12 performance indicators and the level of satisfaction with each of these indicators. Absolute and relative employment change, absolute and relative sales change, profit relative to competitors, money taken out of the businesses (absolute and standardized by the number of businesses)	Differences related to some of the performance measures, but in total no support of hypotheses suggesting that habitual entrepreneurs perform better than novice entrepreneurs, nor that portfolio entrepreneurs perform better than serial entrepreneurs.
<i>Norwegian study on farm owners</i>			
Rønning & Kolvereid, 2006	Diversified farmers, portfolio farmers with farm-related enterprises, portfolio farmers with non farm-related enterprises, farmers with external employment	Gross annual household income	Portfolio farmers with non-farm related enterprises and farmers with external employment reported significantly higher household income than the others.

STUDY	EXPERIENCE MEASURE	PERFORMANCE MEASURES	FINDINGS
<i>Studies reporting entrepreneurial experience as independent variable</i>			
Stuart & Abetti, 1990	Entrepreneurial experience: composite measure including involvement in previous ventures, number of ventures started, number of successful ventures, and the role played in such ventures	Standardized composite measure including sales growth, employment growth, profitability and productivity. Standardized composite measure including meeting plan, employee satisfaction, overall evaluation of progress, survivability of the firm, ability to attract capital and cash flow.	Entrepreneurial experience was significantly associated with performance.
Dyke, et al., 1992	Entrepreneurial experience: the number of years of business ownership previous to owning the current firm Start-up experience: the number of previous businesses which the owner helped to start	Annual total sales, number of full time employees, annual income, profit growth and employment growth	Separate analysis for industry sectors: Entrepreneurial experience correlated with employment growth in food retail. Food wholesale: Entrepreneurial experience correlated with no. of employees and employment growth. Start-up experience correlated with total sales and no. of employees. Food manufacturing: Entrepreneurial experience correlated with total sales and annual income. Start-up experience correlated with employment and profit growth. No significant correlations in furniture manufacturing. Computer services: Entrepreneurial experience correlated with annual income. Start-up experience correlated with total sales, no. of employees and annual income.
Reuber & Fischer, 1994	Start-up experience: the number of firms in total the owner has helped to start	Weighted subjective performance scores related to financial, international, sales and overall performance. Percentage change in no. of employees, total sales and annual income.	Positive significant correlations between start-up experience and weighted financial performance and employment growth. No significant correlations with the other performance measures.
Haynes, 2003	Entrepreneurial experience (yes/no)	Annual sales	ANOVA tests showed significant relationship between entrepreneurial experience and annual sales.
Delmar & Shane 2004	Start-up experience No. of previous start-ups	Hazard of disbanding	New ventures pursued by more experienced firm founders had a lower hazard of disbanding than new ventures pursued by less experienced founders. Each prior start-up undertaken by a venture team reduced the hazard of disbanding by 22%

At best, the results so far concerning the anticipated superior performance of experienced entrepreneurs can be said to be inconclusive. This has led some researchers to argue that firm level performance may not be the most relevant criterion to evaluate portfolio entrepreneurs compared to other types of entrepreneurs. For instance, Rosa (1998:58) claimed that:

“Comparing the latest firm started by a habitual entrepreneur with that started by a novice entrepreneur, as earlier studies did, can be potentially misleading without taking a more holistic view of how growth in capital assets and employment is achieved over all business activities”

Accordingly, several scholars have argued that one should use the entrepreneur rather than the firm as unit of analysis in this type of studies (Carter & Ram, 2003; Scott & Rosa, 1996; Westhead & Wright, 1998c). Since portfolio entrepreneurs spread the results of their entrepreneurial talent, commitment and enthusiasm into several businesses, the performance of one of these businesses does not fully measure the contribution to the economy made by portfolio entrepreneurs. This argument particularly applies when measuring growth, as these entrepreneurs tend to grow their business activities by establishing new businesses in stead of growing the ones they already own (Rosa, 1998).

However, when the focus is put on how learning and resource transfer from portfolio entrepreneurs' existing businesses into new ventures, it is still relevant to assume that this have some sort of effect on performance at the level of the new business activity in question. When previous studies have failed to find support for this assumption, this may be related to several factors. First, some previous studies have failed to separate portfolio from serial entrepreneurs. Since they possess different capital resources, motivations and other characteristics, it is reasonable to expect that there might be performance differences between the two (Ucbasaran *et al.*, 2000; Westhead & Wright, 1998c).

Second, comparing performance of new ventures is difficult because of their great heterogeneity when it comes to size, innovativeness and potential (Cooper, 1993). For instance, portfolio entrepreneurs have been found to be more innovative than other entrepreneurs (Westhead *et al.*, 2005). If they have more innovative and complex business ideas, this should be controlled for, at least when performance is

measured relatively early in the business life cycle, as the introduction phase may be longer for these businesses.

Third, many previous studies have measured performance at a stage when the firms in question have been of varying age (e.g. Ucbasaran *et al.*, 2006; Westhead *et al.*, 2004a; Westhead & Wright, 1998b). When focusing up on experience based knowledge and resources drawn from previous/current businesses, this can be assumed to have greatest impact in the earlier stages of new ventures. After a number of years in business it is likely that novice entrepreneurs will catch up with some of the knowledge deficiencies relative to experienced entrepreneurs.

Fourth, the relationship between entrepreneurial experience and performance may be mediated with other factors. Start *et al.* (1993:128) assessed that

“most studies fail to recognize that the economic value created by prior entrepreneurial experience is not just evident in the venture’s financial performance, but it may be associated with other critical success factors including: fundraising capacity and initial start-up resources, time required to achieve developmental milestones, resource expenditures, returns to investors and the entrepreneur’s personal investment and financial gains”.

If portfolio entrepreneurs have the advantage of better access to a variety of resources, as suggested above, these resources may be the source of superior performance, not the portfolio experience per se. Moreover, many previous studies have not taken into account that there may be both assets and liabilities associated with these resources (Starr & Bygrave, 1992) (see section 2.7.5). Which capital resources are obtained from experience and how these resources relate to performance need further examination. For instance, the transferability of resources accumulated through experience (Ucbasaran *et al.*, 2000), as well as how and when these resources are, or should be, utilized in the new business activities (Rerup, 2005) need to be studied

2.9 Summary

This chapter have accounted for the theoretical insights the empirical studies of this thesis build upon. An opportunity based view of entrepreneurship is adopted, which means that the identification and exploitation of opportunities constitute the entrepreneurial process. The focus has been set on portfolio entrepreneurs, who are identified as current owner-managers who engage themselves in the identification and exploitation of new business opportunities. The acquisition and organization of resources are seen as central aspects of the entrepreneurial process. It is suggested that portfolio entrepreneurs can learn and transfer resources from their current businesses into their new venture. A resource based view has been adopted to understand the nature and value of learning and resource transfer related to opportunity identification as well as opportunity exploitation.

The empirical part of this thesis consists of six individual studies presented in scientific articles. Different aspects of the theoretical framework presented in this chapter have been utilized in each of the articles. Table 1.2 summarizes the research questions explored and the theoretical perspectives utilized in each of the articles. Chapter 4 will describe the theoretical grounds for each of the articles in detail. The next chapter discusses the methodological approach of the thesis.

3 RESEARCH METHODOLOGY

In this chapter, philosophical issues relating to scientific realism with regard to approximate truth, causation and abduction, are discussed. The research design is then summarized. A distinction is made between method, data, theoretical and investigator triangulation. The units of analysis explored are then discussed. In the following section, criteria for judging the quality of quantitative and qualitative studies are reviewed. Ethical issues are then summarized with regard to the research process, privacy protection and social responsibility. The methods adopted for each the empirical articles are accounted for in chapter 4.

3.1 Philosophical approach

3.1.1 Research paradigms

Two main research paradigms related to the social sciences can be identified; positivism and phenomenology. Within the positivistic approach facts or causes of social phenomena are sought without regard to the subjective state of the individual, while phenomenologists stress the subjective aspects of human activity by focusing on the meaning of social phenomena (Collis & Hussey, 2003). These paradigms can be viewed as two extremes on a continuum.¹² Positivism is associated with a view of an objective reality which is independent from the researcher investigating it, value-free and objective research, and valid knowledge generation based on the measurement of observable phenomena. The phenomenological approach, on the other hand, is associated with the view of reality as subjective, where the researcher interacts with what is being researched, value-laden research, and valid knowledge generation based on the meanings people place upon social phenomena (Collis & Hussey, 2003; Remenyi *et al.*, 1998). Most research can be placed somewhere between the extremes on this

¹² Remenyi *et al.* (1998) argued that it is useful to see positivism and phenomenology as related concepts rather than two extremes and separate approaches. Knowledge is created in a dialectic process where a thesis is contradicted with an antithesis to create new knowledge (i.e. a synthesis). A variety of methods and approaches are promoting the process of knowledge generation. In this way research methods and approaches can be seen as a set of tools or directions which the researcher may draw upon when appropriate.

continuum, where some of the features and assumptions of one paradigm are relaxed and replaced by those of the other (Collis & Hussey, 2003).

The philosophical approach of this study can be placed closer to the positivistic than to the phenomenological paradigm, though it is not a strict positivistic view. The perspective taken is inspired by a scientific realist approach. Scientific realism has much in common with positivism, but differs from it in several aspects, particularly regarding epistemology and the view on explanation and causation (Ladyman, 2001; Sayer, 2000). In the following sections, the scientific realism approach of this thesis is discussed.

3.1.2 Scientific realism

Table 3.1 summarizes the features characterizing scientific realism as compared to positivism. The scientific realism approach is based on ontology similar to the positivistic. The external world is seen as existing independently of people sense experience, ideation and will. There is an 'objective' world independent of our knowledge about it (Bunge, 1993; Payne & Payne, 2004). This world consists of both observable and unobservable phenomena. Epistemologically, scientific realism deviates from positivism because it implies that we can know also the unobservable phenomena. Not observable forces can lie behind the phenomena we observe (Payne & Payne, 2004).

Thus, scientific realism considers unobservable entities to be relevant objects for research (Miller, 1987). However, it is difficult to establish the truth of unobservable entities. Scientific realists accept that the human perception is limited and can also be deceptive. The way we perceive facts depend partly upon our beliefs and expectations (Bunge, 1993). The theoretical perspectives guiding this study rely on unobservable concepts. For instance, within the resource based view of the firm, inimitability of resources is seen as important to sustain competitive advantage. Inimitability is partly created by the difficulty to observe these resources (Godfrey & Hill, 1995). The concept of entrepreneurial opportunity is also characterized by difficult to observe relationships between potential markets and potential products or services (Shane, 2003). Elements such as entrepreneurial opportunities, immaterial resources, learning and knowledge can only be observed

through the perceptions of the persons studied and/or the researcher. We can gain knowledge about the properties of these entities only through the way they appear, through indicators. Further, the knowledge people have of their social world affects their behaviour (May, 2001). People's perception is therefore relevant to research.

Table 3.1 Features of scientific realism and positivism

	POSITIVISM	SCIENTIFIC REALISM
<i>Ontology</i>	Reality is seen as objective and independent of our knowledge about it	Reality is seen as objective and independent of our knowledge about it
<i>Epistemology</i>	We can only know observable phenomena	We can know observable and unobservable phenomena Perceived facts depend upon beliefs and expectations of the individuals
<i>Aim</i>	Objectively true knowledge	Approximately true knowledge
<i>Causation</i>	Causation in closed systems Regular succession of events that can be predicted Causes determine effects	Causation in open systems Regularities are dependent on context and conditions Causes are tendencies to produce effects
<i>Explanation</i>	Relies on hypothetic-deductive reasoning and explanation Inference from cause to effect Theory guides research	Relies on abductive reasoning and model-theoretic explanation Inference from effect to the best explanation Theory guides research
<i>Methods</i>	Quantitative methods	Quantitative and qualitative methods

This study seeks to contribute to the further development of theory which is not perfectly but 'approximately' true (Ladyman, 2001). Theoretical concepts will never be completely identical to the phenomena they relate to as such, since theories always contain simplifications and idealizations (Bunge, 1993). However, within scientific realism, scientific research is regarded as the best way to generate knowledge, even if it is not infallible, and the principle that scientific research, even if not perfect, can give us increasingly true knowledge about the world (Bunge, 1993).

3.1.3 Approximate truth and scientific progress

The notion of 'approximate truth' is essential to the scientific realism approach (Ladyman, 2001). Researchers search to gain knowledge about an 'objective' world out there, but they are not able to develop a perfectly true theory because not all elements of the world are observable and because what is observed is biased by the perceptions and interpretations of the observer. Nevertheless, the theories developed *aim* at the truth in the sense that we try to measure their closeness to truth by empirically testing them, and that we show how a new or adjusted theory, more often than not, takes us closer to the truth (Forster & Sober, 1994; Sayer, 1992). The relevance of theories is determined by confronting them against empirical data (Boyd, 1984; Miller, 1987). Through repeatedly empirical testing by several researchers and various methods, errors are corrected and theories are adjusted in order to become approximately true. McKelvey (1997) argued that:

"...there is enough of an objective reality 'out there' that repeated attempts by various researchers, using a variety of generally approved methods of 'justification logic' eventually will discover the approximate truth of theories by successively eliminating errors." (McKelvey, 1997:363).

This scientific progress includes the development of new theories for phenomena not previously explained, the falsification of existing theories and their replacement with new theories, the expansion of the scope of a theory to include new phenomena, and the broadening of specific theories into more general theories (Hunt, 1991; cited from McKelvey, 1997).

3.1.4 Causation in social systems

Positivism focuses on universal laws, hypothetic-deductive explanation and prediction. A rigid emphasis is put on falsification. On the contrary, scientific realism emphasizes model-theoretic forms of explanation, and search for underlying causal mechanisms and processes to explain observed phenomena. The intention is to describe complex real-world processes (Lane, 1996). The scientific realism approach sees the social systems studied within social sciences as open systems, and the happenings in such systems are in principle not predictable in the strict sense. This implies that laws and regularities detected through research never

can be assumed to valid at all times and within all contexts (Djurfeldt, 1996; Sayer, 2000). This has implications for how causation can be understood. In scientific realism causation is not understood on the model of regular successions of events (i.e. the successionist view) as in positivism. Explanation is instead depending on the identification of causal mechanisms and how they work, and discovering if they have been activated and under what conditions (Sayer, 2000). Consistent regularities do not occur in open systems. In the social world the same causal power can produce different outcomes, and different causal mechanisms can produce the same results (Sayer, 2000). Causes are therefore not determining actions. They must be seen as ‘tendencies’ that produce particular effects (May, 2001).

In social systems there are typically many interacting structures and mechanisms, which create a risk of attributing to one mechanism effects which are actually due to another (Sayer, 2000). In order to establish the cause of an observed object or event, the researcher needs to discuss questions such as what are the preconditions of this event, could the different possible causal mechanisms exist independently of each other, what is it about these possible causal mechanisms which may lead to the observed event, keeping in mind that there may be several mechanisms at work simultaneously (Sayer, 2000). It is necessary not only to find a mechanism that can predict the phenomenon in question, but also an explanation to how this mechanism operates and under which conditions (Ladyman, 2001; Lane, 1996). Thus, within scientific realism a theoretical framework guiding the research is of great importance. Hypotheses should be derived from theory and tested using empirical data.

3.1.5 Abduction, inference to the best explanation and the use of theory

Scientific realism relies on abduction rather than deduction. Abduction is characterized as reasoning from effect to cause, and as being interpreted as giving reasons for pursuing a hypothesis (Niiniluoto, 1999). This reasoning follows the argument that if a hypothesis is supported, it is the best available account of the empirical data. This logic is relying on the concept ‘inference to the best

explanation' (IBE) (Day & Kincaid, 1994). Ladyman (2001:196-197) explained IBE as "the principle that, where we have a body of evidence and are considering several hypotheses, all of which save the phenomena, we should infer the one that is the best explanation of the evidence (providing it is at least minimally adequate according to other criteria).

The ability of theories to explain phenomena determines their relevance (Boyd, 1984). The nature of scientific knowledge is seen as cumulative, and studies should therefore utilize theory that has been developed during previous research. The judgement of what is a sensible explanation is dependent upon the theoretical framework and is also open to scientific debate (Djurfeldt, 1996). In this sense, research is fundamentally theory-dependent. The theoretical view guide the researcher's basic position, affects the construction of the research problem, which theoretical procedures are used and what constitutes observations and evidence (Boyd, 1991). Scientific realism stresses the theory-driven nature of social scientific research (May, 2001).

Thus, the construction of a theoretical basis has been important for this study. Theoretical insights are mainly gained from the opportunity-based view of entrepreneurship and from the resource-based view of the firm. In addition, some insights are gained from other theoretical perspectives, including the rural sociology perspective on pluriactivity and Weick's theory on organizing. The specific research questions in each of the scientific articles are developed based on previous literature. It has also been important to interpret the findings of the empirical analyses in light of a theoretical framework.

3.1.6 Scientific realism and empirical research methods

There is a connection between the selected philosophical approach and the choice of research methods. The usual view is that quantitative methods are used within positivistic or close to positivistic approaches, while qualitative methods are used on the phenomenological side of the philosophical approach axes. However, some qualitative aspects can also be included into a more positivistic inspired research (Collis & Hussey, 2003). Scientific realism is compatible with a relatively wide range of research methods (Sayer, 2000). According to this view, the particular

choice of method should depend of the nature of the phenomenon studied and the research questions pursued. This study has utilized both quantitative and qualitative methods to gather and analyse empirical data to answer the research questions. While quantitative methods have been dominant, the inclusion of some qualitative aspects has been fruitful as it has given the possibility to investigate other types of research questions and has given a depth to the empirical data contributing to increased understanding. A closer discussion on the triangulation approach adopted in this research is given in the next section.

3.2 Research design

3.2.1 A triangulation approach

A main factor characterizing the research design of this study is triangulation. Triangulation is the use of different research approaches, methods and/or techniques in the same study (Collis & Hussey, 2003). This mixed-method approach or triangulation has long tradition in social sciences (Erzberger & Prein, 1997), and has been particularly popular within business and management research (Bryman & Bell, 2003). It has also been suggested that a triangulation approach would benefit entrepreneurship research in particular (Davidsson, 2003; Westhead & Wright, 2000).

The combination of quantitative and qualitative methods into one study is the perception of triangulation most often referred to. However, Denzin (1989) discussed four types of triangulation. First, data triangulation implies that data is collected at different times, spaces, or from different sources. Second, investigator triangulation relates to research where data for the same study is collected by different researchers. Third, theory triangulation involves the use of multiple theoretical perspectives in relation to the same phenomenon. Finally, method triangulation is when different methods are used in relation to the same phenomenon, usually both qualitative and quantitative methods (see also Easterby-Smith, Thorpe, & Lowe, 2002). All of these four types of triangulation are used in this study, however to a various extent.

The most often used argument for a triangulation approach is that researchers, by combining multiple observers, theories, methods, and empirical materials, can hope to overcome the intrinsic bias and problems that come from single-method, single-observer and single-theory studies (Denzin, 1989). Critics of multi-strategy approaches pursue that research methods carry epistemological commitments, and that qualitative and quantitative research represent separate paradigms, and therefore cannot be combined (Bryman & Bell, 2003). However, Bryman and Bell (2003) argued that one should view method and philosophical approach separately, and that both quantitative and qualitative methods can be connected different epistemological and ontological views. Nevertheless, the scientific realism approach is consistent with both quantitative and qualitative methods. Before the approaches to the different types of triangulations taken in this study are discussed, the next section gives an overview of the methods utilized in the scientific articles included in the study.

3.2.2 Summary of the methods utilized in each of the six articles

As mentioned, this thesis consists of six scientific articles based on four empirical studies. This section briefly summarizes the empirical method characterizing these studies (Table 3.2). A detailed overview of sampling frame and method considerations for each of the articles is given in chapter 4.

Article 1 is based on a longitudinal, survey of nascent entrepreneurs conducted as the Norwegian part of the Entrepreneurship Research Consortium (ERC) (in the US later known as the PSED¹³). Persons reporting that they were trying to start a new business were interviewed by telephone at two points in time about their personal characteristics, their start-up activities and the outcomes of their start-up efforts. The final sample contained data from 159 nascent entrepreneurs. Response bias tests were conducted related to age, gender, ethnic background, education and entrepreneurial experiences. No serious response bias was detected. Non-parametric bivariate analyses were utilized to explore the research questions.

¹³ Panel study of entrepreneurial dynamics.

Table 3.2 Overview of methods utilized in the scientific articles in this thesis

#	ARTICLE TITLE	SAMPLING FRAME	DATA COLLECTION METHODS	SAMPLE	REPRESENTATIVENESS	TYPE OF ANALYSIS
1	The business gestation process of novice, serial and parallel business founders	Nascent entrepreneurs identified from a representative sample of Norwegian households	Longitudinal, quantitative: Telephone surveys. Follow up telephone interviews 12 months later	159 nascent entrepreneurs starting from scratch	No response bias regarding age, gender, ethnic background, education or entrepreneurial experience	Bivariate statistics
2	New business early performance: novice, serial and portfolio entrepreneurs	New businesses registered in the Norwegian central coordination register for legal entities	Longitudinal, quantitative: Postal survey Follow up telephone survey 19 months later	410 new firms	Representative to new businesses regarding legal status or localization. No serious response bias revealed related to human capital, location, industry or gender.	Multivariate statistics
3	Farm-based entrepreneurs: What triggers the start-up of new business activities?	Portfolio farm households in Norway	Cross-sectional, qualitative: In-depth interviews	16 portfolio farmers/ farm households	-	Comparative case analysis
4	Farmers as portfolio entrepreneurs: necessity pull or opportunity push?	Representative sample of farm households in Norway	Cross-sectional, quantitative: Postal survey	748 farm households	No response bias regarding age, sex or type of farm production, but average farm size was larger among respondents.	Multivariate statistics
5	Opportunities and prior knowledge. A study of experienced entrepreneurs	Portfolio farm households in Norway and Finland	Cross-sectional, qualitative: In-depth interviews	59 opportunity generation processes identified from interview with 31 farmers/farm households	-	Comparative case analysis
6	Multiple business ownership in Norwegian farm sector: Resource transfer and performance consequences	Portfolio farm households identified from a representative sample of farm households in Norway	Cross-sectional, quantitative: Postal survey	207 portfolio farm households	No response bias regarding age, sex or type of farm production, but average farm size was larger among respondents.	Multivariate statistics

Article 2 is based on a longitudinal study of new business start-ups. Persons registering a new business in the Norwegian Central Coordinating Register for Legal Entities filled in a questionnaire shortly after registration, and were then telephone interviewed 19 months later. These data were collected as a part of a PhD study at Bodø Graduate School of Business (Isaksen, 2006). The sample utilized in article 2 consisted of 410 respondents. These were representative to all new businesses in Norway regarding legal status or localization. Respondents to both the postal survey and the telephone follow-up interview were compared to those who only responded to the postal survey. No serious response bias was revealed related to human capital, location, industry or gender. Bivariate and multivariate techniques were used to test the hypotheses.

The other four articles were based on a research project on farm-based entrepreneurship at Nordland Research Institute. The project included quantitative and qualitative data collection. Article 3 and 5 are based on the qualitative data from this study, consisting of in-depth interviews with Norwegian farm owners and their spouses if relevant. Only interviews with portfolio farm owners were considered in the articles. In article 3, interviews from 16 farm households were utilized. In article five data from the Norwegian study were combined with data from a similar Finnish study. In all, interview data from 31 farm household were utilized in this article. The analyses were based on comparing cases in both these studies.

Article 4 and 6 are based on the quantitative data from the study of farm-based entrepreneurship. This was a cross sectional postal survey among farm owners in Norway, including portfolio farmers as well as farmers with no additional business activity to farming. Article 4 utilized data from both these groups to investigate factors associated with the propensity to start additional business activities. A valid sample of 748 farm households was investigated. A response bias test was conducted in relation to the non-respondents among the sampling frame. No response bias was detected regarding age, sex or type of farm production, but average farm size was larger among respondents. Logistic regression models were used to test the hypotheses. Article 6 was based on data from the portfolio farmers only. A total of 207 respondents were utilized in the analyses of resource transfer

between the farm and the new venture. Bivariate and multivariate techniques were utilized to examine the research questions.

3.2.3 Method and data triangulation

Four distinct empirical datasets are used to explore the broad research questions presented in section 1.1.2. Table 3.2 presented the methods utilized in each of the six scientific articles. The first and second articles utilize two different longitudinal, quantitative data sets related to nascent entrepreneurs and newly registered firms, respectively. The third and fifth articles utilize qualitative, cross-sectional data from portfolio entrepreneurs in a farm context. The fourth and sixth articles are based upon quantitative, cross-sectional data on farmers. Although each article utilizes only one method, the thesis as a whole applies a combination of different data sets which are collected through different empirical methods. The purpose of this triangulation strategy is to produce different research results that can be related to each other (Erzberger & Prein, 1997).

According to Bryman and Bell (2003), there are several approaches to multi-method research. First, results from an investigation employing one method may be cross-checked against the results of using another method. In this case, one can increase the validity of the study by using multiple methods and/or data sources. Denzin (1989) argued that the flaws of one method often the strengths of another; and that by combining methods, observers can achieve the best of each while overcoming their unique deficiencies.

Second, qualitative research may facilitate quantitative research, by for instance providing hypotheses or aiding measurement. In these cases, a qualitative study typically will be undertaken as a pilot study. Third, quantitative methods may facilitate qualitative research, for instance through the selection of people to be interviewed. Fourth, an investigation with a different method is undertaken to supplement the findings of the main study. For instance, qualitative methods may be used to provide contextual information that supplements the findings of a larger quantitative study, or to facilitate the interpretation of the relationship between variables. Fifth, different methodical approaches may be taken to answer distinct

research questions related to the same theme, for instance both static and processual features or both macro and micro levels.

Four data sets are utilized in this study; three sets of quantitative data and one set of qualitative data. The rationale for using multiple data sets and methods has first and foremost been related to the fifth point above. Qualitative research normally looks for patterns of interrelationships between many categories rather than the sharply delineated relationship between a limited set of them (McCracken, 1988). For instance, when exploring the motivational aspects of portfolio entrepreneurship, the qualitative study gave insights into the details of it making it possible to distinguish between different types of portfolio entrepreneurs and linking the characteristics and the processes related to the new business activities to the motivational aspects. Conversely, the quantitative nature of the study of resource transfer made it possible to find generalizeable¹⁴ relationships between resource transfer and new business performance which hardly could have been detected using qualitative data from a relatively small sample.

Further, as some areas of this research are characterised of little developed theory, more explorative, qualitative methods are applied to be better able to 'grasp' the essence of the phenomenon. This has particularly been the case when studying opportunity identification. Moreover, the findings from the different empirical studies have supplemented and deepened each other. In particular the qualitative study has contributed by giving context to and facilitating the interpretation of the results from the quantitative study in the same sector. This has increased the validity of the study (see section 3.3).

In practice, strategies of triangulation often imply that the research project is split into a qualitative and a quantitative part, wherein different data sets are collected and the appropriate analysis techniques are applied (Erzberger & Prein, 1997). This has also been the case in this thesis, where the individual articles utilize only one method each. However, the goal has also been to interweave the different elements and the different results (Bryman & Bell, 2003). Here, the common theoretical

¹⁴ Generalizeable here means possible to generalize within the specific context of the sampling frame of this study.

framework has been important, as the findings from the different empirical studies has been interpreted from this framework.¹⁵ A common theoretical basis makes it possible to integrate the findings from the different methodological approaches (Erzberger & Prein, 1997), but also to link different findings to different aspects of the researched phenomenon (Bryman & Bell, 2003). The next section will discuss

3.2.4 Theoretical triangulation

The theoretical basis for this study, as accounted for in chapter 2, is built up from different theoretical perspectives. An opportunity perspective on entrepreneurship has been supplemented with insights from the resource-based view of the firm and from the rural sociology perspective on pluriactivity. Theoretical triangulation can be conducted by contrasting hypotheses from two or more theoretical perspectives, or by integrating two or more perspectives to generate new hypotheses and models (Denzin, 1989). One of the articles in this thesis contrasts hypotheses generated from an opportunity based view on entrepreneurship and a rural sociology view of pluriactivity (article 4). However, the main approach has been building a theoretical basis in which the main perspective is complemented with other perspectives to be better able to include other aspects of the phenomenon studied. Table 1.2 gives an overview of the specific theories utilized in each of the scientific articles.

Theoretical triangulation is only useful as a basis for empirical studies, but also in relation to the interpretation of empirical findings (Denzin, 1989). Denzin argued that theoretical triangulation can be used to make the researcher aware of the multiple ways in which the phenomenon may be interpreted. Sometimes empirical findings may be contradictory to one perspective while supportive to another. However, it may be that each theoretically based interpretation “contain a kernel of truth” (Denzin, 1989:243). When discussing the findings and implications of the empirical studies, it has therefore been important to bring the full theoretical framework as a background for interpretation.

¹⁵ However, this framework again consists of several theoretical approaches which are only partly linked together.

3.2.5 Investigator triangulation

As presented in table 1.2, each of the empirical studies have been conducted by a team of two or three researchers, so called investigator triangulation. When more than one researcher is participating in the data collection and analysis, this can reduce the subjectivity and increase the reliability of the research (see 3.3). This has particularly been discussed in relation to qualitative studies. When more than one person are interviewing or observing, the potential bias that comes from a single person can be reduced and one can achieve greater reliability in the collection of data (Denzin, 1989). In the qualitative study (article 3 and 5), a team of three researchers were conducting the interviews. About half of the interviews were undertaken by two researchers together in varying combinations. In this way, we strived to achieve a common understanding of the empirical data, and to reduce the bias of subjective interpretation of individual researchers.

In the quantitative studies, the relationship between the researcher and the respondent was not direct, as they were undertaken by postal surveys and/or telephone surveys conducted by professional interviewers. Still, there were a team of researchers developing the questionnaires in all cases. In the quantitative articles included in this thesis, there were also a team involved in data analysis and interpretation. Also in these studies, investigator triangulation has been fruitful as it has broadened the competence base from which the results have been interpreted.

In the qualitative and the quantitative studies related to entrepreneurship in the farm sector, investigator triangulation has been particularly fruitful, as the research team consisted of researchers with different theoretical backgrounds (entrepreneurship and rural sociology) and with their main experience from different methodologies. In this way investigator, theoretical and methodological triangulations were combined.

3.3 Criteria for judging research quality

Assessing the quality of qualitative as well as quantitative research is a difficult task as we have no completely unarguable way of gaining direct access to reality (Bryman & Bell, 2003; Hammersley, 1992). The quality of research should be

judged by its trustworthiness and integrity of the conclusions generated from it. This section discusses quality criteria for the quantitative and the qualitative studies respectively.¹⁶ In the following subsections, quantitative studies are evaluated with regard to construct, internal and external validity and reliability, whilst qualitative studies are considered with reference to internal and external validity as well as internal and external reliability.

3.3.1 Quality of quantitative studies

Reliability and different forms of validity are central concepts to evaluation of quantitative studies. Validity is concerned with the integrity of the conclusions from a study (Bryman & Bell, 2003). Several aspects of validity should be discussed, of which construct validity often is considered as the most important (Reve, 1985). Construct validity is related to the extent to which a measure really represents the concept it is supposed to measure (Bryman & Bell, 2003). Construct validity is assessed through three subconcepts of validity: face validity, convergent validity and divergent validity (Reve, 1985). Face validity represents the immediate accordance between the theoretical and operational definition of the variables. Face-validity has been considered for all the quantitative studies included in the thesis. Measurement instruments have been exposed for evaluation from experts in relevant areas. For the quantitative study utilized in article 4 and 6, the measurement tool was pre-tested among a group of farmers. For the empirical data utilized in article 2, measures were adopted from an international research project in which the scales were tested.

To increase construct validity, multiple measures are recommended (Reve, 1985). Multiple measures have been adopted for article 2, 4 and 6. Convergent validity refers to the extent to which there is internal consistency in these multiple measures. To assess convergent validity, PCA models have been conducted (Carmines & Zeller, 1979). Further, the internal consistency reliability of the scales has been assessed by inter-item correlations and Chronbach's alpha calculations.

¹⁶ These discussions are done for the thesis as a whole. The detailed descriptions of methodological considerations for each of the studies are given in the scientific articles. See also chapter five for a review of each article.

Divergent validity refers to the degree to which a concept is separated from other concepts. To assess divergent validity, correlation analyses have been conducted between all concepts used in each of the articles (article 2, 4 and 6), as well as by the use of PCA models (article 4 and 6).

Further, construct validity can be increased by using multiple methods for measuring the same concept. This has not been done related to each of the scientific articles, but for the thesis as a whole, a triangulation approach was adopted. Both qualitative and quantitative studies discussed issues related to opportunities (article 4 and 5), resources (article 3, 5 and 6) and new venture performance (article 3 and 6) giving similar results. This strengthens the construct validity of these concepts.

Reliability is connected to the degree to which observations or measures are consistent or stable (Remenyi *et al.*, 1998) and to which extent the influence of measurement error is minimized (Judd, Smith, & Kidder, 1991). High reliability demands that measure instruments are stable over time and that there is internal consistency among different measurement items of the same concept (Fink, 1995; Judd *et al.*, 1991). Reliability is thus dependent on construct validity. In longitudinal studies, the consistency in the measures related to the two points in time, is also important (Black, 1999). In the study related to article 1, the exact same measures were used on both data collections to insure reliability. The same is true for the measure of financial capital utilized in article 2.

Internal validity concerns whether a conclusion about a causal relationship between two or more variables can be drawn (Bryman & Bell, 2003). Criteria for assessing a causal relationship are 1) covariation between cause and effect, 2) the cause precedes the effect in time, the relationship between the variables is not spurious, 3) the relationship between variables are not spurious, and 4) the relationship between the variables and the presumed sequence is theoretically based (Frankfort-Nachmias & Nachmias, 1996; Hair *et al.*, 1998). The statistical tests used in the studies generally establish covariation. For two of the studies (article 1 and 2), the time order of cause and effect is sought to be established using a longitudinal approach where independent variables were measured at time one and dependent variables at time two. However, the study among farm-based entrepreneurs (article

4 and 6) was cross-sectional. The sufficient time lag was thus not designed into this study.

The question of spurious variables is a demanding one. One way of eliminating the effect of external variables, is to include possible such variables in the multivariate analysis as control variables (Black, 1999). Some control variables have been included in each of the analysis. For instance, in article 2 it turned out to be important to control for the novelty of the business idea when testing for the association between entrepreneurial experience and new business performance. However, it is not possible to include all relevant control variables and to include all spurious effects. This means that one never with certainty that the associations detected are real causal relationships. The fourth requirement relating to theoretically based relationships is partly related to the question of spurious variables, as the theoretical framework should guide which relationships to test for and which control variables to include. Building a theoretical framework has been important for this research. However, as some of the research questions are related to areas where there exists little previous literature, some of the articles are more explorative in nature (e.g. the question of resource transfer). Their role has been more to identify possible links rather than to establish causal relationships.

External validity concerns whether the results of the study can be generalized beyond the specific research context (Bryman & Bell, 2003). An important aspect of this is the degree to which the investigated sample is representative to the population and stable over the period of the study (Black, 1999). This is both a question of defining the population, selecting an adequate sampling frame, as well as a question of if the final sample is representative to the sampling frame (Aldrich & Baker, 1997; Black, 1999). Definition of population and selection of sampling frame for each of the studies are accounted for in chapter 4. In all quantitative studies, response bias tests have been conducted for the available variables to test if the final sample is representative to the sampling frame (see Table 3.2). However, this does not ensure that there might not be bias related to other variables which are not detected. Whether a sample is completely representative to the population cannot be fully asserted (Pedhazur & Scmelkin, 1991). Still, the researchers should address validity issues when designing, planning and executing the study (Black,

1999). The steps of the research process of each of the studies are described in chapter 4.

3.3.2 Quality of qualitative studies

Qualitative researchers debate whether the quality of qualitative studies can be assessed by adapting the concepts of reliability and validity to qualitative research or whether alternative criteria for evaluating qualitative research should be used (Bryman & Bell, 2003). This divide is related to the philosophical approach. Researchers adopting a phenomenological or interpretivist approach argue to use alternative evaluation criteria, as reliability and validity are seen as presupposing believing in an 'objective' reality (Bryman & Bell, 2003; Guba & Lincoln, 1989). However, from a scientific realism approach is the concepts of reliability and validity can be used also with reference to qualitative studies, however with some adaptation connected to lesser focus on measurement issues.

A qualitative approach was utilized in article 3 and 5. In-depth interviews were undertaken with farmers, and if relevant, their spouses. The detailed methodological considerations of these articles are accounted for in chapter 4. Validity was considered in relation to an internal and an external dimension (Bryman & Bell, 2003). Internal validity refers to whether there is a good match between researchers' observation and the theoretical ideas they develop. High internal validity is reached through a dialectic approach where the researchers' alternate between empirical data and theory to insure a high level of congruence. The internal validity was assessed by building a semi-structured questionnaire on a theoretical framework. Then, the interviews were carried out in a way so that the interviewees were free to use their own words and come forward with the arguments and details they considered important. The transcribed interviews were then analysed in relation to the theoretical perspectives utilized in the articles.

External validity is related to the extent to which findings can be generalized across social settings. Generalization is often problematic in qualitative research. It is necessary to give detailed descriptions of the social setting of which the study has taken place, so that readers can consider to which extent this is transferable to other settings. In article 3, there is given a description of the Norwegian farm context to

inform the interpretation of the qualitative data. External validity can also be increased by increasing the number of cases studied. The principle of saturation implies that one should continue gathering data, for instance through interviews, until little new relevant information is gained through new interviews (Bryman & Bell, 2003). After doing 20 interviews (of which only 16 were used in the final analyses) we experienced that the stories told by the informants became similar to those of previous interviews, indicating that we had reached this a level of saturation.

In relation to the qualitative study, reliability is interpreted as the degree to which the observations and findings of the study are stable (Remenyi *et al.*, 1998). On the one hand, this is connected to the replicability of the research (external reliability). This form of reliability is often low in qualitative research since the social setting and circumstances of a study depends on the persons involved and time (Bryman & Bell, 2003). At the time the interviews with the farmers were conducted, there was a strong media focus on farmers needing to cut down costs to reduce market prices. This was an issue several of our informants at the time were concerned about and therefore mentioned in the interview. This might have affected their contemporary thoughts about entrepreneurial activities. To increase the external reliability, we have sought to be aware of this possible influence and take it into account during the analysis.

On the other hand, reliability concerns the consistency of the results (internal reliability) (Bryman & Bell, 2003). This is related to the degree to which different members of the research team agree about the observations. In this study, the three members of the research team discussed the findings. In article 3, the three authors conducted the interviews. The analysis where undertaken as a common process. There were no major inconsistencies between the researchers. Minor inconsistencies were dealt with during the process of analysis. In article 5, two separate qualitative studies are combined when studying the process of opportunity generation. In this article, reaching consistency between the authors in categorizing opportunities according to a theoretical framework was central to the analysis. Through a process where the authors discussed each case thoroughly, such consistency was reached.

In this section the issues related to quality judgements of the studies were considered. A detailed account for method and data is given in chapter four. In the next section, ethical issues related to the research are considered.

3.4 Ethical issues

Independent on methodology used, there are important ethical issues connected to all research who involves collecting data from and about people (Punch, 1998). Ethical concerns will emerge during research planning, making contact with informants, data collection, analyses, and reporting results (Saunders, Lewis, & Thornhill, 2000). Ringdal (2001) differentiated between three kinds of research ethical concerns; those connected to the research process, those connected to privacy protection and those related to the use of research results, including the researcher's social responsibility. In this section, the studies included in this thesis are considered in relation to these concerns.

3.4.1 The research process

Ethical issues have been considered for the design stage, the data collection stage as well as the analysis and reporting stages of the research process (Saunders *et al.*, 2000). During the design stage, the ethical issues of the study have been considered in relation to the choice of methods. In particular this relates to the privacy of the persons affected by research, especially related to getting access to the persons in the first place. In the data collection stage it the research team have sought to make sure that the data was collected accurately and fully, and that exercising subjective selectivity was avoided. Punch (1998) claimed that ethical issues more likely will arise in qualitative research, as this often intrudes people's life more. The issues dealt with in this research are not considered to be of particular sensitive and intimate ones. Still, the question of how informants are affected by the data collection has been considered (see section 3.4.2). We have sought to avoid pressing the informant for response, asking questions that are demeaning or humiliating or in other ways make the situation stressful for the informant. The informant was given the possibility to influence the time and place for the

interview, and it was made clear the interview was voluntary and that he/she did not have to answer the questions they did not want to answer (Saunders *et al.*, 2000).

Further, during the analysis and reporting stage the objectivity of the researcher is vital. We have sought not to be selective regarding which data to report and the statistical accuracy has been accounted for (Saunders *et al.*, 2000). Most of the articles constituting the main part of the thesis will have two or more authors. The guidelines for research ethics in the social sciences, law and the humanities (NESH, 2001) refers to the so-called 'Vancouver rules' which state that the authorship credit should be based only on substantial contribution to conception and design or analysis and interpretation of data, and to drafting or revising the article, and on final approval of the version to be published. My participation to all these three stages of article writing has been extensive for all the academic papers included in the thesis.

3.4.2 Privacy protection

Saunders *et al.* (2000) claimed that privacy is 'the cornerstone of the ethical issues' concerning researchers. The basic norm is that the researcher should work based on fundamental respect for human dignity (Ringdal, 2001). The Norwegian committee for research ethics in the social sciences and the humanities (NESH) (2001) stated guidelines concerning the protection of persons. These are to a various extent relevant for the studies presented here. In addition from the more general obligations about human dignity *et cetera*, the question on consent and confidentiality/anonymity needs particular attention. The obligation to obtain consent implies that the participants should explicitly have stated their willingness to participate after getting information about the research (Ringdal, 2001; Saunders *et al.*, 2000). They should also be informed that they can deny answering any question and can withdraw from the study whenever they want to. This is of particular importance in qualitative studies where the participant easily can feel obligated to answer in a face-to face situation. These principles have been followed in the studies included in this thesis.

The confidentiality obligation implies that the data in the individuals participating in the studies should not be presented in any way that their identity can be revealed.

In the scientific papers included in this study, information about informants is presented in a way so that no informants can be recognized. To make sure that the research design satisfies the norms regarding personal privacy, the research projects are reported to NSD, who prepares the cases for the Norwegian Data Inspectorate and gives advices regarding privacy protection in research. None of the studies required licence from Datatilsynet as long as the information and confidentiality criteria are fulfilled.

3.4.3 Social responsibility

Research about society is always value-laden since its results and implications have value-laden implications. The research can therefore be utilized by particular interest or political actors. Still, science should always strive to be part neutral (Ringdal, 2001). This implies that the researcher should be aware of the difference between research and politics and be sure to make this distinction. Although policy implications have been discussed in this thesis, the research has not been influenced by any political or other type of external pressure. The work related to this doctoral thesis has been financed from the Norwegian Research Council (NFR), through the REGMAT-programme. NFR has not attached any particular perspectives, methods or other expectations to this funding, except that the funding should be used to produce a PhD thesis according to the research application they approved. In addition, data collections related to the four data sets have been funded from separate sources.¹⁷

3.5 Summary

This chapter has discussed methodological issues of this composite thesis. Scientific realism was chosen as philosophical approach. This approach allowed for a research design with triangulation, where different methods, data, theories and investigators have been utilized and combined in the thesis. Criteria used for

¹⁷ The data collection related to nascent entrepreneurs was funded by the Norwegian research council. The data collection related to early business start-ups were funded by The Norwegian Ministry of Trade and Commerce and Kunnskapsfondet Bodø. Both qualitative and quantitative data collection from farmers and farm-based entrepreneurs were funded by the Norwegian research council.

judging the quality of this research were considered, followed by a review of ethical issues related to the research. The discussion in this chapter has been related to the thesis as a whole. The detailed method considerations related to each of the scientific articles, are presented in the next chapter as well as in the individual articles presented in chapter 6 and 7. Next chapter gives a brief account of each of the scientific articles.

4 EMPIRICAL STUDIES

4.1 Overview of empirical studies

The empirical section of the thesis consists of six scientific articles. Each of these articles is related to the research questions and theoretical frameworks lined up previously (see Table 1.2). However, as they are written in an article format, they also stand on their own feet; they are developed according to their own specific research questions. Still, they are closely tied to each other, investigating different aspects of the same phenomenon; portfolio entrepreneurship.

The articles can be divided into two distinct parts. Part A consists of two articles discussing differences between portfolio entrepreneurs as compared to novice and serial entrepreneurs (articles 1 and 2). These studies are conducted in a multi-industry context and have focus on the early phases of a business start-up process. Article 1 deals with nascent entrepreneurs, and investigates whether nascent portfolio entrepreneurs undertake business start-up processes which differ in their content, time length and outcomes from nascent serial and novice entrepreneurs. Article 2 takes one step forward in the business start-up process, investigating new business starters from the time of business registration through the first 19 months. The question explored here is whether portfolio entrepreneurs differ from serial and novice entrepreneurs when it comes to resources acquired during the start-up process and the outcomes achieved 19 months later.

Part B is concerned with a deeper examination of the phenomenon of portfolio entrepreneurship in particular. This part consists of four articles; all based on empirical data from farmers and farm-based portfolio entrepreneurs. Article 3 and 4 discusses the issue of why some existing business owners start new business activities in addition to their existing ones and become portfolio entrepreneurs. The former explores how different types of motivation define different types of portfolio entrepreneurs, associated with different characteristics and outcomes. The latter discusses push and pull factors associated with becoming portfolio entrepreneurs using quantitative data. Article 5 investigates the process of business opportunity generation of portfolio entrepreneurs and the importance of prior

knowledge in this process. The sixth and final article goes into the relationship between the original and the new business activity of the portfolio entrepreneurs. The extent of resource transfer between the originating and the new business as well as the consequences of such transfer for the performance of the new business, are explored.

In this chapter, each of the scientific articles will be accounted for. The articles themselves are found in chapters 6-11.

Part A: Portfolio entrepreneurship: general context

4.2 Article 1: The business gestation process of novice, serial and parallel business founders¹⁸

4.2.1 Introduction

Article 1 explores the new business start-up process among novice, serial and portfolio¹⁹ nascent entrepreneurs. Nascent entrepreneurs are defined as individuals undertaking the process of starting a new business from scratch, but who still have not completed the process and established a new business (Carter *et al.*, 1996). The study was linked to the Entrepreneurship Research Consortium, an international consortium set up to undertake longitudinal studies of nascent entrepreneurs²⁰. It was designed to capture on-going business start-up efforts, and to follow them over time. In this way insights could be gained into process issues and the determinants of the outcomes of these processes (Davidsson, 2006b). Thus, the characteristics of

¹⁸ Alsos GA & Kolvereid L. 1998. The business gestation process of novice, serial and parallel business founders. *Entrepreneurship Theory and Practice* 22(4): 101-114

¹⁹ At the time the article was written we used the term 'parallel entrepreneurs' in stead of 'portfolio entrepreneurs'. This concept was used as an opposite analogue to 'serial entrepreneurs' at a time when the concept of 'portfolio entrepreneurs' was not yet well established. In this chapter, I have chosen to use 'portfolio entrepreneurs' to ensure consistency with the rest of the chapter.

²⁰ In the literature often referred to as PSED (Panel study of entrepreneurial dynamics).

the start-up processes of these three different types of entrepreneurs and what came out of their processes could be explored.

This design gave a unique opportunity to investigate the question if entrepreneurs learn from experience. The influence of entrepreneurial experience have been discussed in the entrepreneurship literature since Lamont (1972). At the time, this issue was actualized by MacMillan's (1986) request to study habitual entrepreneurs and by the discussion related to multiple business ownership (Birley & Westhead, 1993; Scott & Rosa, 1996). If entrepreneurs learn from previous business start-up processes, experienced entrepreneurs would be anticipated to undertake somewhat different start-up processes the second time around, and achieve a higher probability of succeeding in setting up a business.

4.2.2 Theoretical framework and research questions

The theoretical framework of this study is related to the business start-up process. It was built upon Block and MacMillan (1985) who asserted that the early venture development process is associated with a number of developmental milestones (such as first sales, first shipment, operating break-even, etc.). Further, it relies on Carter et al.'s (1996) work on business start-up activities. They investigated the number and kinds of activities nascent entrepreneurs carried out during the business start-up process, as well as the sequence of these activities, and found that this have a significant influence on the probability that this process would result in a new business.

Starr and Bygrave (1992) suggested that experienced founders are likely to meet developmental milestones and to establish new businesses more effectively than novice founders. MacMillan (1986) argued that experienced entrepreneurs learn from their earlier entrepreneurial experiences and build an experience curve of entrepreneurship. They have the opportunity to analyze what went wrong and what went right, and eventually 'adopt the technology of entrepreneurship'. If an experience curve for entrepreneurship really exists, it could be reasonably assumed that serial and portfolio entrepreneurs undertake a somewhat different, and supposedly more efficient, business start-up process than founders who do not have any prior entrepreneurial experience. Based on the knowledge learned from previous experience and possibly also other resources transferred from current or

previous ventures, experienced nascent entrepreneurs could also be assumed to be more likely to succeed in setting up a new business.

The following research questions were investigated:

1. How do the business gestation processes reported by novice, serial and parallel business founders differ with regard to a) the start-up activities they carry out during the process, b) the number of such start-up activities cited, c) the timing of start-up activities, and d) the sequence of the start-up activities?
2. Do serial and parallel founders have a higher probability of actually starting new businesses than novice founders?

4.2.3 Method

The unit of analysis of this study were the business start-up efforts of individual nascent entrepreneurs. Nascent entrepreneurs and their start-ups effort were identified by screening a large representative sample of the Norwegian adult population. This screening was part of a weekly telephone survey of a professional survey institute, MMI, conducted during a 10 week period early in 1996. Each of these weeks, MMI survey interviewed 1,000 persons who were at least 15 years of age, in total 10,000 interviews. However, since we screened for nascent entrepreneurs only among persons who were 18 years or older, the sample was reduced to 9,533 respondents. They were asked if they, alone or with others, were currently trying to start a new business, and if they had started a new business during the last year. If they answered 'yes' to either of these two questions, they were identified as nascent entrepreneurs. They were then asked to state their names and telephone numbers to participate in a follow-up study. In all 322 respondents were identified as nascent entrepreneurs, of which 255 stated willingness to participate in a follow-up interview.

The follow-up interviews were conducted by telephone a short time after the screening. Of the 255 individuals on the list, 18 were inaccessible, 28 turned out not to be nascent entrepreneurs after all, and 6 refused to participate. The 203 respondents left were asked questions regarding the activities they had carried out trying to start a business, as well as regarding their previous entrepreneurial experience and other individual characteristics. A response bias test comparing

these 203 respondents with the individuals identified as nascent entrepreneurs but not interviewed this time, revealed no statistically significant differences when it comes to personal characteristics such as age, gender, ethnic background, education nor entrepreneurial experience (Rotefoss, 2001).

For the purpose of this study, only respondents who reported that their proposed business venture was a wholly new (de novo) business (and not an acquisition or take over of an existing business) were subject to further analysis. This left us with 160 valid respondents who were starting new independent businesses from scratch at the time of the interview in early 1996. These 160 individuals were contacted again approximately 12 months later. A telephone survey gathered updated information about the activities they had carried out during the business start-up effort, as well as the outcome and current status of this process. One person refused to answer, leaving us with longitudinal data for a final sample of 159 respondents. Among these, 64 % were identified as novice nascent entrepreneurs, 20 % were serial nascent entrepreneurs and 16 % were portfolio nascent entrepreneurs.

In the telephone interviews respondents were asked a series of questions related to 20 distinct activities often associated with the process of business start-up. The activities fell into three categories: business planning, financing the new firm, and interaction with the external environment. This list of activities was based on the one used in the Entrepreneurship Research Consortium but translated and slightly adapted to the Norwegian context. For each activity, respondents were asked to indicate whether it was a) not yet initiated, b) not relevant, c) initiated, or d) completed. If an activity had been initiated or completed, respondents were asked to specify the month and year of its initiation. These questions were first asked in the interview conducted early 1996, and the information was updated in the follow-up interview early 1997.

The number of months from the earliest reported activity to the initiation of each subsequent activity was calculated, including the number of months from the first to the last start-up activity initiated. Further, measures were calculated regarding the number of initiated or completed activities for each of the three categories of activities, as well as the total number of activities initiated/completed. Finally, the mean number of months between the initiations of each activity was calculated.

During the follow-up survey in 1997 the respondents were also asked to report on the current status of their start-up effort; if the business was started, if they were still trying to start it, or if they had given up the start-up effort.

4.2.4 Key findings

The study investigated the proportion of each type of nascent entrepreneurs who had initiated each of the start-up activities. Further, differences between novice, serial and portfolio nascent entrepreneurs with regard to the number of start-up activities initiated, in total and for each category, the time period between the first and last activity initiated, as well as the average time period between start-up activities, were examined. Moreover, the sequences of start-up activities were compared. Finally, the outcomes of the start-up process for novice, serial and portfolio entrepreneurs were evaluated.

The findings showed that portfolio nascent entrepreneurs carry out more activities in their business start-up process than other nascent entrepreneurs. However, they do not hurry. Rather, they seem to take one step at a time and they wait until the last part of the process before they undertake costly activities such as buying equipment, hiring employees and devoting themselves full time to the business. They invest their own money into the business at a relatively early stage, but wait until the last part before they acquire external funding. Portfolio nascent entrepreneurs do to a larger extent than novice and serial nascent entrepreneurs organize a start-up team, invest their own money in the venture, initiate sales promotion, and hire one or more employees.

Serial nascent entrepreneurs carry out more start-up activities in the earlier phases of the business start-up process than portfolio nascent entrepreneurs. Moreover, they often devote themselves full-time to the business start-up effort from the beginning of the process. Further, they are less likely to receive external funding, particularly government support, than portfolio nascent entrepreneurs. Novice nascent entrepreneurs undertake their business start-up process much in the same way as serial nascent entrepreneurs. However, they take their time during the first phases of the process, and then top their effort over the last quarter of the first year and carry out most of the remaining start-up activities then. In marked contrast to

serial and portfolio nascent entrepreneurs, they rarely hire employees, and if they do, they wait until the very end of the business start-up process.

When comparing the outcomes of the start-up efforts of the three types of nascent entrepreneurs, portfolio nascent entrepreneurs were found to be significantly more likely to actually start a business, and equally less likely to give up their start up efforts than both novice and serial nascent entrepreneurs. Serial nascent entrepreneurs were found to be more likely to give up their start-up efforts than both novice and portfolio nascent entrepreneurs.

In conclusion, the empirical evidence suggests that there are differences in the business founding processes reported by novice, serial and portfolio nascent entrepreneurs. The findings support the need to distinguish between different types of experienced entrepreneurs. Portfolio, in difference from serial, nascent entrepreneurs seem to build an experience curve of entrepreneurship leading to a somewhat different business start-up process and a higher probability of actually starting a subsequent business. Serial nascent entrepreneurs on the other hand, seem to be no better than novice nascent entrepreneurs at reaching milestones in the business start-up process.

The distinction between portfolio and serial entrepreneurs is linked to the question of learning from past experiences. Portfolio entrepreneurs may have a richer and fresher experience base with which to work, while serial entrepreneurs may be labouring under the biases inherent in selective recall and oversampling of success (see Sitkin, 1992). In other words, portfolio nascent entrepreneurs can iterate back and forth between experiences, while serial entrepreneurs may only operate from what is remembered about the previous experience. The findings from this study may illustrate the value of fresh and ongoing experience from other entrepreneurial activities when initiating new business start-up processes.

However, the current businesses owned and managed by portfolio entrepreneurs may be a source not only of fresh experience, but also of other resources. For instance, a reason why portfolio nascent entrepreneurs are able to invest own money early and apply for external funding late in the process, may be that access to funding and other resources are made available through their existing

business(es). Moreover, utilization of spare resources in their existing business(es) may allow portfolio entrepreneurs to postpone costly activities such as investments and employment until the new business is ready to stand on its own feet. The transfer of knowledge as well as other resources may thus not only increase the likelihood that the start-up efforts of portfolio nascent entrepreneurs actually lead to a new business. It may also increase this business chance of success by reducing its start-up costs and/or providing valuable resources. The next article looks into the resource access of new businesses started by novice, serial and portfolio entrepreneurs, and their subsequent early performance.

4.3 Article 2: New business early performance: differences between firms started by novice, serial and portfolio entrepreneurs²¹

4.3.1 Research questions

This study explores resource access and performance differences among new firms started by novice, serial and portfolio entrepreneurs. In particular, the question of whether experienced business founders own superior performing firms relative to inexperienced entrepreneurs, is illuminated. The study is based upon the presumption that experienced entrepreneurs have learned from their experiences and may therefore be better at identifying new opportunities, acquiring the resources necessary, as well as better at utilizing these resources to exploit their business opportunities. This study investigates whether serial and portfolio founders are superior to novice founders at acquiring resources for the new venture, and if the resources acquired are associated with higher subsequent business performance. The following research questions were explored:

²¹ Alsos GA, Kolvereid L & Isaksen EJ. 2005. New business early performance: Differences between firms started by novice, serial and portfolio entrepreneurs. In P Christensen, F Poulfeldt (Eds.), *Managing complexity and change in SMEs: Frontiers in European Research 2005. Rent Anthology 2005*. Edward Elgar.

1. Do novice, serial and portfolio entrepreneurs differ when it comes to their ability to identify opportunities and acquire resources when starting a new business?
2. Do such differences lead to different performance in new businesses started by novice, serial and portfolio entrepreneurs?

Novicy is a temporary condition, as also novice entrepreneurs will become experienced after learning from their first start-up. Performance differences between novice and habitual entrepreneurs are, therefore, likely to be found in the early stages of business development. The study is designed to study brand new businesses. The entrepreneurs were contacted within few days after they registered their new firms, i.e. at start-up, and then followed up 19 months later. Resource acquisition and performance is thus considered for the very early days of the new business.

4.3.2 Theoretical framework

This study is guided by a theoretical framework inspired by the resource-based view of the firm, suggesting that differences in performance result from the resource combinations controlled by the entrepreneurs and their firms. According to this view, resources can include financial capital and physical assets as well as knowledge, routines and other immaterial assets (cf. chapter 2). Experienced entrepreneurs may have acquired knowledge and assets from their former business, and that this give them better access both to new opportunities and various resources (Scott & Rosa, 1996). These resources may include knowledge resources that accrue from experiential learning; networks and contacts, as well as financial capital and fixed assets. Moreover, Westhead, Ucbasaran & Wright (2003a) found that portfolio entrepreneurs have more diverse experiences and more resources than both serial and novice entrepreneurs. Portfolio entrepreneurs possess resources through their existing business that might be used in the start-up of the new business such as organisational routines, employees, suppliers, customers, localities or equipment.

This study focus on three resource categories which has been suggested to differ between types of entrepreneurs and to be important sources to performance

differences; financial capital (Scott & Rosa, 1997; Westhead *et al.*, 2003a), start-up teams (Birley & Westhead, 1993; Westhead & Wright, 1998c) and opportunity identification abilities (McGrath, 1996; McGrath & MacMillan, 2000; Ronstadt, 1988; Ucbasaran *et al.*, 2003a). Since access to opportunities and resources is central to the possibility of success of a new business, higher access to resources is expected to lead to higher performance of new businesses started by experienced entrepreneurs. Particularly, serial and portfolio entrepreneurs may be able to 'grow' their new businesses more rapidly from the start because of their presumed better access to resources. In the very early stages of a new business, growth in sales and employees is important indicators of early business performance.

Performance differences between novice and experienced entrepreneurs have been anticipated by several authors (Kolvereid & Bullvåg, 1993; MacMillan, 1986; Westhead & Wright, 1999). However, hitherto, there has been presented little empirical evidence that experienced business founders perform better than their inexperienced counterparts (Carter & Ram, 2003). Several explanations has been offered to this paradox, for instance that previous research has failed to differ between types of experienced entrepreneurs (Westhead & Wright, 1998c), and that there are both assets and liabilities connected to prior experience (Starr & Bygrave, 1992). Further, there may be differences in the nature of the business ideas pursued by novice as opposed to experienced entrepreneurs (Ucbasaran *et al.*, 2003a), which may have implications for performance levels, particularly at the short term. Moreover, previous research has typically investigated performance between well established businesses. As mentioned, we argue that performance differences between experienced and inexperienced entrepreneurs are most likely to be found in the early stages, before the novice entrepreneurs gain experience.

In this study, we search to make up for some of these deficiencies by focusing of brand new businesses, differing between serial and portfolio entrepreneurs, and controlling for the novelty of the business idea pursued. Further, by focusing on factors leading to the proposed performance differences, such as resource acquisition and opportunity identification behaviour, the design of the study gives the possibility to identify assets as well as liabilities related to the types of entrepreneurs.

4.3.3 Method

The unit of analysis of this study is the new business start-up. Based on longitudinal data of a representative sample of new business formations, the present research explores the differences between novice, serial and portfolio entrepreneurs when it comes to their resources and the subsequent performance of the new business started.

Data for this study was gathered from new business founders drawn from The Norwegian central coordinating register for legal entities. This register contains all businesses that have employees, all limited liability companies and partnerships, and all sole proprietorships obliged to pay VAT²². The four most common legal forms of new businesses in the register are sole proprietorships, partnerships with mutual responsibility, partnerships with shared responsibility and unlisted limited liability companies. Since a total of 98.6% of Norwegian new registrations in 2002 chose one of these four legal forms (Statistics Norway, 2004), other less common legal forms were disregarded. All new businesses that registered with the central coordinating register during weeks 21-24 2002 were approached. Within two weeks after registration in the register, a questionnaire was mailed out in four rounds to 3,121 businesses registered during these weeks. A reminder with a new copy of the questionnaire was sent out in four rounds three weeks after the initial mailings. Of the questionnaires posted, 126 were returned unreachable, while we received 1,048 completed questionnaires – a response rate of 35%.

The second round of data collection took place during week number 5-8 in 2004, i.e. about 19 months after the initial mailing. A professional survey agency was engaged to telephone the respondents to the mail survey in order to find out what had happened to the businesses since the first round of data collection. Among the 1048 businesses that responded to the mail survey, 29 businesses were excluded since they had been de-registered from the central coordination register. Another six businesses were excluded because they had more than 50% missing data on the first round of data collection. Finally, 33 respondents were excluded since the

²² At the time of the initial data collection in 2002, this included, with few exceptions, all sole proprietorships (as well as other businesses) with an annual turnover of NOK 30,000 or more.
1 NOK = approx. 0.14 USD or 0.12 EUR.

business or the contact person was not listed in any of the available telephone directories. The survey agency attempted to reach all the remaining 980 respondents. Among these 275 persons were inaccessible and 54 others refused to participate. Follow-up data were thus collected from a total of 651 of the business founders. Only respondents who identified themselves as the founder and owner-manager of the new business were included in the further analysis. Further, we include only those respondents who submitted complete data sets. In total, this left 410 cases for the analysis of total employment and 354 cases for the analysis of sales turnover in the business. Thorough response bias tests did not reveal any significant differences between respondents and non-respondents. Moreover, the final sample did not differ significantly from the entire cohort of businesses started in Norway in 2002 with regard to legal status or localization. Hence, there is good reason to believe that the sample is representative for the population of new business start-ups in Norway.

4.3.4 Key findings

The study investigated differences between novice, serial and portfolio entrepreneurs regarding resource access. Novice entrepreneurs are found to be significantly less likely to have organized a team of entrepreneurs to start the business, to identify significant fewer opportunities, and to raise significantly less financial capital than serial and portfolio entrepreneurs. Further, portfolio entrepreneurs are found to identify significantly more business opportunities than serial entrepreneurs, but there were no significant differences between serial and portfolio entrepreneurs regarding start-up teams and financial resources. In total, these results indicate that serial and portfolio entrepreneurs are able to get access to more resources and opportunities than novice entrepreneurs.

Hierarchical multivariate regression analyses were used to explore the associations between these resource differences and early performance of the new businesses. Obtained level of sales turnover and level of employment other than the founder were used as performance measures. Whether the new business was a de novo start-up or an acquisitive entry, as well as the degree of novelty of the business idea were controlled for in the models. Serial and portfolio entrepreneurs were found to achieve significantly higher sales turnover and significantly more employees than

novice entrepreneurs, when resource access was not controlled for. When the three categories of resources were included in the models, financial resources and start-up team were significantly associated with both performance measures, while opportunity identification was only significant in the model related to employment. However, when controlling for resources, the effect of experience (serial and portfolio entrepreneurs) were substantially reduced. This indicates that access to resources is mediating the relationship between experience and performance. More specifically, serial and portfolio entrepreneurs reach higher turnover in their new businesses mainly because they are better able to get access to valuable resources.

The results of this study give interesting contributions to the literature on entrepreneurial experience and habitual entrepreneurship. First, this is one of very few studies that actually are able to show performance differences between experienced and inexperienced entrepreneurs. Acknowledging the need for controlling for the nature of the business idea, the results show that the new businesses of serial and portfolio entrepreneurs actually perform better. Second, the study begins to reveal what constitutes the advantages of experienced entrepreneurs. Basically, these entrepreneurs seem to be better at getting access to resources which again help them build businesses with higher performance.

The findings of the present study also raise new questions that should be dealt with in future research in this area. For instance, one should look into the process of resource acquisition and explore how experienced entrepreneurs are able to get access to a larger amount of resources. It is reasonable to assume that some of these resources are obtained from their previous or existing ventures. This raises a question of the nature and effects of resource transfer between the ventures in experienced entrepreneurs' curriculum. As Iacobucci and Rosa (2004) suggested, the creation of new businesses on the basis of previous or existing businesses of experienced entrepreneurs can be regarded as evolutionary entrepreneurial systems where the relationship between the different business opportunity exploited by the entrepreneur and the dynamics of the entrepreneurial team(s) involved may be important antecedents of new business performance. The resource transfer between existing and new businesses of portfolio entrepreneurs is one of the issues which are considered in part B of this chapter.

Part B: Portfolio entrepreneurship: farm context

While the previous two articles investigated differences between novice, serial and portfolio entrepreneurs, the articles in this section concentrate on portfolio entrepreneurs only. Moreover, we move from studying representative samples of entrepreneurs from all industries, to give attention to one sector - the agricultural sector. All portfolio entrepreneurs studied in this section own and manage a farm business. However, as portfolio entrepreneurs, they are also involved in one or more businesses in addition. These businesses are not farm businesses; rather they constitute a large variation in type and industry.

4.4 Article 3: Farm-based entrepreneurs: What triggers the start-up of new business activities?²³

4.4.1 Introduction

This study goes deeper into the question of why some farmers choose to start new business activities instead of limiting their engagement to farming or waged employment. Obviously, the reasons for starting new business activities are of many kinds, as such choices deeply affect the living of the household involved. This study uses in-depth qualitative interviews to explore the motivation of farm-based entrepreneurs as well as the resources and characteristics of their business activities. Three types of farm-based entrepreneurs are identified based on their reported main motivation for new business start-up in addition to the farm. Moreover, these three types were compared regarding their business goals, their resource base as well as several characteristics of the business activity started.

²³ Alsos GA, Ljunggren E & Pettersen LT. 2003. Farm-based entrepreneurs: what triggers the start-up of new business activities? *Journal of Small Business and Enterprise Development* 10(4): 435-443

4.4.2 Theoretical framework and research questions

Three theoretical perspectives are used to explore the factors affecting the start-up of new business activities amongst farmers: the rural sociology perspective of pluriactivity, the opportunity based perspective of entrepreneurship and the resource based perspective as adopted within entrepreneurship research.

The rural sociology perspective sees the rationale for agricultural households adopting different patterns of activity as dependent upon conditions in agriculture, off-farm job opportunities and the structure of the household (Fuller, 1990). The strategy adopted by the household depends on the perception of these 'realities'. The dominant reason to start searching for an opportunity to establish another business is considered to be the need to maintain or increase the income generated by the farm (e.g. Bowler *et al.*, 1996; Efstratoglou-Todoulou, 1990; Ilbery, 1991). Starting a new business activity is not only an economic adaptation strategy but may enable farm household to continue farming and living in rural areas (Barlett, 1986; Eikeland, 1999; Kinsella *et al.*, 2000). This could be motivated by a wish to keep the family farm going, to stay at home because of parents, by an affinity with the nature of farm work or emotional reasons such as 'not wanting to sell the family land' (Kinsella *et al.*, 2000). Accordingly, starting a new business could be motivated by a wish to continue farming as a life-style, to remain free and independent as self-employed or because of the rural tradition of combining different activities.

The opportunity based perspective of entrepreneurship emphasizes business opportunities as the main source of entrepreneurial activities and an important trigger of new business start-ups (Shane & Venkataraman, 2000). Opportunities are the result of environmental conditions and entrepreneurial ability as well as access to and processing of information (Ucbasaran *et al.*, 2000). As experienced business owner-managers still in business, farmers can be assumed to have access to knowledge and information which can become the basis of other valuable business ideas (McGrath, 1996; Ronstadt, 1988). Experience may also increase the cognitive capabilities necessary to evaluate information making experienced owner-managers better able to identify new business opportunities (McGrath, 1996) and to carry through a start-up process (Starr & Bygrave, 1992). The prior knowledge,

gain from experience, may be central to the identification and exploitation of new business opportunities (Ardichvili *et al.*, 2003; Shane, 2000). It can thus be argued that farm-based entrepreneurship is the result of alert farmers discovering and exploiting business opportunities related to their prior knowledge.

The resource-based view of the firm suggests that the acquisition and organisation of resources is a vital element in the process of starting a new business activity (Brush *et al.*, 2001). An entrepreneur's ability to collect the necessary resources and combine them in a new business may be crucial to whether the new firm will come into existence. While investigating farm-based new businesses, Carter (1998) emphasized the advantages of utilizing capabilities connected to traditional farming activities when new businesses were first established. The farm may give access to raw materials and may facilitate the utilization of common resources for the new and the former business, such as localities, distribution channels, network contacts, etc. (Alsos & Ljunggren, 2002). According to the resource-based perspective, a competitive advantage should be built based on resources (or combinations of resources) that are valuable and unique, and which cannot easily be imitated by competitors (Barney, 1991). If the farmer possesses this kind of resources this may be a 'trigger' to start a new business activity.

4.4.3 Method

The unit of analysis for this study is the farm household. The household is the basic unit of production and organization in agriculture, and several studies have identified it as the key element in researching and understanding changes within the farm sector (Eikeland & Lie, 1999; Fuller, 1990; Gasson & Winter, 1992). The fact that decisions regarding the development of family owned micro businesses are most often made within the household (Wheelock *et al.*, 1999), also makes it an appropriate unit of analysis when studying the process of starting a new business.

The data was obtained from sixteen in-depth interviews with farmers in two rural regions in Norway. Similar to most European countries, there have been great changes in the domestic agriculture sector. However, Norway being outside the EU, the restructuring process has been slower and farms are still relatively small compared with other European countries. The vast majority are family farms and

most employ only family members. It is also quite common for one or more individuals in the household to be employed outside the farm. The labour market in rural areas of Norway has probably given better access to waged jobs than in other parts of Europe. In particular, a large public sector has been an important source of jobs for farm-based women, offering both full- and part-time employment.

The respondents for the study were farmers who have started new business activities in addition to the farm, or are seriously considering doing so. In cases where the farm household consisted of a couple where both were involved in the farm and/or in the new business activity, both spouses were interviewed. This was the case in eight of the sixteen interviews. New business activities were defined as those that could not be categorized as traditional farming. The new activities were established after the respondents took over the farm. The research sample comprised thirteen livestock and three arable farms.

4.4.4 Key findings

The sixteen farm households were categorized according to their main motivation to start new business activities. The analysis revealed three types of farm-based entrepreneurs, which were labelled as pluriactive farmers, resource-exploiting entrepreneurs and portfolio entrepreneurs. These differed with regard to several features relevant to the three theoretical perspectives employed, including connection to the farm, business goals, source of business ideas, resource base and source of competitive position. They also differed in business characteristics such as size, capital requirements, ownership and employment.

The pluriactive farmers are motivated to start new business activities in order to maintain or expand the farm and are usually closely related to it. These households are strongly committed to farming, in regard to their identity, where they put their work effort, and from where they get their main source of income. Establishing new business activities is a way of increasing the income from the farm, since growth within traditional farm production is restricted due to quotas or resource limitations. They choose a new business activity instead of waged employment, since they find an off-farm job difficult to combine with activities at the farm, and also difficult to fit into their choice of life style. The new business activities started

are very small and usually embedded in farming activities. For the majority, the farm still contributes most to the household income. The main competitive factor that these new business activities are based on the possibility of utilizing spare capacity at the farm (work force, machinery, etc.), the households willingness to work for less or a combination of these two factors. The pluriactive farm household's opportunity search is distinguished by searching for something that can give an income and which is possible to combine with farming. These opportunities are often imitations of similar business activities run by others, and in some cases externally generated. They are based on competence and/or physical resources available at the farm.

The resource-exploiting entrepreneurs start new business activities mainly because they wish to utilize unique resource(s) which they control or can get access to. These resources are usually connected to the farm and/or the members of the household, but could also be resources in the local community. The resource-exploiting entrepreneurs see the farm as the preferred place of residence for the household, but they do not have as strong ties to farming activities as pluriactive farmers. The new business activity may be just as, or even more important than the farm, with regard to income, quality of life, job satisfaction, etc. The new business activity is often larger than that of the pluriactive farmer, but normally only employs household members. The business is not necessarily embedded in farming activities and may be located outside the farm. The competitive factors that these new business activities are based on involve access to unique resources or combinations of resources.

The portfolio entrepreneurs base their motivation for new business start-up on a business idea they have identified and wish to exploit. These business ideas do not necessarily originate in the farm's resources. If necessary, these entrepreneurs can acquire resources to exploit a business idea and they invest much more time and financial resources than the other two types of entrepreneurs. The business activities are often team ventures, established by teams composed by family members and/or outside persons. Portfolio entrepreneurs could be described as having weaker ties to farming activities and sometimes also to the farm as a residence. They see the farm as a business and as such do not find it necessary to 'keep it going' under any circumstances. The new business activity does in many

cases contribute more to household income than the farm. It is often organized as a separate unit and is larger in terms of turnover and number of employees. The competitive position of new businesses is based on the uniqueness of the idea rather than on work effort or specific resources. These entrepreneurs set out to create uniqueness by e.g. differentiating their products from ‘bulk’ production, using design, marketing the enterprise as a niche business and being focused on sales.

This study shows that there is heterogeneity among farm-based entrepreneurs which needs to be accounted for in research as well as by policy makers. Their motivations, goals and behaviours may differ substantially, which have implications for how they respond to for instance policy initiatives. This has inference for how we should understand the concept of portfolio entrepreneurship and which outcomes we should expect from these activities. The farm business owners’ motivations for starting new business activities, seem to have consequences for how the process of identifying and exploiting new business opportunities is carried through and which results to expect from it. The next article discusses which factors are associated with the propensity for farmers to becoming portfolio entrepreneurs.

4.5 Article 3: Portfolio entrepreneurship in the farm sector: Necessity push or opportunity pull?²⁴

4.5.1 Research questions

This study looks into the issue of why some business owners become portfolio entrepreneurs, while most do not. Based on insights from the rural sociology view of pluriactivity and the opportunity-based view of entrepreneurship, factors associated with farmers to become portfolio entrepreneurs are explored. Specifically we explore a model of the business founding process relating to three

²⁴ Alsos GA, Ljunggren EC & Pettersen LT. Portfolio entrepreneurship in the farm sector: Necessity push or opportunity pull? An earlier version of this paper were presented at ICSB, Belfast, 16.-18. juni 2003.

different milestones: intention, preparation and start-up of business activities, and push and pull factors associated with these three milestones.

Data for this study is from a survey of a representative sample of farmers in Norway. The fact that the respondents have a relatively similar first business, a farm business, gives an opportunity to compare factors associated with their start-up efforts without the disadvantage of possibly highly different background, resource access and environments associated with multi-industry samples. Push and pull factors associated with the environment for their original business activity, (farming) the environment for new business start-ups, and the competences associated with the farm household are investigated. The following research question was addressed:

1. Is the likelihood of farmers to consider, prepare and establish new business activities in addition to their farms associated with
 - a. the institutional environments for farming,
 - b. the institutional environments for new business start-ups,
 - c. farmers' entrepreneurial abilities and/or their access to business opportunities?

4.5.2 Theoretical framework

Two theoretical perspectives guide this study: The rural sociology perspective to farm-based pluriactivity and the opportunity based perspective to entrepreneurship. Further, we build upon insights related to the business start-up process. Katz (1990; 1992) suggests there are several phases which an entrepreneur has to address to establish a new firm, however not necessarily in a certain chronological order. A number of milestones have been identified (Block & MacMillan, 1985; Katz, 1992; Starr *et al.*, 1993). Following Katz (1990) we monitor farmer behaviour with regard to: 1) having an *intention* to start a business, 2) starting to *prepare* the business, and 3) *founding* the business. Katz argued that these milestones represent hurdles to the business start-up; some individuals fail to address all the hurdles and do not set up a new firm²⁵ (see also Carter *et al.*, 1996; Reynolds & Miller, 1992).

²⁵ Katz's (1990) model originally discussed hurdles towards self-employment, but has been utilized with regard to business formation (Alsos & Ljunggren, 1998; Rotefoss, 2001; Rotefoss & Kolvereid,

The rural sociology perspective relating to farm-based pluriactivity suggests that farmers may be 'pushed' into multiple business ownership. Pluriactivity is seen as a mechanism to address constraints imposed by agricultural recession, as well as a survival strategy for the farm household (Bowler *et al.*, 1996; Damianos & Skuras, 1996; Ilbery, 1991). Intentions, preparation and start-up of new business activities among farmers are considered to be results of unfavourable conditions. Entrepreneurial activities are often understood as a response to the lack of opportunities for full-time employment or full time farming (Eikeland & Lie, 1999). Farmers experiencing reduced or insufficient income from their farming activities may be pushed into finding new income sources for the household (Ilbery, 1991; McNally, 2001). Further, if they in addition find it difficult to obtain adequate waged employment, their income generating activities will be directed towards starting new business activities (Eikeland & Lie, 1999).

Conversely, the opportunity based perspective to entrepreneurship emphasize the opportunities as the fundamental aspect of the entrepreneurial process (Eckhardt & Shane, 2003). This perspective suggests that entrepreneurs will identify market opportunities, and will be 'pulled' into establishing new business activities to exploit these opportunities (Kirzner, 1973; Landström & Johannisson, 2001; Shane & Venkataraman, 2000). Farmers' ability to identify business opportunities may therefore be a pull factor associated with intentions, preparation and start-up of a new business. Moreover, whether the individuals decide to pursue the opportunity identified, depend on how they evaluate the opportunity (Ardichvili *et al.*, 2003). This evaluation is partly dependent on how the individuals perceive their own abilities to successfully pursue the opportunity, and partly on how they consider the environmental conditions for opportunity exploitation. Entrepreneurial abilities and positive environment for new business start-ups may also contribute to the pulling of farmers into new business activities.

2005). Here, the model is adapted to consider the behaviour of farmers who already own a farm business and desire to start and own additional business activities (see also Alsos & Kolvereid, 1998).

4.5.3 Method

The unit of analysis for this study is the farm household defined as the farmer and his/her spouse. The household is the basic unit of production and organization in agriculture, and several studies show that the household is the key element in studying and understanding changes within the farm sector (Eikeland & Lie, 1999; Fuller, 1990; Gasson & Winter, 1992). The fact that decisions regarding the development of family owned micro businesses most often are made within the household (Wheelock *et al.*, 1999), also makes the household an appropriate unit of analysis when studying the process of starting a new business.

Data for this study was gathered through a postal survey among farmers in Norway administered by Statistics of Norway. Questionnaires were sent to a stratified (by region) random sample of 3018 farmers drawn from an agriculture census. The questionnaires were addressed to the (main) farm owner. 21 questionnaires were returned due to farm closure, and were excluded from the population. After one postal reminder, 1019 filled in questionnaires were returned. Respondents who failed to present complete information were excluded. In total, responses from 748 farm households are discussed here, i.e. 25 % of the original sample. No statistical significant response bias was detected between the respondents and the non-respondents with regard to age and sex of main farm holder, or type of farm production. However, the respondents were slightly more likely to have larger farm sizes than the non respondents (mean: 168 decares as compared to 154 decares). Farm size was not found to correlate significantly with any of the dependent variables.

The questionnaire was designed to measure whether farmers had started new business activities in addition to their farm business. New business activities were defined as any business activities other than traditional farming with an annual turnover larger than NOK 30 000²⁶ owned and managed by the respondent. To address content and face validity of the questionnaire, academics in the fields of entrepreneurship and farm management was asked to comment on it. Further, a

²⁶ Approx. € 3 800. NOK 30 000 equals the limit for VAT registration in Norway.

pilot study among practising farmers with or without other business activities was conducted. These were contacted by members of the research team at a face-to-face basis. No major problems were detected but suggestions related to minor changes and rephrasing of questions were incorporated.

4.5.4 Key findings

Logistic regression models were calculated to investigate the factors associated with each of the three milestones in the process of starting a new business activity in addition to the farm business, i.e. becoming a portfolio entrepreneur; intention, preparation and start-up. The results indicate that *intention* of starting new business activities are more likely among farmers which are younger, well educated and who currently are portfolio entrepreneurs, i.e. those who already own and manage at least one business activity in addition to the farm. Farmers with entrepreneurial intentions are more likely to believe they have the entrepreneurial abilities needed to start new business activities, and are slightly less prone to perceive laws and regulations for business start-ups as complicating than other farmers. Finally, these farmers to a larger extent than others experience new business opportunities emerging from their farming activities.

Preparation of new business activity start-up is found to be more likely among younger farmers who currently are portfolio entrepreneurs. Farmers preparing business start-ups seem to be more confident with their own entrepreneurial abilities and are also able to see more business opportunities arising from their farming experiences, than other farmers. Actual business *start-ups* are found to be associated with younger farmers who strongly believe in their entrepreneurial abilities and who also believe they are relatively attractive in the labour market. All in all, the findings seem to emphasize opportunity pull rather than necessity push as the dominant mechanism for portfolio entrepreneurship in the farm sector.

The rural sociology perspective emphasizes other business activities in addition to the farm as an adaptation strategy farmers may choose when the conditions for farming are changing. This study gave no support for this view. Rather, it was the pull factors relating to business opportunities as well as entrepreneurial abilities and experience, which most strongly differed farmers considering, preparing and

establishing new business activities from other farmers. This may indicate that difficult conditions for farming and reduced incomes are not sufficient factors for starting new business activities. The tendency to find the conditions for farming as unsatisfactory and to experience reduced income from farming activities were widespread among the farmers investigated, while only some of them considered entrepreneurial activities as an option. The findings suggest that the farmers who consider and prepare for business start-up process possess abilities to recognise and exploit opportunities evolving from the farming experience. Establishing new business activities are also more likely among farmers with entrepreneurial abilities. The finding that farmers with additional business activities also find themselves more attractive on the labour market than other farmers, indicates that it is the most competent and resourceful farmers who go into new business activities.

The next two articles look specifically at those farmers who have taken steps to become portfolio entrepreneurs and which their experiences and farm resources play in this respect. Using a qualitative approach, the next article discusses the utilisation of prior knowledge in process of opportunity identification among farmers.

4.6 Article 5: Opportunities and prior knowledge: A study of experienced entrepreneurs²⁷

4.6.1 Introduction

This exploratory study investigates how opportunity generation is related to the prior knowledge base of experienced entrepreneurs. The article explores how prior knowledge is used in the process of opportunity generation and whether this varies dependent on how opportunities come into existence. Firstly, taxonomy of opportunity generation processes is developed. Secondly, the link between prior knowledge and new opportunities is explored based on opportunity stories accessed

²⁷ Alsos GA & Kaikkonen VA. 2004. Opportunities and prior knowledge: A study of experienced entrepreneurs. In SA Zahra, CG Brush, P Davidsson, J Fiet, PG Greene, RT Harrison, M Lerner, C Mason, GD Meyer, J Sohl, A Zacharakis (Eds.), *Frontiers of Entrepreneurship Research*: 301-314. Babson College: Wellesley, MA

through in-depth interviews of experienced farm-based entrepreneurs in Finland and Norway. Differences in use of prior knowledge depending on the type of opportunity generation process are discussed.

4.6.2 Theoretical framework and research questions

The theoretical framework of this study builds on the debates going on within the opportunity-based view of entrepreneurship regarding how opportunities come into existence. Two central debates are whether opportunities are the result of serendipity or deliberate search (e.g. Chandler *et al.*, 2002; Gaglio & Katz, 2001), and whether they are objectively discovered or subjectively created (e.g. Davidsson, 2003; Gartner *et al.*, 2003). We argue that these two debates not solely represent different ontological views, but may also be considered as illustrate the heterogeneity of opportunity detection processes. Both elements of search and coincidence, as well as elements of discovery and creation may be included in such processes. These four concepts may be viewed as placed on different ends of two axes describing the variety of opportunity generation situations; one an axis where active search and passive luck represent the two extreme points, and one axis where pure objective discovery and subjective creation represent the two extreme points.

The combination of these two axes makes it possible to separate between four broad categories of processes: opportunity discovery (passive-objective), opportunity search (active-objective), opportunity creation (active-subjective) and opportunity occurrence (passive-subjective). *Opportunity discovery* takes place when the opportunity objectively exists, and it can be recognized by the entrepreneur even though (s)he is not actively searching. *Opportunity search* supposes for more active search for finding a business opportunity, considering that the opportunity can be objectively recognized. *Opportunity creation* and *opportunity occurrence* on the other hand are the opportunity generation processes in which the entrepreneur's (subjective) abilities, experiences, prior knowledge and actions make the opportunities to come into existence. The opportunities are therefore formed rather than recognized. The difference between these two categories lies in the extent of active search. Opportunity creation takes place when the entrepreneur actively searches for a business opportunity and uses her

subjective capacity and resources to create the opportunity. In some cases the opportunity can occur due to entrepreneur's special skills and resources, even though (s)he is not actively looking for (this particular) opportunity, i.e. opportunity occurrence.

Further, the study builds on literature suggesting that opportunity generation is facilitated by the prior knowledge of the entrepreneur. It is argued that entrepreneurs discover opportunities related to the information that they already possess because prior knowledge triggers recognition of the value of the new information (Shane, 2000). Each person's idiosyncratic prior knowledge creates a 'knowledge corridor' that allows him/her to recognize certain opportunities, but not others (Ronstadt, 1988; Venkataraman, 1997). Prior knowledge can be assumed to affect both the ability to search for useful information and the ability to take advantage of elements of coincidence or luck. Further, both discovery and creation of opportunities may be supported by the prior knowledge of the discoverer/creator.

Entrepreneurial experience is a source of prior knowledge which might be particularly interesting in this respect. Founding and running of a business may give access to information and knowledge which become the basis of new business ideas (MacMillan, 1986; McGrath, 1996; McGrath & MacMillan, 2000). This information may be a result of the learning taking place during the start-up or owner-management of a prior business (Ronstadt, 1988), of an increased network resulting from the prior activities (McGrath, 1996; Singh *et al.*, 1999), and of development of cognitive abilities through experience (McGrath, 1996; Ucbasaran *et al.*, 2002). An existing farm business can therefore be a source of new business ideas both in it self, through the entrepreneurs experience with it, as well as through the network developed through the owner-management of the business. However, the heterogeneity of opportunity generation processes as suggested above, encourage an exploration of a possible variation between in the role of prior knowledge relating to the type of process in question.

This exploratory study addresses the following broad research questions:

1. Can the four suggested types of opportunity generation processes be identified empirically?
2. What characterizes and differentiates the four types of processes?
3. In what way is prior knowledge and experience of the entrepreneur related to the four types of processes?

4.6.3 Method

The unit of analysis for this study is the entrepreneurial opportunity. An opportunity is defined as a perceived situation where a good and/or a service can be introduced which the entrepreneur believes will yield a profit. One entrepreneur may detect several opportunities. The data for this study consist of qualitative long in-depth interviews of thirty-one farm-based entrepreneurs in Finland and Norway. Stories of opportunity generation were extracted from these interviews and analysed.

The origin of this study is in two separate but similar studies conducted in Norway and Finland, both focusing on rural micro firms. The interviewed farm-based entrepreneurs were located in the Northern Savo region in Finland and the Nordland and the Møre regions in Norway. These regions have many similarities, for instance their rurality and their dependence on primary production and small businesses. But there are also differences, not least regarding the different agriculture policy efforts of Finland, as an EU member, and Norway.

The informants were farmers who have started new business activities in addition to the farm, or are seriously considering doing so. In the cases the farm household consisted of a couple who both were involved in the farm and/or in the new business activity, both spouses were interviewed when possible. During the interviews, they were asked how business opportunities had come into existence in their lives. The stories revealed several opportunity detection episodes where some of the opportunities were rejected, some resulted in new ventures, and some are still being considered for the future. These opportunities were included in the study regardless of the present outcome of them, since focusing only on opportunities

that are carried out may cause scholars to overlook a large number of venture possibilities that were seriously considered by an entrepreneur (Fiet, 1996:421).

The interviews of thirty-one entrepreneurs (or couples) gave us a data consisting of fifty-nine opportunity generation processes. The opportunities were categorized according to the passive-active and objective-subjective axes, using the following procedure: Each opportunity was first categorized separately by each of the authors. Secondly the categorizations were compared. In the cases of disagreement, the categorization was discussed between the authors until an agreement was reached.

4.6.4 Key findings

All four types of opportunity generation processes from the developed taxonomy were identified in the empirical data, from both Finnish and Norwegian entrepreneurs. An investigation of the characteristics of the opportunity processes in each category revealed that each category has some similar features which differ from opportunities in other categories. Opportunities in the category *opportunity discovery* were often related to pluriactive farms, where new business opportunities are considered as a way to increase the income for the owning family (cf. 4.4.4). Exploiting business opportunities are seen as an alternative to searching for waged employment. The opportunities are typically related to something which traditionally has been done in farms, and farm resources are often central. Opportunities are often imitations and sometimes also identified by others. Opportunities in this category relate mainly to local markets, and are often 'low potential' opportunities when it comes to growth.

Opportunities in the category *opportunity search* are less related to the farms than the discovery opportunities. Entrepreneurs searching for opportunities in this way have typically chosen to develop other business activities in stead of growing their farm, as a response to policy demands or the need for more income than farming can give. These opportunities are often imitations of other businesses locally or in other areas. The active opportunity search has been conducted looking for 'known' opportunities that might fit the entrepreneur's competence, resources and situation.

Also these opportunities are mainly related to local markets and often related to a small growth potential.

Opportunity creation processes often seem to lead to opportunities related to areas from which the entrepreneur has already got experience due to prior business ownership, a hobby, or work experience. It is therefore a continuance of earlier practice, but is often also connected to a perceived market need. These opportunities are generally more innovative than the ones resulting from search or discovery. Farm resources are seldom crucial to the opportunities, but they may still make use of such resources. These opportunities are often, but not always, related to larger growth potential or ambitions than the previous categories, and are usually related to regional or national markets. In the category of *opportunity occurrence* the opportunities typically occurred due to the entrepreneur's special skills, unique knowledge or distinct resources, even though (s)he has not actively searched for (this particular) opportunity. They seem to be more innovative than the other opportunities, and they often involve relation to unique competences or resources controlled by the entrepreneur. They are not or only marginally related to farm resources, and if/when they are successfully exploited they would replace the farm as the main business activity and also exceed the income and size of the farm considerably. These opportunities are usually related to national or international markets.

Prior knowledge seems to play quite different roles depending on the type of process. Opportunity creation and occurrence seem to be related to a more extensive knowledge base of the entrepreneur than the other processes. Opportunity discovery seem to be based on the farm-based knowledge or skills, while opportunity search to some extent seem to stem from the lack of particular knowledge. Further, entrepreneurs with extensive experience from other areas than farming, e.g. prior employed work, prior business activities or hobbies, seem to be more able to undertake generation processes which includes more subjective creation than less experienced entrepreneurs.

The results from this study indicate that there is a heterogeneity among opportunity generation processes which needs to be taken into account when discussing the relationship between prior knowledge and opportunity generation. Moreover, it

seem that entrepreneurs when gaining experience from prior opportunity generation and exploitation may move from opportunity discovery or search to more occurrence or creation in their subsequent generation processes, indicating that there might be learning or development resulting from such processes. Further, in accordance with the findings reported in 4.4.3, this study found that the motivation of the entrepreneur has an impact on the type of process conducted. Entrepreneurs pushed by the need for extra income or from the need to change their activities from farming to something else, were more active in their opportunity generation processes. These entrepreneurs were often also more objectively searching for opportunities, and therefore their processes often fell in the category of opportunity search.

The role of the existing farm business and the resources connected to it played a different role in the different types of processes. The opportunity discovery and search processes resulted in opportunities more connected to the farm and more dependent on farm resources than the opportunity occurrence and creation processes. The final article examines the connection between the new business activities started and the resources of the originating business of portfolio entrepreneurs.

4.7 Article 6: Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences²⁸

4.7.1 Research questions

This study examines portfolio entrepreneurship in the Norwegian farm sector, focusing on the extent of resource transfer between the origination farm businesses and the newly created ventures of the portfolio entrepreneurs. Further, the subsequent effects on the performance of the new business activities of this

²⁸ Alsos GA & Carter S. 2006. Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences. *Journal of Rural Studies* 22(3): 313-322

resource transfer are investigated. The study is based on a survey of Norwegian farm business owners which have established a new business activity in addition to the farm. The fact that the respondents have a relatively similar first business, a farm business, gives an opportunity to compare the resource transfer from these businesses to the new venture without the disadvantage of possibly highly different types of resources controlled by the originating business. However, the farm businesses may still vary extensively with respect to their resource richness, an issue which is also discussed in this article.

This study was designed to investigate resource transfer within the farm sector, focusing on the extent of resource transfer from originating farm business into new ventures and the subsequent effect on new venture performance. There were three specific research questions:

1. To what extent are different types of resources transferred from the farm business into the new venture?
2. To what extent does the resource richness of the farm influence the resources that are transferred?
3. Which transferred resources, if any, are associated with enhanced performance in the new venture?

4.7.2 Theoretical framework

This study was guided by the resource-based view of the firm. This perspective suggests that access to resources is crucial to new business start-ups (Brush *et al.*, 2001; Johannisson & Landström, 1999). Control over a variety of resources is therefore regarded as an advantage for entrepreneurs. When starting a new business, portfolio entrepreneurs almost certainly make use of resources made available through their existing business. A resource-based perspective suggests that portfolio entrepreneurs therefore have an advantage over their inexperienced counterparts, being able to access and mobilise proven business resources. These resources may include knowledge resources that accrue from experiential learning; organisational resources such as routines, employees and networks of the existing businesses; physical resources such as buildings and equipment; and financial resources in terms of equity, working capital, and capital assets such as premises

(Birley & Westhead, 1993; Reuber & Fischer, 1999; Westhead *et al.*, 2004a). While the literature has focused particularly on the transfer of experiential knowledge, Carter's (1999) analysis of portfolio entrepreneurship in the UK farming sector suggested that the availability of physical assets such as land and buildings is crucial in enabling the development of business opportunities.

Yet the assumption that resource transfer materialises into superior performance in the new venture has yet to be proven. Mosakowski (2002) criticised the resource-based view for its focus on the positive consequences of resources, arguing that a firm's resource endowments may favour, but equally may also impair the ability to discover and exploit new business opportunities. Drawing from a larger resource-base is not necessarily a competitive advantage. While in some ventures resource transfer may contribute to enhanced performance, in others resource transfer may have a negative impact, derived from a 'liability of staleness', since the resources available from the original firm are not always suitable for the new venture (Starr & Bygrave, 1992). We should therefore take into account the possibility of resource transfer having both positive and negative impacts on performance. This may, in fact, be one reason why previous studies have failed to find empirical support for the presumed advantage of experienced entrepreneurs.

4.7.3 Method

The unit of analysis of this study is the new business activity started by farm-based portfolio entrepreneurs. The association between the extent of resource transfer from the originating farm business and the performance of the new business activity is examined. The sample frame was drawn from the agriculture census from 1999, but including only the farms which were still registered as active in 2002. From this sampling frame, a representative sample of 3,018 farm households from all regions of Norway was selected. The survey instrument was designed by the research team and administered by postal mail-out by Statistics of Norway, in spring 2002. The questionnaire was addressed to the main farm business owner. From the original sample, 21 questionnaires were returned because of farm closure and excluded from the population. 1019 completed questionnaires were returned, resulting in a usable response rate of 34%. No statistical significant response bias was detected between the respondents and the non-respondents with regard to age

and sex of main farm holder, or type of farm production. However, the respondents were slightly more likely to have larger farm sizes than the non respondents (mean: 168 decares as compared to 154 decares). Farm size is controlled for in the analyses.

For this study, only data drawn from portfolio entrepreneurs was used. These were defined as respondents who own and manage at least one business venture in addition to their farm business. Additional business activities were included if they entailed activities other than traditional farming, commanded an annual turnover larger than NOK 30 000²⁹, and were owned and managed by the respondent. After excluding cases with missing data on the variables used for this paper, 207 cases were left for analysis.

4.7.4 Key findings

The extent of resource transfer from the farm business to the new business activity was explored by the means of descriptive statistics and one-way ANOVA analyses. The results suggest that there is a substantial transfer of resources into the new venture. Resource transfer is particularly apparent when the activities of the new business venture are closely related to the farm business, in terms of horizontal or vertical expansion, and is greater when the farm is relatively resource rich. There seem to be a considerable transfer of knowledge-based resources and physical resources, while the transfer of organizational resources is less comprehensive. Further, correlation analyses indicated that there is an association between the resource richness of the farm business and the extent of resource transfer. This was particularly apparent with regard to knowledge-based resources and organizational resources. This implies that farmers who have been successful in creating one well functioning and resource rich business are able to transfer a greater volume of resources into their new ventures. This is in line with findings in other industries (cf. 4.3.4).

²⁹ Approx. € 3 800. NOK 30 000 equals the limit for VAT registration in Norway.

Finally, the question of whether resource transfer is associated with higher performance of the new business venture was investigated using hierarchical linear regression analysis. Resource transfer was found to be both positively and negatively related to the new venture's profitability performance. While the transfer of physical resources appeared to enhance the new venture's profitability, the transfer of knowledge and organizational resources appeared to reduce it. In part, this can be explained by the particular characteristics of the Norwegian farm sector. The sector is still highly regulated. A long tradition of large-scale cooperatives with the obligation to buy total production has resulted in farmers having little or no contact with the market. As a consequence, they generally have little knowledge of marketing, sales, pricing and distribution. It is not surprising, therefore, that portfolio farm-based entrepreneurs transfer few of these types of knowledge resources to their new ventures. The finding that the transfer of these types of knowledge resources has a negative impact on new venture performance can be explained by 'liabilities of staleness' (Starr & Bygrave, 1992) or overconfidence (Westhead *et al.*, 2004a). Extensive transfer of knowledge resources may indicate that farmers think they know what is needed and therefore do not act to gain new knowledge. Transfer of existing knowledge resources may lead to reduced experimentation and existing knowledge may be core rigidity rather than core resource (Mosakowski, 2002).

To date, research studies have shied away from direct examination of the relationship between the activities of existing firms and new ventures. The results presented here suggest this relationship may be crucial to our understanding of the potential advantages of multiple business owners and how the performance of their ventures may be inter-related.

4.8 Summary

This chapter has summarized the scientific articles constituting the empirical part of this thesis. Two articles deal with differences between portfolio, serial and novice entrepreneurs in a general industry context. One discusses the behaviours and outcomes related to the business start-up process of nascent entrepreneurs. The other examines resource acquisition and subsequent performance among fledging

new firms. The remaining four articles deals with portfolio entrepreneurs in the farm sector. One explores how different types of motivation define different types of portfolio entrepreneurs, associated with different characteristics and outcomes. The second discusses push and pull factors related to farmers' chose to start additional business activities and becoming portfolio entrepreneurs. The next examines the importance of prior knowledge in the process of opportunity identification of farm-based entrepreneurs. The final article looks at the extent of resource transfer between the originating and the new business activity and performance consequences for the performance of the new business activity. In the next chapter, an overall discussion of the findings and conclusions from these articles will be given. Further, contributions, limitations as well as implications of this research will be discussed.

5 CONCLUSIONS AND IMPLICATIONS

“Science is built up of facts, as a house is built of stones; but an accumulation of facts is no more science than a heap of stones is a house.”

Poincaré (1905:141)

This chapter discusses the conclusions and implications from the research. The conclusions from each of the six studies are summarized and synthesized in order to bring out the joint conclusions and implications of this thesis as a whole. The chapter is structured as follows. First, the main contributions of the thesis will be discussed related to practical, theoretical and methodological issues. The next section will summarize the key findings from the empirical studies in relation to each of the broad research questions presented in chapter 1. Implications for practitioners and policy makers as well as for research are subsequently considered. Limitations of this thesis are then discussed. Finally, some directions for future research are suggested.

5.1 Contribution of the thesis

The aim of this thesis was to contribute to the knowledge on portfolio entrepreneurship relevant to researchers as well as to practitioners. In sections 1.3.2 and 1.3.3, gaps in the knowledge base regarding portfolio entrepreneurship were identified. The purpose of the study has been to address these gaps by investigating differences in behaviour and start-up performance between novice, serial and portfolio entrepreneurs, exploring factors associated with the propensity to become portfolio entrepreneurs, and examining the extent and consequences of resource transfer from current to new business activities of portfolio entrepreneurs. Six studies were conducted, each addressing specific research questions related to the overall purpose of the thesis (see Table 1.2). The studies were summarized in chapter four. In this section the common contributions of these studies are highlighted. Possible practical, theoretical and methodological contributions are discussed.

5.1.1 Practical contributions

Ucbasaran *et al.* (2001) suggested that entrepreneurship studies should focus on more precisely defined entities (e.g. type of entrepreneurs), contexts and relationships to allow for more specific advice and applications for policy makers, practitioners and entrepreneurs. This study has focused on portfolio entrepreneurs in a multi-industry as well as in a single-industry context. Further, each of the articles included has focused on specific relationships: between behaviour in the start-up process and the outcome of this process (article 1), between resource acquisition and early firm performance (article 2), between motivation for new business start-up and the development and characteristics of the new business (article 3), between perceived environmental factors, perceived opportunities and entrepreneurial abilities and the propensity to become a portfolio entrepreneurs (article 4), between prior knowledge and the identification of business opportunities (article 5), and between resource transfer from originating firm and profitability of new business activity of portfolio entrepreneurs (article 6).

The research has been linked to policy debates. First, it is related to the general debate about developing a competitive Norwegian economy by pursuing entrepreneurship and new business start-ups. The studies have shed light on the contribution of portfolio entrepreneurs in this respect, as well as assets and barriers related to new business start-ups among current business owner-managers. Second, the research has been related to the specific debates concerning the restructuring of the agricultural sector. This debate has focused upon entrepreneurial activities among farmers and the utilization of farm-based resources for new business development. By researching farm pluriactivity from an entrepreneurship perspective, this thesis addresses issues of opportunity identification and exploitation which have seldom been explored in a farm-based context. Third, the study investigates the value of farmers' prior knowledge and farm-based resources to new business development. Consequently, the results from the studies seem to have the potential to inform the policy debates, and several practical implications can be extracted from the findings (see section 5.4).

5.1.2 Theoretical contributions

A theoretical contribution will usually imply an improvement of theoretical knowledge which already exists (Whetten, 1989). A thorough review and discussion of previous research in the area of study is therefore a prerequisite for theory-building (Feldman, 2004). A theory contains elements or constructs, relationships between them, explanations for these relationships, and a boundary for where the relationships are applicable (Weber, 2003; Whetten, 1989). A theoretical contribution can imply adding new elements or relationships, to provide new or improved explanations to why these relationships occur and/or to widen or narrow the boundaries in which the theory is applicable (Whetten, 1989).

As accounted for in earlier chapters; this study builds on previous research on portfolio entrepreneurship, including habitual entrepreneurs, multiple business owners, entrepreneurial experience and pluriactivity. However, as previous research has mainly been exploratory and empirically founded (Rosa, 1998; Ucbasaran *et al.*, 2006), it gives limited guidance the theoretical foundation for studying portfolio entrepreneurship as a phenomenon. In line with recommendations from, amongst others, Davidsson *et al.* (2001), this research makes use of theory development within the entrepreneurship field as well as within related fields. As little development has been done related to theory on portfolio entrepreneurship or related concepts, the basis for building a strong theoretical model and test it is not present. The approach has instead been to illuminate different aspects of portfolio entrepreneurship utilizing alternative theoretical insights. As one theory provides only a limited view of the phenomenon (Weber, 2003), it has been fruitful to build upon varying theoretical perspectives depending on the specific research question explored. The research has mainly been guided by the opportunity-based view of entrepreneurship and the resource-based view of the firm, but has also built on insights from other perspectives (e.g. Weick's theory of organizing, the rural sociology view of pluriactivity). The illumination of portfolio entrepreneurship from various theoretical perspectives may represent a contribution of this thesis.

Further, the thesis may also have some contributions to the broad theories utilized which go beyond the phenomenon of portfolio entrepreneurship. It may contribute

to the resource-based view of the firm by focusing on the construction of the initial resource-base of a firm, and by highlighting that resources may apply dysfunctional as well as functional to the development of competitive advantage. So far, these aspects have received limited attention in the resource-based view (Brush *et al.*, 2001; Mosakowski, 2002). Another possible contribution to the resource-based view is the focus on resources which are transferred between interconnected firms (Lavie, 2006). Moreover, the results from this thesis may contribute to the opportunity-based view of entrepreneurship by examining the role of prior experience-based knowledge and controlled resources to the process of opportunity identification and exploitation. Finally, the integration of the opportunity-based view of entrepreneurship and the resource-based view of the firm in the study of a specific type of entrepreneurs may represent a contribution.

Farmers starting additional business activities have been examined from an entrepreneurship perspective. In previous research in the entrepreneurship field, the farm sector is most often excluded from the analysis due to a proposed lack of relevance to entrepreneurship (Carter, 1996; Carter & Rosa, 1998). The results from this study indicate that the theoretical framework has been applicable to this setting, and that empirical studies in the farm sector can give theoretical contributions to the entrepreneurship field. Moreover, this study may contribute to the rural sociology view of pluriactivity by bringing in the identification of business opportunities as an important element to understand farmers' engagement in additional business activities.

5.1.3 Methodological contributions

In section 1.3, previous research on experienced entrepreneurs was reviewed to identify gaps in the knowledge-base on portfolio entrepreneurship. This review revealed that previous studies to a large extent were quantitative, cross-sectional studies using descriptive statistics or bivariate analysis to explore the issues highlighted (see table 1.3). There seemed to be a lack of qualitative, in-depth studies and longitudinal studies as well as more advanced statistical analysis of quantitative data. Several scholars have called for a variety methodologies to explore entrepreneurial themes and aspects (Davidsson *et al.*, 2001; Hofer & Bygrave, 1992; Ucbasaran *et al.*, 2001; Westhead & Wright, 2000). The main

methodological contribution of this thesis is the adopted triangulation approach, including the combination of qualitative and quantitative, as well as cross-sectional and longitudinal empirical studies. This multiple-method approach has allowed for a broad investigation of the phenomenon of portfolio entrepreneurship. A qualitative method was adopted to look for complex patterns of interrelationships between many aspects concurrently (e.g. the mutual relationship of start-up motivation and the characteristics of the originating farm business, the new business and the household strategies), while quantitative approaches were used to seek to isolate direct relationships between a limited set of variables for possible generalization (e.g. the relationship between resource transfer and performance of the new business).

An additional contribution relates to the use of rigorous methods related to quantitative empirical data (Chandler & Lyon, 2001). First, multi-item measures are used to represent several of the constructs included. Second, when analysing quantitative data multivariate techniques are adopted where applicable to explore the research questions. In this way, the possibility that one dependent variable might be influenced by several independent variables is accounted for.

There has been a reviving discussion of the 'appropriate' unit of analysis in entrepreneurship research, particularly but not exclusively related to studies of serial and portfolio entrepreneurs (Birley & Westhead, 1993; Carter & Ram, 2003; Gartner, 1989; Gartner & Shane, 1995; Scott & Rosa, 1996; Westhead & Wright, 1998c). The selection of unit of analysis is closely tied to the choice of research questions. A possible contribution from this thesis is the inclusion of different units of analysis depending on the particular research questions explored, including the household, the opportunity and the new venture (see. table 1.2).

The definition of portfolio entrepreneurs as current entrepreneurs starting new business activities through the identification and exploitation of business opportunities may also constitute a possible contribution from this thesis. By focusing on business activities rather than formal entities, the study has sought to examine the entrepreneurial process related to a business opportunity, regardless of the mode of exploitation chosen. Similarly, additional formal entities based on the

same opportunity, by splitting an existing business activity, have been excluded. This distinction is made most clearly in the studies related to the farm context.

Several scholars have recommended a stronger focus on the contexts for entrepreneurial activities (Carter & Ram, 2003; Low & MacMillan, 1988). It has been argued that there is a need for more industry specific studies to build relevant knowledge for practitioners and policy makers (Borch, 2004). This thesis includes investigations related to a multi-industry context as well as to a farm context. The multi-industry studies provide results which may be applicable to different types of businesses, and hence more 'general'. On the other hand, single industry studies may take more consideration to industry specific factors. Further, by holding the industry context stable, the relationships examined may appear more clearly, as they will not be blurred by industry differences.

5.2 Discussion of key findings

The previous section has highlighted possible practical, theoretical as well as methodological contributions related to this thesis. In this section, a more detailed review of key empirical findings is provided. An overview of the key findings from each of the six studies is presented in Table 5.1. The findings are discussed in relation to each of the three broad research questions presented in section 1.1.2. In accordance with Table 1.2, the findings from article 1 and 2 are related to the first broad research question on differences in behaviours and performance of portfolio, serial and novice entrepreneurs. Further, the findings from article 3 and 4 are related to the second broad research question on factors associated with the propensity to become a portfolio entrepreneur. Finally, the findings from article 5 and 6 are discussed in relation to the third broad research question on the role of prior knowledge and resource transfer.

5.2.1 Differences in behaviours and performance of portfolio, serial and novice entrepreneurs

Results from this thesis indicate that there are differences between novice serial and portfolio entrepreneurs related to their behaviours in the process of starting new business activities. In the study of nascent entrepreneurs (article 1), portfolio entrepreneurs were found to undertake a higher number of start-up activities as compared to novice entrepreneurs. In particular, they were more active in actions related to financing the new firm and interaction with the external environment, while there were no differences related to business planning activities. The higher level of activity of portfolio entrepreneurs seems largely to be associated with acquisition of resources such as funding, start-up team and employees. Moreover, portfolio entrepreneurs were found to use the time needed to complete the process, postponing costly activities until late in the process. At this point, the uncertainty related to the viability of the business idea may be reduced. These findings support the argument of other scholars that individuals with entrepreneurial experience have had the opportunity to develop knowledge about the 'logic' behind entrepreneurial processes (MacMillan, 1986; Politis, 2005), which can be interpreted as the organizing of internal and external resources and networking (Johannisson, 2000).

Table 5.1 Overview of key findings from the six scientific articles

#	ARTICLE TILE	SPECIFIC RESEARCH QUESTIONS	KEY FINDINGS
1	The business gestation process of novice, serial and parallel business founders	<p>How do the business gestation processes reported by novice, serial and parallel business founders differ with regard to a) the start-up activities they carry out during the process, b) the number of such start-up activities cited, c) the timing of start-up activities, and d) the sequence of the start-up activities?</p> <p>Do serial and parallel founders have a higher probability of actually starting new businesses than novice founders?</p>	<p>Portfolio nascent entrepreneurs carry out more activities in their business start-up process than other nascent entrepreneurs. They do more often organize a start-up team, invest their own money in the venture, initiate sales promotion, and hire employees. Portfolio entrepreneurs seem to take one step at a time and they wait until the last part of the process before they undertake costly activities. Portfolio nascent entrepreneurs were more likely to succeed in starting a business, and equally less likely to give up their start up efforts than both novice and serial nascent entrepreneurs. Serial nascent entrepreneurs were more likely to give up their start-up efforts than both novice and portfolio nascent entrepreneurs.</p>
2	New business early performance: novice, serial and portfolio entrepreneurs	<p>Do novice, serial and portfolio entrepreneurs differ when it comes to their ability to identify opportunities and acquire resources when starting a new business?</p> <p>Do such differences lead to different performance in new businesses started by novice, serial and portfolio entrepreneurs?</p>	<p>Novice entrepreneurs were less likely to have organized a start-up team, identified fewer opportunities, and raised less financial capital than serial and portfolio entrepreneurs. Portfolio entrepreneurs identified more business opportunities than serial entrepreneurs. Serial and portfolio entrepreneurs achieved larger businesses in terms of sales turnover and employment than novice entrepreneurs. Access to resources mediated the relationship between experience and performance and explained the higher growth of business owned by serial and portfolio entrepreneurs.</p>
3	Farm-based entrepreneurs: What triggers the start-up of new business activities?	<p>What are the motivations of farmers starting new business activities, and how are differences in motivation related to the characteristics of the new business venture?</p>	<p>Heterogeneity among farm-based entrepreneurs. Three types of farm-based entrepreneurs were identified based on their main motivation for starting additional business activities: The pluriactive farmer, the resource exploiting entrepreneur and the portfolio entrepreneur. The three types differed in terms of how the process of identifying and exploiting new business opportunities is carried through and the outcomes of this process.</p>

#	ARTICLE TITLE	SPECIFIC RESEARCH QUESTIONS	KEY FINDINGS
4	Farmers as portfolio entrepreneurs: necessity pull or opportunity push?	Is the likelihood of farmers to consider, prepare and establish new business activities in addition to their farms associated with a) the institutional environments for farming, b) the institutional environments for new business start-ups, and c) farmers' entrepreneurial abilities and/or their access to business opportunities?	Intention and preparation of starting new business activities are more likely among farmers which are younger, well educated and who currently are portfolio entrepreneurs, who perceive they have entrepreneurial abilities and see new business activities arising from farm-based experiences. Actual business start-ups are found to be associated with younger farmers who strongly believe in their entrepreneurial abilities and who also believe they are relatively attractive in the labour market. In total, the findings emphasize opportunity pull rather than necessity push as the dominant mechanism for portfolio entrepreneurship in the farm sector.
5	Opportunities and prior knowledge. A study of experienced entrepreneurs	Can the four suggested types of opportunity generation processes be identified empirically? What characterizes and differentiates them? In what way is prior knowledge and experience of the entrepreneur related to the four types of processes?	Four types of opportunity identification processes were identified based on two dimensions: active search or passive serendipity, and objective discovery or subjective creation. Differences between the types of processes were found with relation to the source of opportunity, the use of prior knowledge, the extent of innovation, the markets approached and the growth potential of identified opportunities.
6	Multiple business ownership in Norwegian farm sector: Resource transfer and performance consequences	To what extent are different types of resources transferred from the farm business into the new venture? To what extent does the resource richness of the farm influence the resources that are transferred? Which transferred resources, if any, are associated with enhanced performance in the new venture?	There is a substantial transfer of resources into the new venture, particularly apparent when the activities of the new business venture are closely related to the farm business, and when the farm is relatively resource rich. There was a considerable transfer of knowledge-based and physical resources, while the transfer of organizational resources is less comprehensive. Positive and negative results from resource transfer on new venture profitability. While the transfer of physical resources enhanced new venture profitability, the transfer of knowledge and organizational resources appeared to reduce it.

Moreover, the evidence related to the timing of activities in the start-up process support McGrath's option approach to entrepreneurship. While prior start-up experience may enable nascent entrepreneurs to quickly initiate new venture operations, as suggested by Starr and Bygrave (1992), evidence presented here show that experienced entrepreneurs in general, and portfolio entrepreneurs in particular, do not move through the business start-up process quicker than novice entrepreneurs. Rather, the findings suggest that portfolio entrepreneurs have advantages over other entrepreneurs since they can afford to 'wait and see'. Moreover, portfolio entrepreneurs seem to be better equipped to take advantage of the time they spend waiting before they establish a new business. The findings further suggest that portfolio entrepreneurs have identified superior business opportunities, possibly because they have access to a high number of latent opportunities (Ronstadt, 1988) or 'shadow options' (McGrath, 1996), and are better able than novice and serial entrepreneurs to turn these options into real options and viable opportunities.

While the study of nascent entrepreneurs showed that portfolio entrepreneurs were more active related to the acquisition of resources, the study of newly registered firms (article 2) revealed that those portfolio and serial entrepreneurs who managed to establish a firm had a resource advantage. Serial and portfolio entrepreneurs had acquired more resources than novice entrepreneurs at the time of business registration, including start-up team, business opportunities and financial capital. Portfolio entrepreneurs also reported to have identified more opportunities than serial entrepreneurs. This resource advantage may be related to a higher level of activity related to resource acquisition (cf. above) or to the possibility of experienced entrepreneurs to transfer resources from previous or current businesses (Brush *et al.*, 2001; Carter, 1999; Scott & Rosa, 1997). Moreover, business ownership experience may be associated with broader network and increased legitimacy among external resource providers. Consequently, initial human capital resources can facilitate further resource acquisition (Löwegren, 2006; Westhead & Wright, 1998b).

Previous studies have suggested, but often failed to prove, that experienced entrepreneurs perform better than novice entrepreneurs in their new businesses (Carter & Ram, 2003). This is one of very few studies that actually are able to

show firm performance differences between experienced and inexperienced entrepreneurs. Performance differences were identified in both the studies comparing behaviours and performances of portfolio, serial and nascent entrepreneurs (article 1 and 2). Making the important distinction between portfolio and serial nascent entrepreneurs, the evidence suggests that current business owners are better able to complete a business start-up process than previous business owners. Thus, it can be interfered that their seemingly more active behaviour related to resource acquisition pays off. Acknowledging the need for controlling for the nature of the business idea, the study of newly registered firms found that portfolio and serial entrepreneurs reported significantly higher levels of sales turnover and employment 19 months after business registration compared to novice entrepreneurs. Taken together, these findings indicate that there are important differences between serial and portfolio entrepreneurs related to the start-up process, but that those nascent serial entrepreneurs who manage to establish a new business, are able to achieve equal levels of firm performance to portfolio entrepreneurs. However, both types of experienced entrepreneurs seem to perform better than novice entrepreneurs.

Moreover, the study begins to reveal what constitutes the advantages of experienced entrepreneurs. Particularly, these entrepreneurs seem to be better at getting access to resources which again help them build businesses with superior performance. These findings have implications to our understanding of the value of experience and other resources accumulated by serial and portfolio entrepreneurs, both related to the value of specific human capital to entrepreneurship (Ucbasaran *et al.*, 2006) and to the importance of the initial resource base of new ventures (Brush *et al.*, 2001; Hayton & Zahra, 2005). Consequently, the findings support the resource-based view of the firm (Barney, 1991; Wernerfelt, 1984) suggesting that resource advantages are related to firm performance. Further, they support the resource dependency perspective (Pfeffer & Salancik, 1978) suggesting that entrepreneurs will be successful when they obtain access to and utilize necessary resources. Moreover, they give support to human capital theory as adopted within entrepreneurship research (Foss, 1994; Ucbasaran *et al.*, 2006) suggesting that the specific human capital of the entrepreneur is associated with increased ability to successfully accomplish an entrepreneurial process.

5.2.2 Factors associated with the propensity to become a portfolio entrepreneur?

By investigating farmers and their entrepreneurial activities, this thesis examined factors associated with the propensity to start an additional business activity and, hence, become a portfolio entrepreneur. Results from the quantitative study among farmers (article 4) indicate that additional business activities are more likely to be pulled from perceived opportunities and entrepreneurial abilities, than to be pushed from perceived constraints related to the current farm business (article 4). Farmers who identified new business opportunities were more likely to start an entrepreneurial process by considering and preparing a new business activity. Moreover, farmers who perceived their own entrepreneurial abilities to be strong were more likely both to intend to start an additional business activity, to prepare a new business start-up and to actually establish a new business activity. Further, farmers who currently were portfolio entrepreneurs (i.e. owned additional business activities) were also more likely to consider and prepare for the start-up of another new business activity. This indicates that additional business start-ups are strongly associated with a feeling of opportunity and ability to carry it through. The study gave no support to the hypotheses that additional business start-ups were a result of constraints related to the farming activities or difficulties in obtaining waged jobs. Moreover, neither favourable framework conditions for business start-ups nor strong social support did seem to increase the likelihood to consider, prepare or establish additional business activities.

These results give important insights the rural sociology perspective which traditionally has put more focus on recession within the agriculture industry as an explanation for additional farm businesses. Starting additional business activities has been seen as a survival strategy for households facing reduced incomes from farming (Damianos & Skuras, 1996; Ilbery, 1991) and lack of employment opportunities (Eikeland & Lie, 1999). On the contrary, findings from farmers in Norway indicate that additional business activities are more likely to be pulled from business opportunities and entrepreneurial abilities. In fact, farmers who perceived off-farm employment opportunities to be good were more likely to engage in new business start-ups. There might be a case for studies of pluriactivity

in the farm sector to put more focus on business opportunities and entrepreneurial abilities as pull factors for enterprise development.

The findings should also be interesting to entrepreneurship scholars. The farm context has often been excluded from entrepreneurship studies due to arguments related to the specific characteristics of this sector. However, the findings from this study suggest that factors associated with entrepreneurial activities in the farm sector are similar to those in other sectors. There does not seem to be reasons not to study entrepreneurship this sector. Farmers can be viewed as primarily business owner managers who respond to market opportunities (Carter, 1996).

In line with findings from studies in other industries (Rotefoss, 2001), it can be inferred from this study that factors related to individuals and household are stronger associated with additional business start-ups than factors related to the external environment. Further, the findings indicate that pull factors are more important than push factors to the entering into portfolio entrepreneurship among farmers. Nevertheless, one should acknowledge that the paths into portfolio entrepreneurship may vary substantially between portfolio entrepreneurs. The results from this thesis indicate that basic motivation may be a source of heterogeneity among portfolio entrepreneurs, since motivation may have consequences for how the additional business activities develop (article 3).

The qualitative study of farm-based portfolio entrepreneurs (article 3) explored the heterogeneity among portfolio entrepreneurs. Based on their motivation for new business start-up, the study identified three types of farm-based entrepreneurs; those whose basis of motivation was farm continuance (pluriactive farmers), those whose basis of motivation was to make the most out of unique resources they controlled (resource exploiting entrepreneurs) and those whose basis of motivation was idea exploitation (portfolio entrepreneurs). A comparison of the three types of entrepreneurs revealed differences related to the source of the business idea, the relation to the originating farm business, as well as the characteristics of the new business activity. Accordingly, the study of opportunity generation processes of farm-based entrepreneurs (article 5), indicated that the motivation of the entrepreneur was found to have an impact on the type of process conducted. Entrepreneurs pushed by the need for extra income or by the need to change their

activities from farming to something else, were more active in their opportunity generation processes. These entrepreneurs were often also more objectively searching for opportunities than trying to create opportunities more subjectively.

These findings give important insight to the knowledge-base on portfolio entrepreneurs. While multiple business ownership often is portrayed as a growth strategy or a diversification strategy (Iacobucci & Rosa, 2005), it may also be a rescue strategy for the previous business, a strategy to put spare resources into work, etc. (Carter & Ram, 2003). The results from this study indicate that differences in motivation or strategy behind the start-up of additional business activities, may lead to quite different developmental tracks, and differences in characteristics and performance of the new business started. As a consequence, motivation is a source of heterogeneity of portfolio entrepreneurs which has important implications to societal outcomes of portfolio entrepreneurship, the value of entrepreneurial experience and resource transfer, and the behaviours of portfolio entrepreneurs related to opportunity identification and exploitation.

Moreover, these findings have relevance to research on motivational aspects of new business start-ups. The findings indicate that motivation varies between the first and subsequent ventures, which are in line with Wright, et al.'s (1997a) finding regarding serial entrepreneurs. While some of the motivation factors may be similar, portfolio entrepreneurs may take into account their whole portfolio of businesses when they consider additional business start-up.

5.2.3 The role of prior knowledge and resource transfer

The third broad research question was related to the utilization of resources originating from the current business in the identification and exploitation of new business activities of portfolio entrepreneurs. This question was examined in relation to the farm context. The results indicate that prior knowledge and resources transferred from the existing farm business to the process of starting new business activities were substantial. However, there were also acknowledgeable differences between types of business opportunities.

Related to the process of opportunity identification, a distinction was made between four types of processes based on their extent of active search relative to more passive serendipity as well as their extent of objective discovery or subjective creation. The processes were categorized as opportunity discovery (passive-objective), opportunity search (active-objective), opportunity creation (active-subjective) and opportunity occurrence (passive-subjective). The opportunities resulting from discovery and particularly search processes were found to be more imitative and related to lower growth potential. Conversely, processes related to creation and particularly occurrence, were found to be more innovative and presumably have larger potential for growth if successfully exploited. The findings indicated that prior knowledge plays quite different roles depending on the type of opportunity identification process. Opportunity creation and occurrence seem to be related to a more extensive knowledge base of the entrepreneur than the other processes. Opportunity discovery seem to be based on the farm-based knowledge or skills, while opportunity search to some extent seem to stem from the lack of particular knowledge. Moreover, entrepreneurs with diverse experience from other areas than farming, such as prior employed work, prior business activities or hobbies, seem to be more able to undertake processes which include more subjective creation than less experienced entrepreneurs.

Related to the process of opportunity exploitation, results from the study of farm-based entrepreneurs revealed that the resource transfer from the originating farm business to the new business venture were extensive (article 6). Some resources are more commonly transferred than others, particularly physical resources (premises) and knowledge resources related to general business operation, calculation and financial management, and financing. Knowledge about sales marketing was not very likely to be transferred, and the transfer of organizational resources was also less comprehensive. Furthermore, the extent of resource transfer depended on the compatibility between the farm and the new venture and on the resource richness of the originating farm business. This implies that portfolio farmers who have been successful in creating one well functioning and resource rich business are able to transfer a greater variety of resources into their new ventures, but that some categories of resources are transferred more than others.

However, the effect of the resource transfer to performance of the new business venture was found to be ambiguous. When the new business venture is closely related to the farm business, in terms of horizontal or vertical expansion, resource transfer appears to explain a substantial share of differences in profitability of new ventures. Yet, resource transfer was both positively and negatively related to profitability. While transfer of physical resources appeared to enhance the new venture's profitability, the transfer of knowledge and organizational resources seemed to reduce it.

Taken together, these findings indicate that what farmers learn from the operation of their farm business can be utilized in the process of creating new business activities, but the utilization of this knowledge is not necessarily related to good results. Farmers relying heavily on farm-based knowledge during the process of opportunity identification seemed to end up with new business opportunities with less potential than those utilizing other sources of knowledge. Moreover, portfolio farmers which relied too much on farm-based knowledge and organizational routines when converting the opportunity into a new business activity appeared to achieve inferior profitability compared to those who relied less on this type of knowledge and routines. The transfer of general physical resources, on the other hand, appeared to be an asset for the new business venture.

The negative relationship between transfer of knowledge-based and organizational resources and performance is interesting. An explanation to this result may be that these types of resources are highly context specific (Starr & Bygrave, 1992). They may, therefore, be less relevant to the context of the new business. Isaksen (2006) found that early business performance in new ventures was related to the similarity between the new business and the entrepreneurs prior jobs and or/ businesses in terms of products/services, customers, suppliers, competitors and technology. It may seem that experience from farm businesses to a lesser extent provide this similarity. For instance, due to the distinctive organization of the Norwegian farm sector, most farmers have little experience from dealing with market opportunities. A long tradition of large scale cooperatives with the obligation to buy total production to fixed prices has resulted in farmers having limited knowledge on marketing, sales, pricing and distribution. Thus, these types of knowledge

resources are rarely transferred. If it is transferred, it is negatively associated with new venture profitability.

These findings support the argument of Starr and Bygrave (1992) that there are both assets and liabilities related to resource transfer between businesses of portfolio entrepreneurs. When transfer of knowledge resources relates negatively to profitability, this can be explained by 'liability of staleness' (Starr & Bygrave, 1992), overconfidence (Westhead *et al.*, 2004a) or reduced experimentation (Mosakowski, 2002). Extensive transfer of not relevant knowledge resources may indicate that these farmers think they know what is needed and therefore do not act to gain new, more relevant, knowledge. Similar arguments can be put forward related to the negative influence of the transfer of organizational resources, including network contacts, suppliers and distribution channels. The value of resources differs depending on the type of business, business strategy and the environment (Chandler & Hanks, 1994). In some situations they may represent valuable assets, while in other situations they represent costly liabilities.

Moreover, evidence from this study may contribute to the resource based view of the firm. It has been shown empirically that resources may be beneficial or disadvantageous to the firm. Therefore, drawing from a larger resource-base is not necessarily a competitive advantage. There may be costs associated with resource endowments, such as core rigidities, reduced experimentation, reduced incentive intensity and increased strategic transparency (Mosakowski, 2002). The resource based view of the firm needs to incorporate potential costs associated with dysfunctional resources as well as benefits related to well-functional resource endowments. Which resources are functional and which are dysfunctional will probably depend on the context. As a consequence, firms should consider which resources to disband in addition to the focus on resource acquisition.

5.3 Limitations

The results from the empirical studies, as discussed above, are certainly influenced by the research design and methodological choices made throughout the research process. Efforts were made to address problems associated with previous studies.

Still, the research presented in this thesis is inevitably associated with limitations. The main limitations are discussed in this section. First, possible limitations related to the research design and methods chosen are considered. Thereafter, some reflections are made regarding the limitations associated with the generalization of the results.

5.3.1 Possible limitations related to research design and method

There is no such thing as a perfect method. Most methodological choices are associated with advantages and disadvantages, which the researcher has to consider in order to make the best choice given the research questions addressed and the resource limits faced. However, there are still possible limitations associated with the design and methods chosen. Five issues will be discussed here: 1) Limited triangulation related to the same specific research question, 2) unit of analysis related to examination of performance, 3) possible survival bias, 4) short time span for longitudinal studies, and 5) lack of longitudinal data for farm context studies.

First, a triangulation approach has been applied. The main reason for this decision has been that the different research questions were best explored using different methods, and that in a multi-method approach some of the weaknesses of one method approach could, to some extent, be compensated by the strength of other methods applied to the same issue. However, while they all are part of the same triangulated research, none of the six scientific articles combine two or more methods. Each specific research question has only to a limited extent been examined in relation to more than one method.³⁰ An alternative approach would be to use both quantitative and qualitative data to examine each of the research questions.

³⁰ The following examples illustrate that some issues have been examined from both qualitative and quantitative methods: The finding from the qualitative article 3 that additional business activities motivated by the wish to exploit an opportunity, were associated with larger, better performing business activities, were confirmed by the quantitative article 6 finding that opportunity based motivation was associated with higher new venture profitability. Moreover, the extensive resource transfer reported in the quantitative article 6, were also found in qualitative articles 3 and 5.

Second, with regard to studies of performance (articles 1, 2 and 6) only the performance related to the most recent business of portfolio entrepreneurs were examined. While it has been argued that performance at the level of the new business activity is relevant, performance at the individual level, including all businesses of portfolio entrepreneurs, would also be of great interest (Scott & Rosa, 1996; Westhead & Wright, 1998c). Performance of the latest venture of portfolio entrepreneurs may not give the true picture of their contribution to value creation, as they still create value through their previous businesses.

Third, another potential limit to the studies of performance is related to the possibility of survival bias. In the study related to article 2, businesses reporting not longer to be in operation were excluded from the sample. Also in article 6, only currently active additional business activities were considered. The decision to exit a business may very likely be related to its performance (Ucbasaran *et al.*, 2001), resulting in a bias towards better performing businesses included in the samples. The findings related to these studies can therefore only be generalized to surviving business activities, still owned by the same owner. In article 1 and 5, however, this bias does not occur, as all start-up initiatives (article 1) and opportunities (article 5) reported, are included in the analyses.

Fourth, a possible limitation relates to the relatively short time frame of analyses of both the longitudinal studies. In the study of nascent entrepreneurs there were a time-lag of 12 months from the first to the second point of measurement (article 1), while the time-lag were approximately 19 months in the study of newly registered firms (article 2). The performance differences found with relation to the start-up process (nascent portfolio entrepreneurs were more likely to actually establish a business) and to early growth (the firms of serial and portfolio entrepreneurs grew larger) may be influenced by the time span chosen. A longer time-span could have revealed whether the relatively high number of nascent serial and novice business founders reporting that they were still trying to set up a business finally would manage to do so, reducing the difference between portfolio and other types of entrepreneurs. Further, longer time span in the study of newly registered firms could have explored whether novice entrepreneurs were able to 'fill the gap' when they get more experienced after having worked longer with their first venture.

Fifth, the cross-sectional design of the studies related to the farm context may constitute a limitation. In a cross-sectional study, the direction of the hypotheses is theoretically derived and cannot be empirically falsified. The question of causality could therefore not be tested. In the qualitative studies, this limitation has sought to be reduced by including questions related to the historically development of the opportunity, business activity, etc. However, this is not a perfect solution to the time frame problem, as these data may be biased by post-rationalisation.

5.3.2 Possible limitations related to the generalisability of findings

Generalisability refers to the characteristics of research findings that allow them to be applied to other situations and other populations (Remenyi *et al.*, 1998). No research result in findings which *per se* are generalisable to the real world as all research is based on a limited set of variables. In particular, studies have to be replicated by other researchers, in other populations, situations and under different conditions. In practice, generalisation therefore is often limited to identical situations and settings (Sekaran, 1992). However, for a study to be a valuable contribution to a body of knowledge issues related to generalisability should be covered (Remenyi *et al.*, 1998). This section discusses three issues related to generalisability: 1) Representativeness of the quantitative studies, 2) analytical generalisation related to the qualitative studies, and 3) the influence of the empirical context.³¹

First, generalisability of the quantitative studies is closely related to the representativeness of the samples from which the data is gathered (Aldrich & Baker, 1997). In all the three quantitative data sets, a random sample was drawn from a population in order to get a sampling frame which was as representative as possible. Although the response rates compared favourably to similar studies (Ucbasaran *et al.*, 2006; Westhead *et al.*, 2005; Westhead & Wright, 1998c), there were still a relatively high number of non-respondents.³² This may constitute a potential limitation to this thesis. Response bias tests were conducted related to

³¹ Cf. also the discussion on external validity in section 3.3.1.

³² As accounted for in chapter 4, the response rates generally were between 25 % and 35 %.

each of the studies, indicating no serious response bias (cf. chapter 4 for detailed information). However, as such tests always are limited by the availability of data related to non-respondents, absolute representativeness cannot be fully asserted.

Secondly, the qualitative studies are in-depth studies of a relatively small sample of informants. These studies were aimed at analytical rather than statistical generalization. The goal is to expand theories, not to assess frequencies (Yin, 2003). Although the multiple case design is associated with some extent of robustness, there cannot be drawn any conclusions in a statistical sense due to the small sample sizes. However, it is possible to generalize the empirical findings to broader theory. Nevertheless, the generated concepts and found relationships need further empirical examination to assert their potential generalisability to a wider population.

Thirdly, the studies are undertaken in specific contexts. The influence on context is also important to generalisability. First, all studies are undertaken in the national context of Norway. National context differences related to political systems, culture, entrepreneurship climate, industry structure and economic situation may influence on individuals' perceived abilities to identify and exploit business opportunities, the stimuli and hindrances they face as well as expected outcomes of entrepreneurial activities. The generalisability of findings to other countries therefore needs to be carefully considered. Moreover, four of the articles relate to one specific industry context: agriculture. The findings from these studies may only be generalised to the Norwegian farm context. However, they may contribute to research related to other industries as suggestions or propositions of relationships that might be found. Nevertheless, further empirical analysis in other industries and other national contexts are needed to verify the findings from this study.

5.4 Implications for policy makers and practitioners

Despite the limitations accounted for in the previous section, the results from this composite thesis have several implications for practitioners and policymakers. In section 1.2 linkages were made to the general industry and entrepreneurship policy debate, as well as to the more specific debate related to the promotion of

entrepreneurial activities in the farm sector. In this section practical implications will be discussed in relation to both these two debates. Finally, some implications for farmers and business owners in other industries are discussed.

5.4.1 Implications for general industry and entrepreneurship policies

Policymakers and practitioners aiming at promoting the development of a competitive Norwegian economy by pursuing entrepreneurship and new business start-ups, should acknowledge the fact that a substantial proportion of new business formations are made by experienced entrepreneurs, many of them still owning and operating their previous business(es). These entrepreneurs utilize their experience and resources of previous and current businesses in the process of creating new business activities. Consequently, if one wishes to promote new business start-ups, current business owner-managers should be an important target group. Current entrepreneurs have stronger intentions towards new entrepreneurial activities as well as a higher propensity to actually start new firms as compared to non-entrepreneurs.

Moreover, results from this study indicate that portfolio entrepreneurs are more successful than inexperienced, novice entrepreneurs, at least on a short time basis. First, they seem to undertake a somewhat different business start-up process than novice and serial entrepreneurs and have a higher propensity to actually start a business if they try to do so. Second, portfolio and serial entrepreneurs appear to acquire more resources for the new business venture than novice entrepreneurs, resulting in larger growth of the new business during the early phase after start-up. This suggests that there may be larger contributions to the economy from entrepreneurial initiatives initiated by current business owners, since they are more likely to result in viable new businesses. Previous studies have indicated that entrepreneurs with existing businesses is a greater source of growth-oriented new businesses than novice entrepreneurs (Rosa & Scott, 1999a; Westhead & Wright, 1999). Consequently, entrepreneurial initiatives of existing business owners should be of particular interest to policymakers and practitioners. This raises a question if policy makers and business development agents should consider targeting scarce

resources to portfolio entrepreneurs to gain higher levels of wealth creation and job generation in a local community. For local development agents, promoting current business owners to initiate further entrepreneurial activities can be a fruitful strategy. Today, most government support programs are directed at businesses rather than individuals. The focus is particularly put on the business idea. This study suggests that policy makers should appreciate that a small subgroup of experienced portfolio entrepreneurs makes significant contributions to tax revenues and job generation. When designing support programmes, one should consider how to target these individuals who can put the entire chain of wealth-creation in place.

On the other hand, the disadvantage of novice entrepreneurs when it comes to resource acquisition should be recognised by policy makers as well as practitioners. Support directed towards giving these entrepreneurs access to the necessary resources, particularly financial resources, may help novice entrepreneurs to increase the performance of their firms to the level of their experienced colleagues. The results from this study give no evidence that novice entrepreneurs utilize the accumulated resources in an inferior way. They seem to achieve similar business growth in the early phases if they are able to acquire the same amount of resources and are able to actually start a business.

The differences between novice, portfolio and serial entrepreneurs suggest that there might be a need for diversified schemes measures to support entrepreneurship. Novice entrepreneurs seem to face a resource barrier as compared to more experienced entrepreneurs. Serial entrepreneurs seem to be less able to utilize their experience in the process of starting a new business. They seem to “burn off” their resources in an early phase and therefore often do not make it to the implementation of the business idea. Those serial entrepreneurs who succeed in starting a new business seem to achieve early performance in their businesses comparable to portfolio entrepreneurs. Thus, their main barriers seem to be related to get the business up and running. Portfolio entrepreneurs, on the other hand, seem to utilize their experience and resource access to undertake more effective start-up processes, but may meet barriers related to lack of own time and locked-up resources. There may be a case for targeting different support schemes towards novice, serial and portfolio entrepreneurs based upon their specific barriers to successful entrepreneurial activities.

This research suggests that experience from multiple business start-ups and portfolio business ownership is valuable to the process of new business start-up. Consultants and advisors helping business founders very often have no experience in business founding or ownership. The findings from this thesis suggest that portfolio entrepreneurs may be valuable mentors to other entrepreneurs. Advisors may benefit from making use of their knowledge. Skills and abilities of portfolio entrepreneurs may also be valuable for banks, business angels and venture capitalists with regard to their decisions to invest resources in entrepreneurs or new businesses. Moreover, there may also be a case for targeting portfolio entrepreneurs to activate slack capital in existing businesses. When current business owners start new business activities, they seem to transfer a substantial amount of resources to the new venture. There might be spare resources in many existing firms. Through the engagement of the entrepreneur in new business start-ups, these resources can be put into productive work.

However, practitioners as well as policy makers should acknowledge that the experience based knowledge and resources of portfolio entrepreneurs may be highly context dependent. Thus, their knowledge and resources may not necessarily be applicable to new business ventures in different contexts. Evidence from the study of portfolio entrepreneurs in the farm sector indicates that transfer of resources from the originating business to the new venture may enhance or hamper the profitability of the new venture. In the farm context, the transfer of organizational and knowledge resources appeared to be dysfunctional to the new business activity, while the transfer of physical resources seemed to advance new business viability. Although these findings cannot be generalized to other business sectors, there is still reason to suspect that there might be assets as well as liabilities of resource transfer also related to other sectors (Starr & Bygrave, 1992). As a result, one should evaluate the competences of portfolio entrepreneurs before making use of them as mentors or advisers in relation to nascent entrepreneurs. Financiers should also evaluate the applicability of resources transferred from previous businesses when funding new ventures of portfolio entrepreneurs.

Finally, portfolio entrepreneurs do not constitute a heterogeneous group. Evidence from the farm sector indicates that the different motivations for portfolio

entrepreneurship play a role for the development of the portfolio of businesses among farmers. One can differ between types of portfolio farmers based on their motivation. Some types seem to contribute more to wealth-creation than others. While this evidence cannot as be generalized beyond the farm context, other studies indicate that motivations for portfolio entrepreneurship can be diverse also in other sectors (Carter & Ram, 2003; Iacobucci, 2002; Rosa & Scott, 1999a). Policymakers and practitioners should acknowledge the potential heterogeneity among portfolio entrepreneurs. When targeting current business owners to stimulate new entrepreneurial activities, there may be a case for carefully selecting the portfolio entrepreneurs who are have an interest in pursuing new opportunities new opportunities rather than those motivated by saving the original firm.

5.4.2 Implication for agricultural policies

The last decade, the pursuit of farm-based entrepreneurship has been an important aspect of Norwegian as well as European agricultural policies as an instrument to increase the value creation from the agriculture production. Entrepreneurship is seen as a possible solution for farmers experiencing the restructuring of the sector following changes in national and international policies. The findings of this thesis reveal that a substantial share of farmers is engaged in multiple business activities and thereby contributing to rural economies as well as to the restructuring of the agricultural sector.

This thesis has investigated factors associated with farmers' engagement in entrepreneurial activities. The results suggest that policymakers and practitioners wanting to promote new business start-ups should focus upon increasing farmers' competence and abilities to carry out entrepreneurial activities, as well as at bringing forth business opportunities. Moreover, policy makers should notice the waged employment and portfolio entrepreneurship are two separate strategies for farmers wanting to increase their incomes. These strategies seem to be related to different contextual factors and also to different attitudes and abilities of the farmers. Policy efforts to support farm diversification should take these differences into account and should also focus more upon the internal resources of the entrepreneur and the farm. An unbalanced focus on the need for more income, may lead farmers into waged employment rather than entrepreneurship.

The heterogeneity among farm-based entrepreneurs implies that differentiated initiatives are needed to increase entrepreneurial activities among farmers. It also emerges that encouraging farmers to start new business activities could contribute to different aims at the society level, depending on which type of entrepreneurs respond to policy initiatives. The results from this thesis reveals that different types of entrepreneurs are may contribute to solve economic as well as societal needs, whether it is employment, the creation of economic activity from unique resources or the maintenance of the cultural landscape. However, different types of entrepreneurs contribute to different types of societal needs. Policymakers should acknowledge these differences when designing support means for farm-based entrepreneurs, as different types of entrepreneurs may be targeted depending on the societal aim in focus.

Policy makers have acknowledged that farms possess resources which can constitute a foundation for new business development in rural Norway (St. meld. nr. 19, 1999/2000). Land and natural resources, buildings and premises, financial and human capital are highlighted. The results from this research suggest that policymakers should take into account that these resources can be, but are not necessarily appropriate to the development of new ventures. While the transfer of general resources, such as land and premises, into new business activities can form a basis for competitive advantage, more specific resources appear to be too context dependent to be fruitfully employed in business activities outside the farm context. Policymakers and practitioners should stress the need for supplementing portfolio farmers' resource base through the acquisition of new resources. Programs including knowledge and network development may be important initiatives related to the promotion of entrepreneurial activities among farmers. In particular, initiatives to raise farmers' knowledge and network related to markets, customers, marketing and distribution channels may be relevant.

Evidence from this research suggests that experience from farming *can* constitute a basis for the identification of new business opportunities. However, knowledge and experience from other areas seem to be of vital importance to the identification of business opportunities with potential to become more than a minor additional income stream to the farm business. As external knowledge seems important also to successfully exploit these opportunities, policymakers and practitioners should

consider initiatives to bring external knowledge, experiences and views into the farm sector. Initiatives promoting cooperation between farmers and business owners in other sectors may be one way of achieving this.

5.4.3 Implications for farmers and other business owners

The results from this study also give some implication for business owners within and outside the farm sector. First, current business owners with intentions to start new business activities may benefit from retaining their previous business(es) while trying to establish a new venture. Ending the involvement in previous businesses before engaging in the process of setting up a new business (i.e. serial entrepreneurship), does not appear to be a good strategy. However, after the new business is up and running, there seem to be little difference between serial and portfolio entrepreneurs. Owning and operating a business may give experienced entrepreneurs greater credibility, as well as easier access to internal as well as external support and resources.

The findings from this research suggest that novice entrepreneurs should attempt to learn from their more experienced counterparts. Trying to get a mentor guiding them in the process of business start-up may prove to be a fruitful strategy. In particular, novice as well as serial entrepreneurs may benefit from adopting portfolio entrepreneurs' strategy to undertake costly activities as late in the process as possible when the insecurity related to the quality and feasibility of the business opportunity is reduced. Further, novice entrepreneurs should learn to pay more attention to resource acquisition in the start-up phase, as the initial resource base seem to be crucial to new business achievements.

Moreover, the results suggest that portfolio entrepreneurs should consider carefully which of their current resources are applicable for their new business, and where they should renew their resource base to provide the strongest start for a new and profitable business. When it comes to farm business owners in particular, they should evaluate their knowledge resources critically, as it appears that the knowledge and experience they have gained as farmers is insufficient for the challenges a new business presents. Further, network, contacts and other types of organizational resources should also be assessed. Nevertheless, some resource

transfer is of great value for the new business, significantly increasing its performance. The ability to transfer such resources, in particular general physical resources, constitutes an important competitive advantage to farmers engaging in new business ventures. Portfolio farmers should bear that in mind. However, they should also be aware that knowledge, experiences and perspectives from areas other than farming can benefit opportunity identification as well as successful opportunity exploitation.

5.5 Implications for research and suggestions for future studies

The previous section accounted for the practical implications of this thesis. This section will discuss the implications related to theory and future research. This discussion relies on the evaluation of key findings in section 5.2. Implications are discussed in relation to research on portfolio entrepreneurship, the opportunity-based view of entrepreneurship, the resource-based view of the firm, as well as to the rural sociology perspective of pluriactivity.

5.5.1 Implications for research on portfolio entrepreneurship

This thesis has combined theoretical insights from the opportunity-based view of entrepreneurship and the resource-based view of the firm to study the characteristics, behaviours and performances of portfolio entrepreneurs. The theoretical perspective and the empirical analyses have contributed to the knowledge base on portfolio entrepreneurship by collecting evidence related to the resource transfer between originating and new businesses of portfolio entrepreneurs, as well as to the role of prior knowledge and available resources to opportunity identification and exploitation.

Previous research on habitual entrepreneurs in general and portfolio entrepreneurs in particular, has especially focused upon the learning aspects of entrepreneurial experience. Experienced entrepreneurs are assumed to have gained knowledge through learning from their prior experiences and to be able to transfer this knowledge into the process of starting new business activities. This research has

reinforced this view. Based on the resource-based view of the firm, this experience-based knowledge has been interpreted as a resource to the new firm which potentially can be a source of a competitive advantage. Moreover, this view has been further developed to include the transfer of other types of resources, such as financial, physical and organizational resources. While the transfer of resources previously have been noted (e.g. Starr & Bygrave, 1992; Westhead *et al.*, 2003a), the little empirical evidence and theoretical foundations offered to study this phenomenon has hitherto been scarce. By bringing in the resource-based view to the study of portfolio entrepreneurship, this thesis offers a theoretical foundation for examining the proposed performance advantages of portfolio entrepreneurs. This perspective may also cover the potential synergistic relationships portfolio entrepreneurs may develop between the ventures they own to gain competitive advantages for individual ventures (Rosa, 1998; Westhead *et al.*, 2003a). The creation of new businesses on the basis of previous or existing businesses of experienced entrepreneurs can be regarded as evolutionary entrepreneurial systems where the relationship between the different business opportunity exploited by the entrepreneur and the dynamics of the entrepreneurial team(s) involved may be important antecedents of new business performance (Iacobucci & Rosa, 2004). The results presented here suggest that the resource-based view may provide a useful theoretical tool for future studies of portfolio entrepreneurship.

Moreover, positive as well as negative consequences related to resource transfer are identified. This links into the discussion of assets and liabilities related to entrepreneurial experience (Starr & Bygrave, 1992). Based on insights from cognitive theory and human capital theory, previous research has pointed at learning and knowledge as the source of assets and liabilities of portfolio entrepreneurs (Ucbasaran *et al.*, 2006; Ucbasaran *et al.*, 2003a; Ucbasaran *et al.*, 2002; Westhead *et al.*, 2005). The findings of this research support the argument that experience-based knowledge can serve as assets or liabilities to new venture formation. Moreover, also the transfer of financial, physical and organizational resources may represent assets or liabilities affecting new venture performance. These findings suggest that negative as well as positive influences of the transfer of resources from previous or current ventures may explain performance differences among portfolio entrepreneurs, as well as between portfolio entrepreneurs and other types of entrepreneurs. Future studies should investigate the assets and

liability related to resource transfer more closely, and for other industries and national contexts. More efforts should be put into the factors determining the applicability of resources transferred, including the relevance of knowledge based on experience from prior ventures. Particularly, the similarity between previous and new businesses of portfolio entrepreneurs may play a role in explaining why some resource transfers represent assets while others represent liabilities.

The transfer of prior knowledge and other resources may not only have direct influence on new venture performance. The results from this research revealed that prior knowledge and resource transfer is relevant to both opportunity identification and opportunity exploitation. The resources tied to the existing businesses of the portfolio entrepreneur may play an important role to if opportunities are identified or not, which opportunities that are identified, the decision to exploit an opportunity and the development of a business activity based on this opportunity. The results from this study may contribute to a further development of the opportunity corridor principle (Ronstadt, 1988). This principle suggest that the act of starting and operating one business enables entrepreneurs to see other opportunities which they could not see nor take advantage of until the initial venture was started. Through their experience with the initial venture, the entrepreneurs moves into a 'knowledge corridor' enabling them to see other opportunities (Venkataraman, 1997). The results from this study suggests that there is also a broader 'resource corridor'. The initial venture gives access to knowledge, organizational, physical and financial resources which influence the identification of opportunities as well as the ability and willingness to exploit them. Future studies should take into account this broader resource linkage between the initial venture and the identification and exploitation of new business opportunities.

The guidance from the opportunity-based view of entrepreneurship allows for a definition of portfolio entrepreneurship which is slightly different from the one used previously. Previous research has defined portfolio entrepreneurs based on ownership stakes in more than one firm (i.e. legal entity). The opportunity-based view sees entrepreneurship as identification and exploitation of business opportunities regardless of the mode of exploitation chosen for the particular opportunity. This moves the focus away from establishing formal entities (firms) to the start up of a business activity which may be organized through a new firm or

within an existing firm.³³ As a consequence, behaviours and performances related to portfolio entrepreneurship can be studied independent of if and when a new formal entity is created. The question of why a particular mode of exploitation is chosen is an interesting one which offers future research opportunities.

The present research reinforces the idea that the single entrepreneurial start-up or firm is not the most appropriate unit of analysis for truly understanding entrepreneurial wealth creation (Birley & Westhead, 1993; Scott & Rosa, 1996; Ucbasaran *et al.*, 2006; Westhead & Wright, 1998c). If individual entrepreneurs are engaged in multiple businesses, we would learn more about how they operate if we looked at how they operate their whole portfolio of businesses. Using the entrepreneur as unit of analysis one can explore the consequence of previous successful as well as failed business activities to the subsequent new businesses. Future research should take into account not only what happened to an individual business, but also where this business fits into the life-cycle of individual entrepreneurs (Ronstadt, 1988). Future studies should also focus on the processes involved in establishing an additional business venture and investigate what happens when existing owner-managers start new businesses in addition to their existing one(s). This will require the use of qualitative, in-depth analysis focusing on the experiences of a variety of portfolio entrepreneurs in different industries and settings. Researchers may also take into consideration both the effects of resource transfer on the new venture and the potential effects of resource depletion on the originating firm business. To the knowledge of this author, no studies have so far looked at the effect on previous businesses of the entrepreneurs' engagement in new business activities.

The results from this thesis also support the idea of distinguishing between serial and portfolio entrepreneurs as two types of experienced or habitual entrepreneurs (Westhead & Wright, 1998c). When the current business is retained while the new business is started, portfolio entrepreneurs have access to fresh knowledge from recent and ongoing experience, while serial entrepreneurs, who have exited their

³³ The business activity may also first be organized within an existing firm and separated into a new firm at a later point in time, for instance when it is ready to 'stand on its own feet'. Conversely, it may be organised through a separate firm at the beginning due to risk considerations, and be included in the initial firm at a later point in time when the risk is reduced.

previous venture, must rely on previous experience possibly giving outdated knowledge. More important, portfolio entrepreneurs have access to a number of resources from existing businesses. While serial entrepreneurs can transfer financial resources and potentially also physical resources, from their previous businesses (if successfully exited), portfolio entrepreneurs can in addition transfer organizational resources and knowledge resources related to employees from the initial venture(s). In particular, immaterial resources related to image, rumour, organizational routines etc. may only be transferred from an operating business. Portfolio entrepreneurs may seek to develop synergy effects between the businesses in their portfolios (Rosa, 1998; Westhead & Wright, 1999). Also, the current businesses may serve as a 'seedbed' for new business start-ups (Carter, 1996; Scott & Rosa, 1997). Consequently, portfolio entrepreneurship may be related to a larger variety of assets and liabilities compared to serial entrepreneurs. The results from this thesis have shed light on possible sources for differences between portfolio and serial entrepreneurs which have implications for future research into this area.

Moreover, the results have illustrated the need for acknowledgement of the heterogeneity among portfolio entrepreneurs. One way of distinguishing between types of portfolio entrepreneurs may be based on their main motivation for establishing a portfolio of business activities. The findings indicate that this distinction is relevant to how the new venture develops, including firm characteristics, relation to initial business(es) as well as performance. Future studies should further explore the heterogeneity of portfolio entrepreneurs, including its sources and consequences.

Finally, it has been noted in the review of literature (see section 1.3) that most studies related to portfolio entrepreneurs have lacked a theoretical base. In the future, more theoretically founded research within this area should be conducted. The resource-based view of the firm and the opportunity-based view of entrepreneurship have been shown to be potentially promising in relation to the generation of a deeper understanding of the phenomenon of portfolio entrepreneurs.

5.5.2 Implications to the opportunity-based view of entrepreneurship

The present research contributes to the opportunity-based view of entrepreneurship by focusing on opportunity identification and exploitation among current entrepreneurs. The results support the view that opportunity is a crucial aspect of the entrepreneurial process (Alvarez & Busenitz, 2001; Ardichvili *et al.*, 2003; Kirzner, 1979; Shane & Venkataraman, 2000). Further, the results suggest that history matters. New opportunities arise from the present business and form the basis of new business activities, and consequently a portfolio of business activities may develop over time. The identification of new opportunities seem to be path dependent (Alvarez & Busenitz, 2001), relying on prior knowledge as well as previous and concurrent activities of the entrepreneurs. New business activities may be grounded upon assets developed through the history of prior and current entrepreneurial actions, including knowledge and capabilities developed from their involvement in prior and current businesses.

Another contribution to the opportunity-based view of entrepreneurship relates to the specific context for which four of the six studies are empirically based. Entrepreneurship studies are rarely conducted within a farm context. The findings from the study indicates that the farmers who possess abilities to recognise and exploit opportunities are able to reorganize their resources into new areas when appropriate, utilizing their 'entrepreneurial mindset' (McGrath & MacMillan, 2000). There seem to be no need to exclude farmers from studies in the entrepreneurship field of research, since farmers seem to organize their businesses and manage their opportunities in the same way as other business owners (Carter, 1996). However, different industry contexts may face entrepreneurs with different hindrances and possibilities, as well as give access to resources of varying applicability. There is a need for more industry specific studies within entrepreneurship research in order to gain more knowledge on the impact of specific contexts.

Finally, there may be potential implications related to the understanding of opportunity identification and exploitation as path dependent activities. While entrepreneurship sometimes are considered as path-breaking acts which are

necessary for breaking path dependency and creating new paths, the results from this research show that entrepreneurship in itself also can be path-dependent. Persons who once have conducted entrepreneurial acts seem to be more likely to conduct further entrepreneurial acts, and by this creating an entrepreneurship path. Moreover, they are more likely to have the resources to discover opportunities and exploit these opportunities. However, to do this successfully demands that they are able to take some deviations from their path, that is, from their previous resources, experiences and learned ways of doing things. This seem to be necessary to take advantage of new situations on not get stuck in the path they developed on the basis of yesterday's situation.

5.5.3 Implications to the resource-based view of the firm

In addition to implications for research on portfolio entrepreneurship and the opportunity based view on entrepreneurship, the results from this study also give some implications related to the resource-based theory of the firm. Three implications are discussed here, related to the transfer of resources between interlinked firms, the importance of the initial resource base and the discussion on value destroying resources.

First, the resource-based view has traditionally interpreted firms as independent entities (Lavie, 2006). The results from this study indicate that resources may very well be transferred between interlinked firms. Rather than limiting our focus to the resources tied to or controlled by the firm (Barney, 1991; Wernerfelt, 1984), we need to consider resources controlled by the entrepreneur(s). For portfolio entrepreneurs, this may include resources controlled by different firms tied to the same entrepreneur. There is a need for the development of the resource-based view to also include competitive advantage built on resources stemming from interconnections between several firms (Lavie, 2006).

Second, the findings from this research have highlighted the importance of the initial resource base of the new firm. The process of building an initial resource base is a complex task that rarely has been addressed (Brush *et al.*, 2001). The results from this study indicate that this is a crucial task which is very important for the subsequent performance of the new firm. Moreover, the resource-based view

still lacks a discussion on how rare, valuable and inimitable resources are developed or acquired (Lichtenstein & Brush, 2001). One way to acquire resources seems to be transferring them from interlinked firms. The resource based view should acknowledge that there are human actors behind firm resources and that human choices affect resource acquisition, development and utilization (Mosakowski, 2002; Penrose, 1959)

Third, the results from this thesis indicate that resources can represent advantages as well as disadvantages to the firm. Previously, the resource-based view has given limited attention to the possibility of value destroying resources (Mosakowski, 2002). Ucbasaran, *et al.* (2003a) noted that knowledge is not only an advantageous resource. Knowledge may also constrain. This study supports this argument, showing that the utilization of prior knowledge can limit the opportunity identification and represent a competitive disadvantage to the new business activity. Moreover, the results suggest that this also may be the case related to other types of resources. If the resources are not applicable to the challenges of the firm, they may destroy instead of enhance the competitive advantage and result in poorer performance.

5.5.4 Implications for research on pluriactivity

This study shows that an entrepreneurship perspective may bring new and possibly fruitful, angles into the study of business pluriactivity in the farm sector, emphasizing the importance of business opportunities and entrepreneurial abilities. By focusing not primarily on conditions for farming and characteristics with the farm and the farm household, but also emphasizing the entrepreneurial mindset; the ability to see and utilize new business opportunities, new knowledge can be created about why and how conventional farms are developed into pluriactive entrepreneurial entities. Future studies on pluriactivity should acknowledge the importance of business opportunities and entrepreneurial abilities. This also raises potential research questions related to how opportunities emerge in the farm context, how they are identified and how and why they are exploited.

Further, the study shows the importance of differentiating between waged employment and new business start-ups when discussing pluriactivity in the farm

sector (Eikeland & Lie, 1999; Fuller, 1990). There seem to be different factors related to the propensity to take a waged job besides operating the farm, compared to the propensity to start an additional business activity. Future studies should acknowledge these differences when issues related to pluriactivity are examined.

This study has looked into the factors associated with farmers becoming portfolio entrepreneurs. Further studies should also investigate whether portfolio entrepreneurship is a fruitful strategy for farmers resulting in better achievements than pursuing the stick-to-farming-only strategy. This implies a focus on the farmer or the farm household as the unit of analysis. Moreover, future studies should consider consequences for the farm business of farmers engaging themselves in new business activities. Are new activities generating synergic effects positively affecting farm development, or are they drawing resources from the farm business, such as farmers' devotion of time, financial resources for investment and physical resources, giving a negative impact on farm development?

5.6 Concluding remarks

This research aimed at contributing to the knowledge on portfolio entrepreneurs by investigating the role of learning and resource transfer from their current to new business ventures. While the scholarly interest into habitual and portfolio entrepreneurship has been increasing, few studies have investigated how the individual businesses in the portfolio of portfolio entrepreneurs are linked together and the consequences of these linkages. The results from this study indicate that these linkages are complex, that they may have various consequences, and that they depend on time, context, situation as well as characteristics, motivations and aspirations of the entrepreneur. Although the results from this thesis contribute to our knowledge base in this area, there is still much more to be learned.

INDIVIDUAL SCIENTIFIC ARTICLES

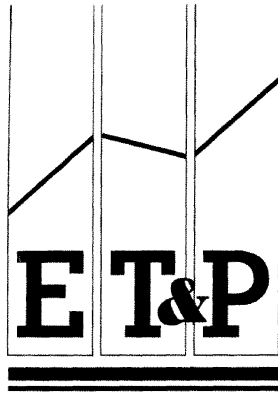
6 PART A: PORTFOLIO ENTREPRENEURSHIP: GENERAL CONTEXT

The following two scientific articles are included in this chapter:

Alsos GA & Kolvereid L. 1998. The business gestation process of novice, serial and parallel business founders. *Entrepreneurship Theory and Practice* 22(4): 101-114. Also reprinted in Davidsson, P., ed, *New Firm Start-ups*. Camberley, UK: Edward Elgar. (2007).

Alsos GA, Kolvereid L & Isaksen EJ. 2006. New business early performance: Differences between firms started by novice, serial and portfolio entrepreneurs. In PR Christensen, F Poulfeldt (Eds.), *Managing complexity and change in SMEs: Frontiers in European Research*: 35-49. Edward Elgar: Cheltenham, UK

6.1 The business gestation process of novice, serial and parallel business founders.



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The Business Gestation Process of Novice, Serial, and Parallel Business Founders

Gry Agnete Alsos
Lars Kolvereid

This article explores the new business gestation process among three types of entrepreneurs: novice founders, serial founders (i.e., those individuals who have previously owned a business but sold it or closed it down), and parallel founders (i.e., those individuals who own at least one business while trying to start another). Founders were identified from a random sample of 9,533 Norwegian adults. Data were collected during 1996. One hundred and sixty respondents were classified as nascent entrepreneurs (i.e., those individuals starting a new business from scratch). One year later, information was collected from this group of nascent entrepreneurs surrounding their current activities. Detailed analysis revealed several differences with regard to the activities carried out during the gestation process among the three types of founders. Most notably, parallel entrepreneurs were found to have a higher probability of venture implementation than novice and serial founders.

To really learn about entrepreneurship and new business formation MacMillan (1986) recommended researchers to study "habitual" or repeat entrepreneurs. Since entrepreneurship may be conceived as a chain of multiple options, McGrath (1996) argued that "habitual" entrepreneurs are more theoretically interesting to study than those who got lucky once. Scott and Rosa (1996) have also recently urged researchers to consider multiple business founders as something more than just a specialist curiosity, since they are "fundamental to our understanding of the process of capital accumulation in a free-enterprise capitalist economy" (1996, p. 81).

Recent research suggests that "habitual" entrepreneurship is more common than previously suspected. In a review of previous studies conducted in Great Britain, Birley and Westhead (1993) reported that the percentage of new business founders with prior founding experience varied from 11.5% to 36%. Studies from other countries have also reported a high proportion of multiple business founders among surveyed founders (Ronstadt, 1984; Schollhammer, 1991; Kolvereid & Bullvåg, 1993).

Despite the importance of the research topic and the high number of multiple business founders, there has been little theoretical development and systematic empirical research in this research area (Westhead & Wright, 1998). Further, it is often assumed that experienced business founders start businesses that outperform firms started by novice founders (i.e., those without prior business start-up experience). Contrary to expectation, empirical testing to date has failed to reveal a positive relationship between prior business start-up experience and enhanced performance of businesses owned by habitual entrepreneurs (Kolvereid & Bullvåg, 1993; Birley & Westhead, 1993; Westhead & Wright, 1998).

The studies discussed above have all focused upon single new ventures owned by founders. It is, however, now becoming widely appreciated that some parallel/portfolio founders own two or

more businesses at the same time as a growth strategy (Birley & Westhead, 1994), or as a strategy for tax reduction. Consequently, any study that focuses solely upon one of the many businesses owned by parallel/portfolio founders, gives an incomplete picture and underestimates the contributions made by this group of entrepreneurs. Supporting this viewpoint, Scott and Rosa (1996) suggested that there is a need to study multiple business starters and the portfolios of businesses owned by this group of entrepreneurs to obtain a more accurate picture of entrepreneurial performance and growth.

Lamont (1972) examined the influence of entrepreneurial experience on selected strategic founding activities. He found that experienced rather than novice founders were more likely to gain access to external finance, and were able to put together a venture team with a better balance of business skills. Lamont's (1972) findings therefore suggest that we may learn something from studying the business gestation process of experienced founders.

To date, no study has systematically examined the effect of prior founding experience on the new business gestation process or the probability that a new venture plan is implemented. The primary object of the present research is to compare the business gestation process of novice and experienced founders. Building upon earlier work in this area conducted by Carter, Gartner, and Reynolds (1996), we explored whether founders carried out a variety of entrepreneurial activities during their business gestation periods.

As in Carter et al.'s work, the theoretical basis for this study is Weick's (1979) theory of organizing. According to Weick, an organization is an ongoing process of interactions among individuals. We see the process of organizational formation as analogous to Weick's process of "enactment," assuming that individuals who engage in behaviors that demonstrate to others that the emerging business is "real" are more likely to create an organization.

LITERATURE REVIEW

MacMillan (1986) described "habitual" entrepreneurs as persons who start new businesses and enjoy the excitement and challenges associated with the creation of new ventures. Often they get bored once the business is operating successfully and hand it over to professional managers. In some instances, habitual entrepreneurs purchase or establish other businesses at a later date. This sequential business ownership action can be repeated more than once.

There is no generally accepted definition of "habitual," multiple or repeat business founders (Birley & Westhead, 1993). MacMillan's (1986) description of the "habitual" founder suggests that this type of individual enjoys setting up businesses in a way few other founders do. Previous studies that have focused on multiple founders have, however, failed to define this group of entrepreneurs with regard to psychological or motivational characteristics. Though the definitions used to some extent vary, most of them require a repetition of an entrepreneurial experience with an entirely new company (Wright, Robbie, & Ennew, 1997). Multiple founders are often defined as those who after starting one business are involved in one or several other business start-ups (Donckels, Dupont, & Michel, 1987; Birley & Westhead, 1993). The definitions used by researchers often concentrate on the act of start-up, and not on career choice, motivation, or joy felt by the entrepreneur.

To be consistent with most previous studies, in this study we will focus upon three types of founders: novice, serial, and parallel (portfolio) business founders. Novice founders are defined as persons who have never established a business. In addition we will identify serial founders as well as parallel founders in order to investigate the potential heterogeneity among multiple business founders as suggested by Westhead and Wright (1998). Both serial and parallel founders have started at least one previous business, but differ with regard to whether their previous business has been sold or closed down (i.e., a business owned by a serial founder), or whether they still own this business (i.e., a business owned by a parallel founder).

The Value of Experience

MacMillan (1986) argued that each "habitual" founder has an experience curve. Habitual founders learn from their earlier founding attempts, have the opportunity to analyze what went wrong and what went right, and eventually adopt the "technology" of entrepreneurship. If there really exists an experience curve for entrepreneurship, it could be reasonably assumed that multiple founders undertake a somewhat different, and supposedly more efficient, business start-up process than founders who do not have any prior entrepreneurial experience.

It is widely assumed that a considerable amount of technical and commercial information can only be learned by practicing managers (Starr & Bygrave, 1991). Some of the knowledge necessary to establish a business relates to tacit knowledge (Polanyi, 1983), which is generally obtained by personal experience. It can reasonably be assumed that serial and parallel founders have accumulated a considerable amount of tacit knowledge. This argument, however, is based on the assumption that the skills gained in an earlier venture are transferable to subsequent founding processes, which may not always be the rule. As Starr and Bygrave (1991) note, the lessons learned via specific cases are highly context dependent. Further, they warned that prior experience may be associated with a "liability of staleness." For example, multiple founders can develop an inertia of conventional wisdom, which may be challenged by others who bring a fresher perspective.

It is generally assumed that investors (i.e., business founders) only make investments in activities that are associated with a positive net present value. However, McGrath (1996) showed that this approach may lead entrepreneurs to turn down attractive opportunities. She argued that entrepreneurs may both reduce the uncertainty they face and dramatically improve the returns of their effort by using an options approach, in which entrepreneurs simply postpone their investments until key identified uncertainties are resolved.

Ronstadt (1988) suggested that "the mere act of starting a venture enables entrepreneurs to see other venture opportunities they could neither see nor take advantage of until they had started their initial venture" (p. 31). Recently, McGrath (1996) argued that the availability of "shadow options" may be an asset for potential founders. Shadow options are not yet recognized opportunities, which are based on the entrepreneur's resources. If the latent potential represented by a shadow option is recognized as valuable, actions may be taken to create a real option (McGrath, 1996). Entrepreneurs must make sense of actions and resources before they can recognize the possible courses of action. The recognition of shadow options thus occurs through retrospective sense making (Bowman & Hurry, 1993). McGrath (1996) argues that entrepreneurs who possess valuable social capital in the form of an extensive or powerful network, for example through an existing business, are likely to enjoy a greater variety of high-quality shadow options. Further, persons with previous entrepreneurial experience may be better at recognizing the value of shadow options, since their experience base influences their sense-making ability. Hence, another potential advantage of prior entrepreneurial experience is the access to "shadow options," and an increased ability to transfer this potential into real options or opportunities.

The Business Start-up Process

Block and MacMillan (1985) have asserted that the early venture development process is associated with a number of developmental milestones (such as first sale, first shipment, operating break-even, etc.). Moreover, they argued that these developmental milestones are more appropriate indicators of venture performance than financial measures alone.

Carter et al., (1996) found that the number and kinds of activities founders carried out, as well as the sequence of these activities, had a significant influence on the probability that an idea would be converted into a new venture. While they investigated the outcome of the business start-up process, they did not compare the gestation processes among different types of founders.

Starr, Bygrave, and Tercanli (1993) suggested that reaching developmental milestones early in the business gestation process increases a new venture's long-term chances of survival and success in the marketplace. Further, according to Starr and Bygrave (1991), experienced founders are

likely to meet these milestones and to establish new businesses more effectively than novice founders. Most notably, they asserted that "the seasoned entrepreneur is well-acquainted with the innovation journey and is able to quickly initiate new venture operations" (1991, p. 350).

However, according to the options approach, experienced entrepreneurs are not necessarily expected to move through the business gestation process faster than novice founders. After buying an option, the founder can reduce uncertainty and increase returns of their effort by waiting. One would expect the options approach to be particularly attractive to founders who can afford "to wait and see," such as parallel founders who presumably can draw upon income streams from other businesses they currently own.

Based on the above discussion, experienced founders may be expected to carry out different business start-up processes than individuals with no prior start-up experience with regard to the type and sequence of activities carried out, the total number of activities conducted, as well as with regard to the duration of the start-up process. Moreover, we would expect to find differences in the start-up process reported by serial and parallel founders, because parallel founders have the option "to wait and see" for additional valuable information concerning the current business idea, or for a suitable subsequent venture opportunity.

In this paper, we will test the two following research questions: (1) How do the business gestation processes reported by novice, serial, and parallel business founders differ with regard to (a) the start-up activities they carry out during the process, (b) the number of such start-up activities cited, (c) the timing of start-up activities, and, (d) the sequence of the start-up activities? (2) Do serial and parallel founders have a higher probability of actually starting new businesses than novice founders?

METHOD

Reynolds and Miller (1992) suggested the use of general purpose surveys to identify new firms at conception. Following their recommendation, we engaged MMI, a professional survey institute in Norway, to interview a large representative sample of the Norwegian population of adults who are at least 18 years old. We requested a large representative sample in order to be able to estimate universe characteristics from the sample data. Moreover, we requested a large sample to identify a sufficient number of nascent entrepreneurs to allow comparisons to be made between types of founders.

The data collection was part of MMI's weekly so-called "CATI-bus" telephone survey. Each week, the CATI-bus survey interviews 1,000 persons who are at least 15 years old. In Norway, approximately 95% of households have telephones, and there are no significant differences in the telephone coverage between different regions. The sample is stratified by county, and within each county households are selected randomly. When a household is contacted, the interviewer asks for the person in the household who most recently celebrated a birthday. If the person in question is not present, up to 5 call-backs are made to contact this person. The number of completed interviews within each stratum is pre-determined, so that the number of interviews actually carried out in each county is proportional with the number of inhabitants in the county. The interviewing in each stratum is completed when the predetermined number of respondents have been interviewed.

The data were collected over a 10-week period early in 1996. To be consistent with previous research (Reynolds & Miller, 1992; Carter et al., 1996), we only screened for nascent entrepreneurs who were 18 or more years of age. Hence, the sample was reduced from 10,000 to 9,533 adults. Respondents to the survey were asked if they, alone or with others, were currently trying to start a new business. In addition, they were asked if they had started a new business during the last year. If they answered yes to either of these two questions, they were asked to state their names and telephone numbers.¹ Of the 322 respondents who answered yes, 67 refused to partic-

1. In the survey 205 respondents stated that they were currently trying to start a new business, while an additional 117 stated that they had started a business during the last year.

Table 1

Prevalence of Novice, Serial, and Parallel Founders

Types of Founders	Survey Conducted in 1996 ^d (n = 9,533)		Follow-up Survey (n = 159)	
	No.	%	No.	%
Novice Founders ^a	120	1.3	102	64.2
Serial Founders ^b	49	0.5	32	20.1
Parallel Founders ^c	36	0.4	25	15.7

Notes: (a) Persons who have not started a previous business. (b) Persons who have started at least one previous business, but this (these) business(es) has (have) been sold or closed down. (c) Persons who have started at least one previous business, and have retained a previous business. (d) Based on the proportion of founders among the 205 respondents in the survey frame who reported that they were currently trying to start a new business. Respondents who reported that they had started a business during the last year are excluded. The percentages are calculated as the number of each type of founder in proportion of the total sample of 9,533 respondents.

participate in any further interviews.

The names and telephone numbers of the 255 nascent entrepreneurs prepared to respond to further interviews were bought from MMI. We attempted to contact the 255 individuals on this list. Eighteen persons were inaccessible, 28 people turned out not to be nascent entrepreneurs, and a further 6 refused to participate. In total, we gathered responses from 203 valid nascent entrepreneurs. The valid respondents were interviewed regarding the activities they had carried out trying to start their proposed businesses as well as their prior founding experiences. For the purpose of this study, only respondents who reported that their proposed business venture was a wholly new business (and not the acquisition or take-over of an existing business) were subject to further analysis. This left us with 160 valid respondents who were starting new independent businesses from scratch at the time of the interview (early 1996).

Twelve months later, in February/March 1997, the 160 valid respondents were contacted again. Using a structured questionnaire, a telephone survey gathered information surrounding their activities, as well as the characteristics of the businesses they currently owned. Only one person refused to respond to the follow-up survey conducted in 1997.

The results from the screening interview indicated that 2.2% (205 out of 9,533) of the Norwegian population of adults were trying to start a new business in 1996. Reynolds and Babson (1997) reported the results from four studies conducted in the United States in which the proportion of the adult population starting a new business varied between 3.7% and 4.5%. This evidence suggests that Norway has fewer nascent entrepreneurs per capita than the United States. Further, this modest proportion was expected because Norway has the lowest self-employment rate of all OECD-countries (McKinsey, 1995).

Table 1 shows the prevalence of novice, serial, and parallel founders. Sixty-four percent of the nascent entrepreneurs were novices in the sense that they had not started a previous business, 20% were serial founders, and 16% were parallel founders. These figures are similar to those reported by Westhead and Wright (1998), who found 63%, 25%, and 12% of the founders in Great Britain to be novice, serial, and parallel founders, respectively.

Few statistically significant differences were detected among the three types of founders with

Table 2

Start-up Activities Reported by Novice, Serial, and Parallel Founders

Start-up Activities	Novice Founders (n = 102)		Serial Founders (n = 32)		Parallel Founders (n = 25)		Chisquare Statistic	Significance Level
	No.	%	No.	%	No.	%		
Business planning								
Prepared business plan	52	51.0	18	56.3	12	48.0	.42	ns
Organized start-up team	52	51.0	16	50.0	19	76.0	5.43	.066 ^{bc}
Looked for facilities/equipment	59	57.8	16	50.0	15	60.0	0.75	ns
Acquired facilities/equipment ^d	57	55.9	17	53.1	16	64.0	.74	ns
Developed product/service	25	24.5	7	21.9	9	36.0	1.71	ns
Conducted market research	37	36.3	13	40.6	11	44.0	0.59	ns
Devoted full time to the business	24	23.5	14	43.8	8	32.0	4.98	0.83 ^{ab}
Financing the new firm								
Saved money to invest	46	45.1	19	59.4	13	52.0	2.09	ns
Invested own money	56	54.9	22	68.8	19	76.0	4.77	.092 ^b
Applied for bank funding	36	35.3	11	34.4	13	52.0	2.58	ns
Received bank funding	37	36.3	13	40.6	11	44.0	0.59	ns
Applied for government funding	39	38.2	10	31.3	14	56.0	3.82	ns
Received government funding	16	15.7	5	15.6	11	44.0	10.52	.005 ^{bc}
Interaction with the external environment								
Applied for license, patent etc. ^e	13	12.7	2	6.3	7	28.0	-	-
Hired employee(s)	7	6.9	8	25.0	8	32.0	13.85	.001 ^{ab}
Sales promotion activities	57	55.9	18	56.3	20	80.0	5.06	.080 ^{bc}
Business registration ^f	53	52.0	20	62.5	17	68.0	2.67	ns
Received first payment	52	51.0	16	50.0	16	64.0	1.49	ns
Positive net income	36	35.3	12	37.5	10	40.0	0.21	ns

Notes: 'a' indicates a significant difference ($p \leq .05$) between novice and serial founders, 'b' indicates a significant difference ($p \leq .05$) between novice and parallel founders, 'c' indicates a significant difference ($p \leq .05$) between serial and parallel founders. (d) Acquired facilities/equipment is based on two questions: Rented facilities/equipment and bought facilities/equipment. (e) Coefficients are not reported due to violations of the assumptions of the Chi-square test. (f) With few exceptions, regardless of the legal status, all new businesses have to register with the Norwegian government in order to obtain an organization number.

regard to their personal characteristics. Novice founders were significantly younger than experienced founders. As anticipated (Rosa & Hamilton, 1994; Kolvereid & Bullvåg, 1993), female entrepreneurs were more likely to be novice founders than multiple founders, particularly parallel founders. Only two of the 25 parallel founders in the sample were women. No significant differences were found with regard to education, county, urban or rural location, household income or political ethos.

Gestation Process Measures

Respondents to the survey conducted in 1996 were asked a series of questions surrounding the gestation process. Questions were consistently asked with regard to 20 different start-up activities.² The activities investigated fall into three different categories: (1) business planning, (2) financing the new firm, and (3) interaction with the external environment.

2. We are indebted to Paul Reynolds and the Entrepreneurial Research Consortium who let us use their list of business gestation activities. The list was translated from English to Norwegian, and only minor changes were made to fit the Norwegian context.

Table 3

Business Start-up Process Differences Reported by Novice, Serial, and Parallel Founders.

Start-up Activities	Novice Founders (n = 102)	Serial Founders (n = 32)	Parallel Founders (n = 25)	Kruskal-Wallis Chi-Square Statistic
Number of start-up activities (Range 1-19) ^a				
Mean	5.96	6.72	7.44	
Median	6.00	7.00	7.00	5.18**
Number of start-up activities by category activities				
-business planning (range 0-7)				
Mean	3.00	3.16	3.60	
Median	3.00	3.00	3.00	2.29ns
-financing the new firm (range 0-6)				
Mean	2.26	2.50	3.24	
Median	2.00	2.50	3.00	6.22***
-interaction with the external environment (range 0-6)				
Mean	2.14	2.38	3.12	
Median	2.00	2.50	3.00	5.88**
Number of months from first to last start-up activity reported				
Mean	22.29	22.55	30.16	
Median	14.00	13.00	20.00	3.02ns
Average number of months between start-up activities				
Mean	3.86	3.79	4.12	
Median	2.82	1.90	2.73	0.77ns

Notes: Level of statistical significance: 'ns' indicates 'not significant' at the 0.1 level or less; * indicates $p \leq 10$; ** indicates ($p \leq .05$) between novice and parallel founders using Mann-Whitney U-tests to investigate pairwise differences between types of founders. (a) Bought and rented facilities/equipment is combined.

For each activity, respondents indicated whether the activity was a) not yet initiated, b) not relevant, c) initiated, or d) completed. If an activity had been initiated or completed, respondents were asked to specify the month and year of the initiation of the activity. We then calculated the number of months from the earliest reported activity to the initiation of each of the subsequent activities. Further, measures were calculated surrounding the number of initiated or completed activities associated with business planning, financing the new firm, and interaction with the external environment. A measure of the total number of activities initiated was also calculated. In addition, we calculated the time period from the earliest to the latest reported activity initiated, as well

as the mean number of months between the initiation of each activity.

During the follow-up survey conducted in 1997, the respondents were asked to report how far their surveyed businesses had developed. The list of start-up activities initiated or completed was also updated. In addition, the three types of founders were classified as follows: still trying, started a business, and gave up.

RESULTS

Table 2 shows the start-up activities initiated by novice, serial, and parallel founders. Chi-square tests were conducted to examine whether there were statistically significant differences in the start-up activities among the three types of founders. Significant differences were found with regard to seven of the activities, evenly distributed between the three categories: organizing a start-up team, founder devoted full-time to the business, investing own money, received government funding, hired employee(s), and initiating sales promotion activities.

Pairwise Chi-square tests revealed that experienced serial and parallel founders are significantly more likely than novice founders to devote themselves full-time to the business and to hire employees. Moreover, parallel founders are found to be markedly more likely than novice and serial founders to have organized a start-up team, to have received government funding, and to have carried out sales promotion activities. Parallel founders are also found to be significantly more likely than novice founders to have invested their own money in the venture.

While novice founders are found to differ from experienced founders with respect to two start-up activities, the results summarized above primarily suggest that parallel founders stand out from the other two groups of founders. As opposed to parallel founders, serial founders do not seem to behave particularly differently from their inexperienced colleagues.

Table 3 shows the mean and the median number of start-up activities initiated. In addition, this table summarizes the number of activities initiated with regard to three categories of activities: business planning, financing the new firm, and interaction with the external environment. Kruskal-Wallis analysis was used to investigate possible differences between novice, serial, and parallel founders. The Mann-Whitney U-test was used to investigate pairwise differences between types of founders.

Parallel founders are found to have initiated significantly more activities than novice founders. The significant differences found between parallel and novice founders relate to activities dealing with financing and interaction with the external environment. No statistically significant differences were, however, detected between the three types of founders with regard to activities relating to new business planning.

Two measures focusing upon the duration of the gestation process — the number of months from first to last start-up activity reported, and the average number of months between activities — are also summarized in table 3. No statistically significant differences among the three groups of founders were detected with regard to these two measures. Interestingly, though not statistically significant, both the mean and the median values suggest that the start-up process of parallel founders has a longer duration than the start-up processes generally reported by serial and novice founders.

From the outset, it should be appreciated that it is a very difficult task to measure start-up event sequences. The number of possible sequences is potentially very large. Nevertheless, we explored whether the sequence of activities reported early in the gestation process varied across the three types of founders. Following the example of Carter et al. (1996), we used the median values to categorize the sequence of the start-up activities reported by respondents in the three founder groups. Given the limitations associated with sample size as well as the problem of outliers, a categorization based on the median is generally regarded as being more appropriate than a categorization based on mean scores. The activities were categorized into three-month time frames (i.e., quarters) since the first activity had been initiated. Results from this detailed analysis are summarized in Table 4.

Table 4
Sequence of Start-Up Activities.^a

	Novice Founders (n = 102)	Serial Founders (n = 32)	Parallel Founders (n = 25)
1st quarter (0-3 months)	Organized start up team (0) Saved money to invest (0) Prepared business plan (3)	Organized start-up team (0) Saved money to invest (0.5) Prepared business plan (1) Devoted themselves full time to the business (3.5)	Organized start-up team (0) Saved money to invest (2.5) Prepared business plan (3)
2nd quarter (4-6 months)	Invested own money (5) Market research (5.5) Devoted themselves full time to the business (6)	Market research (4) Sales promotion (4) First payment (4) Invested own money (4.5) Registered firm (5) Looked for facilities or equipment (6) Rented facilities or equipment (6)	Invested own money (4.5) Sales promotions (5) Looked for facilities or equipment (5) Rented facilities or equipment (5.5)
3rd quarter (7-9 months)	Sales promotion activities (7) Received bank funding (9) Looked for facilities or equipment (9.5)	Developed product/service (9) Positive net income (9)	First payment (9)
4th quarter (10-12 months)	Applied for government funding (10) Developed product/service (10) First payment (10.5) Applied for bank funding (11) Registered firm (11) Bought facilities or equipment (11) Positive net income (12)	Hired employee(s) (11) Applied for government funding (12)	Registered firm (10.5) Market research (12)
5th quarter (13-15 months)	Received government funding (14) Applied for licence, etc. (14)	Bought facilities or equipment (14) Applied for bank funding (14) Received bank funding (14.5)	Developed product/ service (14) Hired employee(s) (15) Applied for licence etc. (15) Devoted themselves full time to the business (15)
6th quarter (≥16months)	Rented facilities or equipment (17)	Received government funding (36.5)	Applied for bank funding (16) Bought facilities or equipment (16) Positive net income (17) Received bank funding (19) Applied for government funding (20.5) Received government funding(22.5)

Note: (a) Activities are categorized by median value for those who had initiated the start-up activity. Start-up activities are included only if more than five founders in the group had initiated the activity in question. Median values are reported in parentheses.

Table 5
Business Gestation Process Outcomes.^a

Outcomes	Novice Founders (n = 102)		Serial Founders (n = 32)		Parallel Founders (n = 25)		Chi-Square Statistic
	No.	%	No.	%	No.	%	
Started a business	39	41.5	12	41.4	17	68	11.25 p<.024
Still trying	25	26.6	5	17.2	7	28.0	
Gave up	30	31.9	12	41.4	1	4.0	

Notes: (a) The minimum expected frequency is 6.25.

Table 4 shows that the three types of founders developed their business ideas in a very similar way. Over the first three months (or first quarter), they organize a team, save money and prepare a business plan. Serial founders, however, are found to be more likely from the outset to devote themselves on a full-time basis to their ventures. In contrast, most novice founders generally wait until the second quarter before they devote themselves full-time to developing their business. Parallel founders generally do not seem to start working full-time with their businesses until the second year of the start-up process. Serial founders seem to be under stronger time pressure than the other two groups. Most notably, serial founders conducted a large number of activities in the second quarter. They generally register their firms and receive payments from the first sale relatively early in the start-up process. Novice founders, however, generally proceed more slowly, and postpone many activities to the fourth quarter.

Parallel founders are even slower than novice founders in implementing many activities, despite the fact that they generally receive their first payments much earlier than novice founders. Many parallel founders are delaying initiating several business development activities until the second year. Since their existing business(es) may take up a considerable amount of their time, they may not have sufficient time available to develop their new business. Further, parallel founders may have more complex business ideas that demand a longer and more thorough start-up process. Finally, because they work in and presumably have income from their existing business, the financial urgency to rush the gestation process may not be a strong "pull" factor. Interestingly, parallel founders who may be expected to have wider and denser contact networks, generally wait until the end of the gestation process before they apply for external funding. This is in marked contrast to the behavior displayed by novice founders (i.e. those without diverse financial resources or income status) who from the outset generally apply for external funding.

Table 5 shows the business gestation process outcomes by novice, serial, and parallel founders.

Parallel founders are found to be markedly more likely to have "started a business" in the period than novice or serial founders. Further, only 4% of parallel founders "gave up" starting a business, compared to 41% of serial founders and 32% of novice founders. We can infer from this evidence that parallel founders find better business opportunities to exploit than serial founders. Based on their survey of venture capitalists, Wright et al.(1997) also found evidence that suggested that serial founders often have relatively poor business ideas.

Novice founders, however, are found to be just as likely as serial founders to have "started a business." We can infer from this finding that prior founding experience obtained by serial founders often is a liability rather than an asset.

CONCLUSIONS

The results from this survey are summarized below by describing the business start-up processes of parallel, serial, and novice founders.

Parallel business founders carry out more activities in their business start-up process than other founders. In general, parallel founders do not hurry, but seem to take one step at a time and wait until the last part of the process has been successfully completed before they initiate costly activities such as buying equipment, hiring employees, and devoting themselves full-time to the business. Even though they invest their own money in their businesses quite early, they wait until the end of the process before they apply for and receive external funding. Parallel founders to a larger extent than novice and serial founders organize a start-up team, invest their own money in the venture, initiate sales promotion, and hire one or several employees. Finally, they are more likely to actually start a business than novice and serial founders.

Serial business founders carry out more start-up activities in the earlier phases of the business start-up process than parallel founders. Moreover, they often devote themselves full-time to the business from the beginning of the business gestation process. They ask for government funding relatively early, but do not receive financial support earlier than parallel founders. In general, they are less likely to obtain external funding. Serial founders are less likely to actually start-up a new venture than parallel founders. Further, they are more likely to give up starting a business than parallel or novice founders.

Novice business founders start the business gestation process in the same way as their more experienced counterparts. However, compared to serial founders, they take their time during the first phases of the business gestation process. Over the last quarter of the first year of the gestation process, they top their effort and carry out most of the remaining start-up activities. In marked contrast to serial and parallel founders, they rarely hire employees, and if they do, they wait until the very end of the business gestation process. Businesses are just as likely to be ultimately established by novice as serial founders. Novice founders, however, are significantly less likely than parallel founders to establish a business.

Limitations

This study is associated with several limitations. First, the founders' business ideas are not examined. Some ideas are more complex than others and may demand more effort and other activities. Our findings suggest that parallel founders have superior business ideas, but future research is clearly needed to confirm this assertion. Second, we have not taken into consideration whether the earlier experience of serial founders were failures or successes. Our sample of serial founders consisted mostly of persons who had closed down their previous business. It is possible that serial founders with prior successful experiences are more able to learn from their experience. Third, we have not taken into consideration founders' occupational status during the start-up process. Further, we have not assessed how much time they have available to found the business, or how much time they devote to another job or another business. We appreciate that the time available to start a new business may affect the duration of the process as well as the outcome. Finally, following the founders for 12 months may not be a sufficient time frame to ascertain whether the different activities will be carried out during the process, whether the business will be established, and whether it will survive.

Implications for Research

The empirical evidence presented in this article suggests that there are differences in the business start-up processes reported between novice, serial, and parallel founders. Further, there is a need to distinguish between different types of experienced founders. Parallel founders seem to be more likely than serial founders to build an experience curve of entrepreneurship, resulting in a somewhat different start-up process and a higher probability of actually starting a subsequent busi-

ness. Serial entrepreneurs, however, are no better than novices at reaching milestones in the gestation process.

The distinction between parallel and serial entrepreneurs is a previously under-emphasized one, and this study suggests this distinction warrants additional research attention. Together with this distinction is the question of learning from the past. Conceivably, parallel entrepreneurs have a much richer current experience base with which to work, while serial entrepreneurs may be laboring under the biases inherent in selective recall and oversampling of success (see Sitkin, 1992). In other words, a parallel entrepreneur can iterate back and forth between experiences, while a serial entrepreneur may only operate from what is remembered about the previous experience. Similarly, a parallel entrepreneur may have more than one good idea at a time, while a serial entrepreneur may simply have had one good idea converted into a business and then be unable to replicate what was essentially an earlier piece of luck. De Konig and Muzyka (1996) as well as McGrath (1996) have suggested that some founders are exceptionally good at recognizing business opportunities. Evidence presented in this article suggests that parallel entrepreneurs are better than novice and serial entrepreneurs with regard to this key entrepreneurial asset. Additional research appears to be warranted on how parallel entrepreneurs identify and recognize valuable business opportunities.

The present findings support McGrath's (1996) options approach to entrepreneurship. While prior start-up experience may enable founders to quickly initiate new venture operations, as suggested by Starr and Bygrave (1991), experienced founders in general, and parallel founders in particular, do not move through the business gestation process quicker than novice founders. Rather, the findings suggest that parallel founders have advantages over other founders since they can afford "to wait and see." Moreover, parallel founders are better equipped to take advantage of the time they spend waiting before they establish a new business. The findings further suggest that parallel founders have superior venture ideas, possibly because they have access to a high number of "shadow options," and are better able than novice and serial founders to turn these "shadow options" into real options and viable opportunities.

The present study reinforces the idea that the single entrepreneurial start-up is not the most appropriate unit of analysis for truly understanding entrepreneurial wealth creation (MacMillan, 1986; Birley & Westhead, 1993; McGrath, 1996; Scott & Rosa, 1996; Westhead & Wright, 1998). If individual entrepreneurs are engaged in multiple businesses, we do not learn much about how they operate by looking only at one new business. Using the business as the unit of analysis in entrepreneurship research focusing on success versus failure may not be relevant, given that entrepreneurship is a portfolio concept for at least one important subgroup of entrepreneurs (Westhead & Wright, 1998). This implies that future research should take into account not only what happened to an individual business, but also where this business fits into the life-cycle of individual entrepreneurs (Ronstadt, 1988).

The present research suggests that history matters, and that it may account for aspects of entrepreneurial behavior that other models (such as rational decision making, trait models, studies of moderate risk taking, etc.) do not. This offers an important insight not only for entrepreneurship, but also suggests bridges between entrepreneurship theory and other theories in which path-dependence figures prominently, such as theories of routine and resource accumulation (Nelson & Winter, 1982), theories of learning (Levitt & March, 1988), and the dynamic capabilities approach to strategy (Teece, Pisano, & Shuen, 1997).

Implications for Practitioners

The present research has several important implications for entrepreneurs and policy makers. We suggest, based on our empirical evidence, that becoming a serial business founder does not appear to be a good entrepreneurial strategy. Business owners should try to retain their business(es) while trying to establish or purchase further businesses. Owning a business may give experienced entrepreneurs greater credibility, as well as easier access to external support and

resources.

Consultants and advisors helping entrepreneurs and business founders very often have no experience in business founding or ownership. This research suggests that experience from multiple business start-ups and parallel business ownership is valuable. Hence, parallel entrepreneurs may be superior mentors to other entrepreneurs. Their skills and abilities may also be valuable for banks, business angels, and venture capitalists with regard to their decisions to invest resources in entrepreneurs or new businesses. Government programs supporting new business start-ups may not be paying enough attention to parallel business founders, who may own high-performing ventures that record employment and sales growth. Instead, most government programs are currently directed at businesses rather than experienced entrepreneurs. When designing support programs for entrepreneurs, policy makers should appreciate that a small subgroup of experienced parallel entrepreneurs in many economies make significant contributions to tax revenues and job generation. The present research suggests that we need a more sophisticated view of who the “entrepreneur” really is — not just some person with a great idea, but someone who can put the entire chain of wealth-creation in place.

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6.2 New business early performance: Differences between firms started by novice, serial and portfolio entrepreneurs.

2. New business early performance: differences between firms started by novice, serial and portfolio entrepreneurs

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INTRODUCTION

There has been a growing research interest in the field of habitual entrepreneurs, that is, entrepreneurs that start more than one business during their career. Multiple business founders are interesting since they are often expected to be competent entrepreneurs. MacMillan (1986) argued that habitual entrepreneurs develop an experience curve of entrepreneurship. They learn from their former experiences, have the opportunity to analyse what went wrong and what went right, and to develop a 'methodology' for entrepreneurship. If such an experience curve exists, the experiences from former businesses give habitual entrepreneurs advantages over inexperienced novice entrepreneurs when it comes to new business start-ups. Research interest has been fuelled by the expectation that firms started by experienced entrepreneurs will have superior or enhanced performance. While this suggestion is intuitively appealing, to date there is little empirical support for such a relationship. One explanation may be that previous studies have not controlled for potential differences in business ideas. Ucbasaran et al. (2003) found that habitual entrepreneurs identified opportunities with higher levels of innovativeness than novices. Experienced entrepreneurs may have more complex business ideas which require a longer introduction period with low returns. Another reason may be that many previous studies have failed to acknowledge the heterogeneity among habitual entrepreneurs. The important difference between serial and portfolio founders is that the latter group still own and manage their original business and are able to draw upon resources in the existing firm when starting a new business. Portfolio entrepreneurs may use their original firm as

a seedbed for subsequent new ventures (Carter, 1998). In a previous study, Alsos and Kolvereid (1998) found that portfolio nascent entrepreneurs were more often successful in founding a new business than both novice and serial nascent entrepreneurs, indicating that the value of still owning and running an existing business is larger than past experience from prior ventures. An existing business may be a better source of fresh experience and relevant know-how than earlier businesses.

The literature on habitual entrepreneurship has speculated about, but has hitherto found little empirical evidence of, experienced business founders performing better than their inexperienced counterparts. There is a need to investigate what constitutes the potential advantages of experienced entrepreneurs. If there is 'an experience curve of entrepreneurship', what do habitual entrepreneurs learn from their experience that give them advantages when starting the entrepreneurial process over again? To be a novice is a temporary condition, as novice entrepreneurs will become experienced after learning from their first start-up. Performance differences between novice and habitual entrepreneurs are, however, likely to be found in the early stages of business development.

Entrepreneurship is about identifying and exploiting opportunities and organizing resources (Landström and Johannisson, 2001; Stevenson and Jarillo, 1990). We suggest that experienced entrepreneurs may have acquired knowledge and resources from their former business, and that this gives them better access to both new opportunities and resources. Since access to opportunities and resources is central to the possibility of success of a new business, this is expected to lead to higher performance of new businesses started by experienced entrepreneurs. Particularly, serial and portfolio entrepreneurs may be able to 'grow' their new businesses more rapidly from the start because of their presumed better access to resources. The following research questions are explored:

1. Do novice, serial and portfolio entrepreneurs differ when it comes to their ability to identify opportunities and acquire resources when starting a new business?
2. Do such differences lead to different performance in new businesses started by novice, serial and portfolio entrepreneurs?

Based on longitudinal data of a representative sample of new business formations, the present research will explore the differences between novice, serial and portfolio entrepreneurs in the process of starting a new business. Portfolio entrepreneurs are defined using multiple ownership and management as criteria: these are persons who own and manage more than one business. Serial entrepreneurs are entrepreneurs who have owner-management experience from more than one business, but

only one at a time, and novice entrepreneurs are entrepreneurs with no prior owner-management experience (Rosa and Scott, 1999; Westhead and Wright, 1998b).

LITERATURE REVIEW

It can be argued that resources are especially critical for new and small businesses due to the shortage of these and the difficulties connected to raising financial capital and sourcing skilled employees as well as other assets (Brush and Chaganti, 1997; Cooper and Dunkleberg, 1986). Aldrich and Fiol (1994) pointed at the 'liabilities of newness and smallness' when it comes to the acquisition of resources. The acquisition of resources is a central element in starting a new business; some even claim it is the most central one (Aldrich, 1999; Landström and Johannisson, 2001). The entrepreneur's ability to collect the necessary resources and combine these into a new business may be vital for whether the new firm will come into existence, and what degree of success it will subsequently attain.

Serial and portfolio entrepreneurs may have accumulated resources through their former businesses that might be drawn upon in the process of starting a new business (Scott and Rosa, 1996). These resources may include knowledge resources that accrue from experiential learning, networks and contacts, and financial capital. In addition, portfolio entrepreneurs possess resources through their existing business that might be used in the start-up of the new business, such as organizational routines, employees, suppliers and customers, as well as physical resources such as buildings and equipment. In these cases the existing business can work as a 'seed-bed' for the new business in its infancy (Carter, 1998). In their study of portfolio entrepreneurs in the farm sector, Alsos and Carter (2003) found an extensive transfer of resources from the existing to the new business. Further, the extent of such resource transfer was associated with the performance of the new business. Moreover, Westhead et al. (2003) found that portfolio entrepreneurs have more diverse experiences and more resources than both serial and novice entrepreneurs, and argue that portfolio entrepreneurs constitute a particularly interesting type of entrepreneurs.

Experience may bring a wide range of contacts, which might be useful in new business start-ups. Through a well-developed network, entrepreneurs may gain access to resources they would otherwise have difficulties obtaining. Such resources may include financial capital or physical resources, or information and knowledge valuable both for identification of opportunities and for founding and developing a new business. Experienced entrepreneurs with a well-developed social network may be better able to

establish good start-up teams for developing new business opportunities. Previous studies have found that experienced entrepreneurs, and in particular portfolio entrepreneurs, are more likely to start a new business with partners (Birley and Westhead, 1993; Westhead and Wright, 1998b). As a lead entrepreneur, the experienced entrepreneur may bring together a group of entrepreneurs for opportunity exploitation, relying on the track record of the lead entrepreneur. Further, experienced entrepreneurs may also be invited to be part of start-up teams of other lead entrepreneurs.

Westhead and Wright (1998a) argue that the experience of the entrepreneur can have a considerable influence on the ways the new business is financed, and that successful habitual entrepreneurs can have a greater access to funds than novice entrepreneurs. For instance, successful habitual entrepreneurs may have more financial resources available to invest in equity capital than novices do. In their study of independent business owners in Great Britain, Westhead and Wright (1998b) found that serial entrepreneurs were more likely to use finance from personal sources (perhaps because they have large financial assets after the sale of the previous business), and that portfolio founders were more likely to obtain finance from customers and suppliers (perhaps because they have ties to them through their existing business). Moreover, experience from previous or current business ownership may have developed their network when it comes to investors, banks and other sources of finance. Finally, a track record as a successful entrepreneur may attract more investors to new business projects.

Several authors have argued that habitual entrepreneurs are particularly good at recognizing and developing opportunities (MacMillan, 1986; McGrath, 1996; McGrath and MacMillan, 2000). Founding and running a business may give access to information and knowledge which becomes the basis of new business ideas. Ronstadt (1988, p. 31) introduced 'the corridor principle' and suggested that 'the mere act of starting a venture enables entrepreneurs to see other venture opportunities they could neither see nor take advantage of until they had started their initial venture'. McGrath (1996) argued that entrepreneurs with access to a large and well-functioning network, for instance through an existing business, will probably have access to a large number of good 'shadow options', that is, latent business ideas. Also Singh et al. (1999) stated that a large social network, with many weak ties going beyond close friends and family, relates positively to idea identification and opportunity recognition. Further, McGrath (1996) advocated that experienced entrepreneurs often have a larger ability to recognize and take advantage of latent business ideas, since experience increases their sense-making ability.

Ucbasaran et al. (2003) investigated information search and opportunity identification among novice and habitual entrepreneurs. They found that

while there were no differences in the intensity of information search and number of sources used, habitual entrepreneurs identified more opportunities given a certain amount of information. They also found that habitual entrepreneurs had different attitudes to opportunity identification than their less experienced counterparts. Habitual entrepreneurs put more focus on problem-solving activities as a source of opportunities, they enjoyed opportunity identification more and they assessed that one opportunity often led to another. The latter is in congruence with Ronstadt's (1988) concept of 'the corridor principle'.

Based on this review of the literature the following hypotheses were developed:

Hypothesis 1: Serial and portfolio entrepreneurs are better than novices in acquiring resources to the new business.

Hypothesis 2: The resources acquired are significantly related to subsequent early business performance.

METHOD

Data for this study was gathered from new business founders drawn from the Norwegian central coordinating register for legal entities. This register coordinates information that exists in other government registers, including: (1) the register of employers; (2) the register of business enterprises; and (3) the Value Added Tax register. Hence, the central coordinating register contains all businesses that have employees, all limited liability companies and partnerships, and all sole proprietorships obliged to pay VAT.¹ Businesses that register are assigned a unique organization number that identifies the business. The four most common legal forms of new businesses in the register are sole proprietorships, partnerships with mutual responsibility, partnerships with shared responsibility and unlisted limited liability companies. Since a total of 98.6 per cent of Norwegian new registrations in 2002 chose one of these four legal forms (Statistics Norway, 2004), other less common legal forms were disregarded. All new businesses that registered with the central coordinating register during weeks 21–24 2002 were approached. In other words, the whole population of new business registrations during these four weeks constituted the sampling frame. With only one week's delay, the register delivered lists of new businesses that were registered each of these weeks. Within a week after the register supplied these lists, a questionnaire was mailed out in four rounds to 603 businesses registered in week 21, 866 businesses registered in week 22, 747 businesses

registered in week 23, and 905 businesses registered in week 24. A reminder with a new copy of the questionnaire was sent out in four rounds three weeks after the initial mailings. A total of 3121 businesses were approached. Of the questionnaires posted, 126 were returned unreachable, while we received 1048 completed questionnaires – a response rate of 35 per cent.

The second round of data collection took place during weeks 5–8 in 2004 (that is, about 19 months after the initial mailing). A professional survey agency was engaged to telephone the respondents to the mail survey in order to find out what had happened to the businesses since the first round of data collection. Among the 1048 businesses that responded to the mail survey, 29 businesses were excluded since they had been deregistered from the central coordination register. Another six businesses were excluded because they had more than 50 per cent missing data on the first round of data collection. Finally, 33 respondents were excluded since the business or the contact person was not listed in any of the available telephone directories. The survey agency attempted to reach all the remaining 980 respondents. Among these, 275 persons were inaccessible and 54 others refused to participate. A total of 3924 telephone calls were made in order to collect follow-up data from a total of 651 of the business founders, 66 per cent of the 980 founders on the list. A total of 104 questionnaires not completed by the founder and owner-manager were removed. Only respondents who submitted complete data sets are included in the present analysis, leaving 410 cases for the analysis of total employment and 354 cases for the analysis of sales turnover in the business. Thorough response bias tests did not reveal any significant differences between respondents and non-respondents. Moreover, the final sample did not differ significantly from the entire cohort of businesses started in Norway in 2002 with regard to legal status or localization. Hence, there is good reason to believe that the sample is representative for the population of new business start-ups in Norway.

Measures

Dependent variables: new business performance

Turnover in 2003 (the first full year in business) and hired employment (other than the respondent) at period two (19 months after registration) were selected to measure of performance. Both variables were highly skewed. Therefore, they were both transformed by taking the logarithm of the responses after adding a constant of 10 000 for turnover and 0.1 for employment.

Types of entrepreneurs

Novice, serial and portfolio entrepreneurs were defined using two questions: whether the respondent at present owned and managed another

business in addition to the newly registered business, and whether the respondent had previously owned and managed another business. Respondents who answered 'no' to both these questions were categorized as novice entrepreneurs. Respondents who answered 'no' to the first question and 'yes' to the second one were categorized as serial entrepreneurs, while respondents who answered 'yes' to the first question were categorized as portfolio entrepreneurs. In the final sample of 410 respondents, 68.5 per cent were novices, 13.7 per cent were serial and 17.8 per cent were portfolio entrepreneurs.

Control variables: new business characteristics

Novelty was included as a control variable since Ucbasaran et al. (2003) found experienced entrepreneurs to have more innovative business ideas. Novelty was measured by an additive scale including three items. Respondents were asked to indicate on a seven-point scale whether they agreed or disagreed with the following statements: 'Customers will experience our product or service as new and unknown', 'Few or no competing businesses offers a similar product or service', and 'The technology or production of our product/service is not easily accessible'. The three items load on the same factor in a principal component analysis representing a cumulative variance of 62 per cent and a Cronbach's alpha of 0.70. This measure is adopted from the one used by the *Global Entrepreneurship Monitor* (Reynolds et al., 2002).

Entry mode was also included as a control variable since experienced entrepreneurs may be more involved in acquisitions than novices. The variable '*de novo*' was included, giving the value 1 to the *de novo* entries (businesses started from scratch) and 0 to acquisitive entries (businesses acquired or inherited).

Resources

Start-up team, opportunities, and amount of financial capital raised were used to measure acquired resources. Respondents were asked to state whether they alone were responsible for the founding of the business (value 0), or whether they started it with other partners (value 1), to measure the existence of a start-up team. The access to opportunities was measured by the number of opportunities the respondent had identified in the last five years (not including the new business). The measure of financial capital was calculated by adding the total debt and deposited equity of the newly registered business. The variable was grouped in seven categories as follows: no financial capital (1), 1 to 10 000 NOK (2), 10 001 to 50 000 (3), 50 001 to 100 000 NOK (4), 100 001 to 200 000 NOK (5), 200 001 to 1 000 000 NOK (6), and more than 1 000 000 NOK (7).

RESULTS

Prior to the formal testing of the hypotheses, descriptive statistics and correlations were run. The results are shown in Table 2.1. Table 2.1 gives preliminary support to both hypotheses, and shows that multicollinearity is not a problem. Hypothesis 1 was tested using ANOVA. The results are presented in Table 2.2.

Novice entrepreneurs are found to be significantly less likely to have organized a team of entrepreneurs to start the business, than are serial and portfolio entrepreneurs. Only 19 per cent of the businesses started by novice entrepreneurs are team start-ups, compared to 34 per cent and 41 per cent of the businesses started by serial and portfolio entrepreneurs respectively. Further, novices are found to identify significantly less opportunities than serial and portfolio entrepreneurs. Portfolio entrepreneurs are also found to identify significantly more business opportunities than serial entrepreneurs. The mean number of business opportunities identified is 0.88 for novice entrepreneurs, 1.5 for serial entrepreneurs and 2 for portfolio entrepreneurs. Serial and portfolio entrepreneurs were also able to raise significantly more capital for investment in the new business than novice entrepreneurs. Further, independent sample t-tests were conducted to explore differences in means between novices and habitual entrepreneurs. The results show significant differences between the types of entrepreneurs ($p < 0.01$) for all three resource types, and thus support the results from the ANOVA analysis. In total, these results indicate that serial and portfolio entrepreneurs are able to get access to more resources and opportunities than novice entrepreneurs. These findings support hypothesis 1.

The next question is whether these opportunities and resources lead to better performance of the new businesses. Performance is measured by the achieved sales turnover of the new business as well as employment of others. To test whether the different types of founders were associated with different levels of performance, multivariate regression analysis was used.

Table 2.3 shows results from a hierarchical linear regression analysis with sales turnover as the dependent variable. Model 1 shows the effect of the control variables. The model is highly significant giving an adjusted R square of 0.13. As expected both control variables are significant with a negative beta-value in the model, indicating that more novel business ideas and *de novo* entries have reached significantly less sales in the first whole year in business than less novel and acquisitive entries. In model 2, serial and portfolio entrepreneurship are included. Both variables have significant and positive impact in the model, indicating that both serial and portfolio

Table 2.1 Descriptive statistics: mean, standard deviation, correlations and VIF-values

	Mean	Standard deviation	1	2	3	4	5	6	7	8	9	10	VIF values
1 Novice entrepreneur	0.69	0.46	1.00										1.086
2 Serial entrepreneur	0.14	0.35	-0.587**	1.00									1.153
3 Portfolio entrepreneur	0.18	0.38	-0.687**	-0.185**	1.00								1.043
4 Novelty	2.91	1.63	-0.053	-0.014	0.078	1.00							1.138
5 <i>De novo</i>	0.88	0.33	0.036	-0.069	0.018	0.161**	1.00						1.141
6 Start-up team	0.25	0.44	-0.201**	0.081	0.171**	0.012	-0.145**	1.00					1.100
7 Opportunities	1.17	1.70	-0.248**	0.079	0.230**	0.044	-0.017	0.140**	1.00				1.268
8 Financial capital	3.67	1.99	-0.219**	0.152**	0.129**	-0.112*	-0.313**	0.306**	0.179**	1.00			
9 Turnover (log)	12.38	1.91	-0.166**	0.138**	0.078	-0.283**	-0.277**	0.237**	0.116*	0.469**	1.00		
10 Employees (log)	-1.59	1.30	-0.126*	0.096†	0.067	-0.148**	-0.187**	0.256**	0.171**	0.390**	0.575**	1.00	

Notes:

n = 410 (except for turnover, where n = 354).

Statistic significance: † indicates $p < 0.10$, * indicates $p < 0.05$ and ** indicates $p < 0.01$.

††

Table 2.2 Differences between novice, serial and portfolio entrepreneurs in access to resources (means and F-value)

	Novice entrepreneurs	Serial entrepreneurs	Portfolio entrepreneurs	F-value
Start-up team	0.19	0.34	0.41	9.030**ab
Opportunities	0.88	1.50	2.00	14.968**abc
Financial capital	3.37	4.43	4.22	10.427**ab
N	281	56	73	

Notes:

n = 410.

Statistic significance: † indicates $p < 0.10$, * indicates $p < 0.05$ and ** indicates $p < 0.01$.

^a indicates significant difference between novice and serial entrepreneurs, ^b indicate significant difference between novice and portfolio entrepreneurs, and ^c indicate statistical difference between serial and portfolio entrepreneurs.

Table 2.3 Hierarchical linear regression: turnover (log) as dependent variable

	Model 1	Model 2	Model 3
Control variables			
Novelty	-0.244**	-0.256**	-0.234**
De novo	-0.237**	-0.225**	-0.094†
Experience			
Serial entrepreneur		0.143**	0.081†
Portfolio entrepreneur		0.129**	0.051
Resources			
Start-up team			0.092†
Opportunities			0.018
Financial capital			0.361**
Model characteristics			
F-value	27.260**	17.169**	21.194**
R ²	0.134	0.164	0.300
Adjusted R ²	0.130	0.155	0.286
Δ R ²		0.030	0.136
Δ F-value		6.261**	22.357**

Notes:

n = 351.

Statistic significance: † indicates $p < 0.10$, * indicates $p < 0.05$ and ** indicates $p < 0.01$.

entrepreneurs reach significantly higher sales turnover than novice entrepreneurs. The change in R square is 0.030 and is significant. In model 3 the variables measuring resources are included. The resulting increase in R square is 0.136 up to a total adjusted R square of 0.286. The change is highly significant. Financial capital is highly significant in the model, indicating an association between the amount of capital invested in the business and the achieved short-time turnover. Further, the presence of a start-up team is positive and significant at the 10 per cent level. The effect of serial and portfolio entrepreneurs is considerably reduced when resources are included. Portfolio entrepreneurship is no longer significant, while serial entrepreneurship is significant now only on the 10 per cent level. This indicates that access to resources is mediating the relationship between experience and performance. More specifically, serial and portfolio entrepreneurs reach higher turnover in their new businesses mainly because they are better able to get access to valuable resources.

Table 2.4 shows the results from a hierarchical linear regression analysis with employment as the dependent variable, following the same steps as the model above. Here also, the first model shows a negative association

Table 2.4 Hierarchical linear regression: employees (log) as dependent variable

	Model 1	Model 2	Model 3
Control variables			
Novelty	-0.121**	-0.129**	-0.112**
<i>De novo</i>	-0.168**	-0.161**	-0.052
Experience			
Serial entrepreneur		0.101*	0.025
Portfolio entrepreneur		0.098*	-0.005
Resources			
Start-up team			0.144**
Opportunities			0.102*
Financial capital			0.295**
Model characteristics			
F-value	10.584**	7.104**	14.174**
R ²	0.049	0.066	0.198
Adjusted R ²	0.045	0.056	0.184
ΔR^2		0.016	0.132
ΔF -value		3.495*	22.117**

Notes:

n = 407.

Statistic significance: † indicates $p < 0.10$, * indicates $p < 0.05$ and ** indicates $p < 0.01$.

between novelty and *de novo* entry and performance, but this model is somewhat weaker than the turnover model with an adjusted R square of 0.045. Including serial and portfolio entrepreneurship in model 2 leads to an increase in R square of 0.016, which is a statistically significant change. Both types of experience are significant and positive in the model. Including the resource variables in model 3 removes the effect of entrepreneurial experience. The presence of a start-up team, the identification of more opportunities and access to financial capital are positively and significantly associated with the level of employment in the new businesses. Thus, the resources are here too mediators in the relationship between entrepreneurial experience and performance. The final model has an adjusted R square of 0.184 and is highly significant.

DISCUSSION

The present study found that experienced business founders are better than novices at obtaining resources during new business start-ups. Hence, the first

hypothesis is supported. Further, supporting the second hypothesis, the more resources entrepreneurs acquire, the higher the subsequent performance of the business. The hierarchical regression analysis also showed that the dummy variables for serial and portfolio entrepreneurs failed to have any significant effect on performance when resource access was included in the model. These results indicate that serial and portfolio entrepreneurs have higher performance than novices because they are better at obtaining resources for the new venture. However, experienced entrepreneurs are not found to be able to utilize the resources they acquire any better than their novice counterparts.

The results of this study give interesting contributions to the literature on entrepreneurial experience and habitual entrepreneurship. First, this is one of very few studies that are actually able to show performance differences between experienced and inexperienced entrepreneurs. Acknowledging the need to control for the nature of the business idea, the results show that the new businesses of serial and portfolio entrepreneurs actually perform better. Second, the study begins to reveal what constitute the advantages of experienced entrepreneurs. Basically, these entrepreneurs seem to be better at getting access to resources which again help them build businesses with higher performance.

One important limitation of the present research is that we have only looked at one business and not the entire portfolio of businesses controlled by portfolio entrepreneurs. As Scott and Rosa (1996) argued, the performance of the latest venture of portfolio entrepreneurs may not give the true picture of their contribution to value creation, as they still create value through their previous businesses. However, to explore the potential experience curve of entrepreneurship, to look at the performance of their latest business is appropriate to reveal how they perform after they have learnt. Another potential limitation is the relatively short time-span between the initial data collection and the follow-up survey. Novel business ideas may require a longer period of time before the start to flourish. Further, an interesting question is how long the resource advantage of experienced entrepreneurs will give advantages. Are novice entrepreneurs eventually able to 'fill the gap'? After all, they too become experienced as time goes by. Future studies should also look at performance differences at later stages of the businesses' development.

Policy-makers should acknowledge the fact that a substantial proportion of new business formations are made by experienced serial and portfolio entrepreneurs, using their experience in the process of exploiting new business opportunities and setting up new businesses. They should also take into account that experienced entrepreneurs generally achieve higher performance in their new firms, at least on a short-term basis, because they are better at obtaining the resources needed. When supporting novice

business owners, their disadvantage when it comes to resource acquisition should be recognised. Support directed towards giving these entrepreneurs access to the necessary resources, particularly financial resources, may help novice entrepreneurs to increase the performance of their firms to the level of their experienced colleagues, as there is no evidence that novice entrepreneurs utilize the accumulated resources in an inferior way. New entrepreneurs should look at the way in which serial and portfolio entrepreneurs gather resources and try to learn from this.

The findings of the present study also raise new questions that should be dealt with in future research in this area. For instance, one should look into the process of resource acquisition and explore how experienced entrepreneurs are able to get access to a larger amount of resources. It is reasonable to assume that some of these resources are obtained from their previous or existing ventures. This raises a question about the nature and effects of resource transfer between the ventures of experienced entrepreneurs. As Iacobucci and Rosa (2004) suggested, the creation of new businesses on the basis of previous or existing businesses of experienced entrepreneurs can be regarded as evolutionary entrepreneurial systems where the relationship between the different business opportunity exploited by the entrepreneur and the dynamics of the entrepreneurial team(s) involved may be important antecedents of new business performance. Further studies into the motivational and processual aspects of serial and portfolio entrepreneurship are needed (Carter and Ram, 2003; Westhead et al., 2003). Moreover, there is a need to look into the influence of the performance of previous and existing businesses of experienced entrepreneurs, as one can assume it is easier to obtain resources from previous successful businesses than from failing businesses.

NOTE

1. At the time of the initial data collection in 2002, this included, with few exceptions, all sole proprietorships (as well as other businesses) with an annual turnover of NOK 30 000 or more. (1 NOK = approx. US\$0.14 or 0.12 euros.)

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7 PART B: PORTFOLIO ENTREPRENEURSHIP: FARM CONTEXT

The following four scientific articles are included in this chapter:

Alsos GA, Ljunggren E & Pettersen LT. 2003. Farm-based entrepreneurs: what triggers the start-up of new business activities? *Journal of Small Business and Enterprise Development* 10(4): 435-443

Alsos GA, Ljunggren EC & Pettersen LT. Portfolio entrepreneurship in the farm sector: Necessity push or opportunity pull? An earlier version of this paper were presented at ICSB, Belfast, 16.-18. juni 2003.

Alsos GA & Carter S. 2006. Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences. *Journal of Rural Studies* 22(3): 313-322

Alsos GA & Kaikkonen VA. 2004. Opportunities and prior knowledge: A study of experienced entrepreneurs. In SA Zahra, CG Brush, P Davidsson, J Fiet, PG Greene, RT Harrison, M Lerner, C Mason, GD Meyer, J Sohl, A Zacharakis (Eds.), *Frontiers of Entrepreneurship Research*: 301-314. Babson College: Wellesley, MA

7.1 Farm-based entrepreneurs: what triggers the start-up of new business activities?

Farm-based entrepreneurs: what triggers the start-up of new business activities?

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Keywords

Start-ups, Farms, Entrepreneurialism, Business development, Norway

Abstract

This exploratory study combines three theoretical approaches to investigate why farmers start additional business activities: the rural sociology perspective, the opportunity perspective and the resource-based perspective – as applied within entrepreneurship research. Building on in-depth interviews of respondents from Norwegian farm households, three types of entrepreneurs were identified: the pluriactive farmer, the resource exploiting entrepreneur and the portfolio entrepreneur. These entrepreneurial types differed in regard to their basic motivation and objectives for start-up, the source of their business ideas, the basis of competitive position and the connectivity between the new business and the farm, as well as in several other ways.

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Implications for policy makers and practitioners

- Policy makers should acknowledge the heterogeneity among farm-based entrepreneurs. Based on their motivation and source of business ideas, the study identified three types of entrepreneurs: the pluriactive farmer, the resource exploiting entrepreneur, and the portfolio entrepreneur.
- These types of farm-based entrepreneurial activities are triggered by a multitude of factors. This implies that homogeneous policy initiatives directed towards increasing entrepreneurial activities among farmers would affect them in different ways.
- The nature of the new business is affected not only by the business idea, but also by the type of available resources and the life style chosen by the farm household.
- The three types of entrepreneurs contribute to society in different ways: pluriactive farmers pursue the multifunctional nature of farming; resource exploiting entrepreneurs utilize unique resources to create economic activity; while portfolio entrepreneurs offer a larger contribution to employment and economic activity.

Introduction

In regional policy, the pursuit of entrepreneurship is seen as fundamental in the development of economically robust regions. Over the last decade, the promotion of entrepreneurship has also been an important part of European agricultural policies as an instrument to increase the value creation of agricultural production. The restructuring of the agricultural sector as a result of changes in national and international policies, demands increased entrepreneurial activities among farmers. It has been argued farm resources can be utilized in entrepreneurial activities, such as tourism or food processing, to generate increased

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economic activity in the region. Farmers could represent an innovative reservoir in agricultural communities and a potential source of entrepreneurship (Borch and Forsman, 2001). They have acquired experience, often through generations, from self-employment and food production, and have historically been known for their commitment to independence and entrepreneurial ideals (Carter, 1996). In addition, agricultural households have a long tradition of combining farming activities with other sources of income. Pluriactivity, the phenomenon of farm households engaging in gainful activities in addition to farming, has a long tradition in most rural areas of Europe (de Vries, 1990; Eikeland and Lie, 1999) and has become even more common during the last two decades (Blandford, 1996).

The strategies that farmers and their households use to meet the challenges brought by changing conditions in the environment, has been an important field of research within agricultural research. Since most studies have failed to differentiate between entrepreneurial activities and other sources of non-farm income, there is still a paucity of knowledge about which factors trigger the start-up of entrepreneurial activities among farmers. Why do some farmers choose to start new business activities instead of limiting their engagement to farming or becoming employed? To encourage entrepreneurial activities amongst farmers, more knowledge about the triggering factors is needed. The aim of this exploratory paper is to investigate factors stimulating farmers to start new business activities in addition to the farm and become portfolio entrepreneurs.

Theoretical perspectives

Three perspectives are used to explore the factors affecting the start-up of new business activities amongst farmers: the rural sociology perspective, the opportunity perspective and the resource based perspective – as adopted within entrepreneurship research. The rural sociology perspective is widely used within studies of strategies for agricultural households. Pluriactivity is analysed as an economic adaptation strategy and as a response to changing conditions in the environment, such as market constraints and

adjustments within agricultural policy. The start-up of additional business activities is often understood as a response to a lack of opportunities for full-time farming or employment (Eikeland and Lie, 1999). However, agriculture has rarely been an empirical setting for entrepreneurship research. Within this research area, the start-up of new business activities is viewed as the exploitation of business opportunities (Kirzner, 1973; Landström and Johannisson, 2001; Shane and Venkataraman, 2000). In the resource-based perspective, the focus has been directed towards business start-up as a resource acquisition process, where the availability of (unique) resources is presumed to promote entrepreneurial activities (Greene *et al.*, 1999; Rotefoss, 2001). Combination of these three perspectives has the potential of offering a more complete picture of the factors that trigger the start-up of new business activities in addition to farm activities.

A rural sociology perspective on farm-based entrepreneurship

Rural sociology has been emphasising agrarian restructuring. Studies of how and why small scale farming “survived” despite industrialization and the capitalist transformation of economy has been a core issue in this area (see for example Chayanov, 1986; Djurfelt and Gooch, 2001). Using the household as the social and economic unit of analysis, the research has emphasized the “pluriactive farm household”, which allocates resources between farm and non-farm activities (Efstratoglou-Todoulou, 1990; Fuller, 1990). The focus has generally been on pluriactivity as a response to recession and constraints within the agriculture sector and as a survival strategy for the farm household (e.g. Benjamin, 1990; Bowler *et al.*, 1996; Champagne *et al.*, 1990; Damianos and Skuras, 1996; Ilbery, 1991).

Pluriactivity is defined as the generation of income from more than one economic activity (Eikeland and Lie, 1999). Studies in this field have focused just as much on off-farm wage earning as on other businesses in addition to the farm, and have often failed to distinguish between the two. Eikeland and Lie (1999) argued that it may be useful to differentiate the concept of pluriactivity, and used Fuller’s (1990) separation between “making jobs” (operating enterprises) and “taking jobs”

(being a wage earner). When discussing factors related to pluriactivity one has to take into account that they may relate differently to these two categories.

Fuller (1990) argued that the rationale for agricultural households adopting different patterns of activity depends upon conditions in agriculture, off-farm job opportunities and the structure of the household. The strategy adopted by the household depends on the perception of these "realities". In many studies building on the rural sociology perspective, the dominant reason to start searching for an opportunity to establish another business is considered to be the need to maintain or increase the income generated by the farm (Bowler *et al.*, 1996; Efstratoglou-Todoulou, 1990; Evans and Ilbery, 1992; Ilbery, 1991; McNally, 2001). Some studies also take into consideration the importance of socio-cultural motives in pluriactivity (Barlett, 1986; Eikeland, 1999; Kinsella *et al.*, 2000). These studies show that pluriactivity is not only an economic adaptation strategy but may enable farm household to continue farming and living in rural areas. Pluriactivity could be motivated by a wish to keep the family farm going, to stay at home because of parents, by an affinity with the nature of farm work or emotional reasons such as "not wanting to sell the family land" (Kinsella *et al.*, 2000). Relying on Höjrup (1983), Eikeland (1999) discussed the ideological aspects of pluriactivity. Höjrup (1983) showed how pluriactivity is sustained, in spite of attractive alternatives, because people have been socialized to economic adaptations based on the combination of different activities. Accordingly, starting a new business could be motivated by a wish to continue farming as a life-style, to remain free and independent as self-employed or because of the rural tradition of combining different activities.

The opportunity perspective to entrepreneurship

Shane and Venkataraman (2000) defined entrepreneurship as the discovery and exploitation of profitable business opportunities. This is in congruence with Kirzner (1973) who argued that the "alert entrepreneur" identifies business opportunities as imperfections in the market and coordinates resources to exploit these opportunities, hereby restoring the balance in

the market. Landström and Johannisson (2001) saw entrepreneurship as the exploitation of perceived opportunities through the organising of resources and collaborating in new business patterns. Thus, the opportunity perspective of entrepreneurship emphasizes business opportunities as the main source of entrepreneurial activities and an important trigger of new business start-ups. Taking an objectivist-subjectivist view of opportunities (Davidsson, 2002), they themselves are objective phenomena but they are not known to all parties at all times (Shane and Venkataraman, 2000). Some individuals recognize and/or exploit particular opportunities more easily than others. The ability to discover opportunities requires the relevant information as well as the cognitive ability to evaluate it. Opportunities are therefore the result of environmental conditions and entrepreneurial ability as well as access to and processing of information (Ucbasaran *et al.*, 2000).

Research carried out during the latest two decades indicates that existing entrepreneurs play an important role in the start-up of new business activities (Birley and Westhead, 1993; Ronstadt, 1988; Rosa and Scott, 1999; Westhead and Wright, 1998). Individuals who are owner-managers of a business and start new business activities are defined as parallel or portfolio entrepreneurs (Alsos and Kolvereid, 1998; Westhead and Wright, 1998). Carter and Rosa (1998) found that farms are similar to other rural small businesses, and farmers may be seen as primarily business owner-managers. Farmers, who start new business activities by discovering and exploiting opportunities while still maintaining their farm business[1] can therefore be seen as portfolio entrepreneurs. It has been argued that entrepreneurs may be particularly good at discovering new business opportunities, since founding and running a business gives access to information and knowledge which can become the basis of other valuable business ideas (Ronstadt, 1988; McGrath, 1996). McGrath (1996) also argued that entrepreneurial experience might increase the cognitive capabilities necessary to evaluate information, increasing their "sense-making ability" (Weick, 1979). Hence, an existing farm business can be a source of new ideas, through the farmer's experience gained by

running it and/or through the network developed while running the farm. Relying on Austrian economics, Shane (2000) suggested that the discovery of business opportunities is related to the prior knowledge of an individual. Ardichvili *et al.* (2002) also claim that prior knowledge, in addition to personality and social networks, affects entrepreneurial alertness. Based on this, it can be argued that farm-based entrepreneurship is the result of alert farmers discovering and exploiting business opportunities related to their prior knowledge.

The resource-based perspective of entrepreneurship

The resource-based perspective (Penrose, 1959; Wernerfelt, 1984; Conner, 1991) was developed by strategic management theorists to understand firms, but it has also been successfully applied in an entrepreneurial setting (Rotefoss, 2001; Green *et al.*, 1999; Dollinger, 1995). This perspective implies that organizations consist of heterogeneous bundles of resources. By combining such bundles in specific ways, a firm can create unique capabilities and develop (sustainable) competitive advantage. Resources are defined as both material and immaterial assets controlled by the firm. Resource typologies have been suggested both within and outside the resource based perspective, to include physical, human and organizational capital (Barney, 1991), financial, reputation and technological resources (Dollinger, 1995), and social capital (Greene and Brown, 1997).

The acquisition and organisation of resources is a central element in starting a new business, while some consider it to be the most important aspect (Aldrich, 1999; Johannisson and Landström, 1999). An entrepreneur's ability to collect the necessary resources and combine them in a new business may be crucial to whether the new firm will come into existence. Carter (1998) investigated new businesses established with foundation in farming activities. She emphasized the advantages of utilizing capabilities connected to traditional farming activities when new businesses were first established. The farm may give access to raw materials and may facilitate the utilization of common resources for the new and the former business, such as localities, distribution channels, network contacts, etc. (Alsos and Ljunggren, 2002). According to the

resource-based perspective, a competitive advantage should be built based on resources (or combinations of resources) that are valuable and unique, and which cannot easily be imitated by competitors (Barney, 1991). If the farmer possesses this kind of resources this may be a "trigger" to start a new business activity.

Method

The level of analysis for this study is the farm household. The household is the basic unit of production and organization in agriculture, and several studies have identified it as the key element in researching and understanding changes within the farm sector (Eikeland and Lie, 1999; Fuller, 1990; Gasson and Winter, 1992). The fact that decisions regarding the development of family owned micro businesses are most often made within the household (Wheelock *et al.*, 1999), also makes it an appropriate unit of analysis when studying the process of starting a new business.

The data was obtained from 16 in-depth interviews with farmers in two rural regions in Norway. Similar to most European countries, there have been great changes in the domestic agriculture sector. However, Norway being outside the EU, the restructuring process has been slower and farms are still relatively small compared with other European countries. The vast majority are family farms and most employ only family members. It is also quite common for one or more individuals in the household to be employed outside the farm. The labour market in rural areas of Norway has probably given better access to waged jobs than in other parts of Europe. In particular, a large public sector has been an important source of jobs for farm-based women, offering both full- and part-time employment.

The respondents for the study were farmers who have started new business activities in addition to the farm, or are seriously considering doing so. In cases where the farm household consisted of a couple where both were involved in the farm and/or in the new business activity, both spouses were interviewed. This was the case in eight of the 16 interviews. New business activities were defined as those that could not be categorized as traditional farming. The new activities were established after the respondents took over

the farm. The research sample comprised 13 livestock and three arable farms.

Findings

The 16 farm households were categorized according to their main motivation to start new business activities. The analysis revealed three types of farm-based entrepreneurs, which were labelled as pluriactive, resource based and portfolio entrepreneurs (Table I). These differed with regard to several features relevant to the three theoretical perspectives employed, including connection to the farm, business goals, source of business ideas, resource base and source of competitive position. They also differed in business characteristics such as size, capital requirements, ownership and employment. The business could involve one or several family members. The household income may originate from farming, other business activities and/or waged employment. One or

both of the spouses may be involved in several of these activities.

The pluriactive farmer

The pluriactive farm household comprises primarily farmers, in regard to their identity, where they put their work effort, and from where they get their main source of income. The new business activities are started in order to maintain or expand the farm and are usually closely related to it. Their strong commitment to farming may be a choice of life style, based on staying at a family farm. This is the case for most of the interviewees categorised as pluriactive farmers in this study. But it can also be related to a feeling of having no choice, either due to a sense of duty for maintaining farming or because they perceive few other opportunities. For these farmers, establishing new business activities is a way of increasing the income from the farm. Since growth within traditional farm production is restricted by quotas (milk), access to land or by workload during peak seasons, the growth has to take place in other

Table I Three types of farm-based entrepreneurs

	The pluriactive farmer	The resource-exploiting entrepreneur	The portfolio entrepreneur
Number of cases	7	5	4
Basis of motivation	Farm continuance	Make the most out of unique resource(s)	Idea exploitation
Goals	The new business activities are started in order to be able to sustain farming or expand the farm to be the workplace for more family members, which in both cases demands more income-generating activities	The new business activities are started in order to utilize own resources	The new business activities are started in order to exploit new business ideas
Source of idea	The farm or the farming community	Unique resource(s) connected to the farm and/or to the person(s)	Various
Relation to the farm	They have made a choice of living "the good farm life", they take maintenance of the farm as a duty, or they see no options other than continuing farming	The farm is a basis (as localisation) for the household, but the new business activity may be just as (or even more) important to them (regarding, income, quality of life, etc.)	The farm is a business just like the new business activities. Which are the most important varies between cases and within each case over time
Competitive position based on: Characteristics of new business activities	Work effort of the household Usually very small Low capital requirements Strongly embedded in the farming activities Ownership and employment only by household members	Unique resources Usually small, but larger than for pluriactive Various capital requirements More often weakly embedded in the farming activities Ownership and employment usually by family members	Various Larger firms than the others Higher capital requirements Often registered as separate business May include external (owners and) employees

types of activities. They choose a new business activity instead of waged employment, since they find an off-farm job difficult to combine with activities at the farm, and also difficult to fit into their choice of life style. In most of these cases, both individuals in a couple worked on the farm.

The new business activities started by these pluriactive farmers are very small and usually embedded in farming activities. These are not organized as separate firms, and both the income and costs are accounted for in the farm's financial statement (tax form). One of the most important considerations when deciding to start a new business activity is how it will fit into the varied workload of the farm. For the majority, the farm still contributes most to the income. For pluriactive farmers, a new business is a piece of the "livelihood jigsaw" (Wheelock *et al.*, 1999). The main competitive factor that these new business activities are based on is the work effort of the farmers. The business activity is built on the possibility of utilizing spare capacity at the farm (work force, machinery, etc.), their willingness to work for less or a combination of these two factors. The pluriactive farm household's opportunity search is distinguished by searching for something that can give an income and which is possible to combine with farming. These opportunities are often imitations of similar business activities run by others, and based on (competence and/or physical) resources available at the farm. In some cases, ideas are generated externally, e.g. projects run by the authorities, established businesses recruiting suppliers or network contacts. Many of the interviewees had started several different small business activities, given up on them after a while and then tried new ones, in an effort to find one that proved gainful.

The new business activities of pluriactive farmers contribute to the household income, and thus to maintaining jobs at the farm as well as the farm itself. Pluriactive farmers pursue a traditional way of living and at the same time they modernise it. Through this and their development of entrepreneurial activities at the farm, pluriactive farmers contribute to the multifunctionality of agriculture (Kinsella *et al.*, 2000).

The resource-exploiting entrepreneur

The resource-exploiting entrepreneur is motivated by a wish to utilize unique

resource(s). This could be material as well as immaterial resources, such as particular buildings, unique premises, education, work experience, etc. These resources are usually connected to the farm and/or the members of the household, but could also be resources in the local community. The resource-exploiting entrepreneurs have the farm as a place of residence for the household, but they do not have as strong ties to farming activities as pluriactive farmers. The farm usually contributes to a substantial part of the household income. The new business activity may be just as, or even more important than the farm, with regard to income, quality of life, job satisfaction, etc. These farm households choose a new business activity because they want to make the most of their own resources. They have other opportunities, such as wage employment or expansion of the farm, but these alternatives would not allow them to utilize their unique resources. The main entrepreneur often has a relatively small workload at the farm.

The new business activity is often larger than that of the pluriactive farmer, but normally only employs household members. Usually, household members own the business activity. The business is not necessarily embedded in farming activities and may be located outside the farm. It may be organized as a separate firm or reported in a separate financial statement. Capital requirements can vary, depending on the kind of resources the household wishes to utilize. Utilization of material resources usually involves more capital than immaterial resources, such as education or work experience. The competitive factors that these new business activities are based on involve access to unique resources or combinations of resources. For instance, human capital resources resulting from education or work experience offer opportunities to start a new business activity. In several cases, a hobby combined with the farm premises gives a combination of resources that is valuable and unique, and which cannot easily be imitated by competitors. In such cases, the resources and capabilities connected to traditional farming activities ensure competitive advantages when starting a new business.

The new business activities of the resource-exploiting entrepreneurs contribute substantially to the households' income. They also utilize unique, sometimes locally fixed,

resources. If these new business activities utilize resources better than before, than they also make a contribution to economic activity.

The portfolio entrepreneur

The main motivation to start a new business for the portfolio entrepreneurs is the wish to exploit a business idea. These business ideas do not necessarily originate in the farm's resources. If necessary, these entrepreneurs can acquire resources to exploit a business idea. Hence, they invest much more than the other two types of entrepreneurs and thereby take risks. These risks are not only financial, as they also invest their time in the new venture and might curtail employment in order to fulfil the business idea. These business activities are often team ventures, where more than one person is actively involved in the start-up. The teams may involve family members and/or other persons. Portfolio entrepreneurs could be described as having weaker ties to farming activities and sometimes also to the farm as a residence. In contrast to pluriactive farmers, they view the farm as a business and as such do not find it necessary to "keep it going" under any circumstances. This is shown by the fact that the new business has sometimes grown bigger than the farm (with regard to income) and has hence become the largest source of income for the household. One might say that these entrepreneurs have a stronger focus on gainfulness than the two other types. This is illustrated by entrepreneurs who would shift resources from the farm to the new business if they foresee a better return. These new businesses are often organized as separate units and are larger in terms of turnover and number of employees. Portfolio entrepreneurs expect these new businesses to contribute substantially to a household's income. They all claim to have consciously chosen self-employment rather than waged employment and this intrinsic aspect seems to be important.

The competitive position of new businesses is based on the uniqueness of the idea rather than on work effort or specific resources. These entrepreneurs set out to create uniqueness by, e.g. differentiating their products from "bulk" production, using design, marketing the enterprise as a niche business and being focused on sales. Focusing on sales implies that these entrepreneurs have a market-oriented approach. They may, for

instance, develop products in conjunction with buyers and thereby adapting them to their specific requirements. Portfolio entrepreneurs are also visionary in the sense that they intend to further develop their business ideas. These entrepreneurs contribute to society by creating jobs and new economic activity. Their businesses are important for rural development and can be said to offer the type of entrepreneurial activity that is supported by governmental agencies in Norway.

Conclusions

We have discussed factors leading to the start-up of new businesses within the farm sector in Norway by applying three theoretical perspectives. The empirical data revealed three types of farm-based entrepreneurs: the pluriactive farmer, the resource-exploiting entrepreneur and the portfolio entrepreneur. By applying three theoretical perspectives, a number of differences were identified in regard to their motivations and objectives for starting up the new business, the source of their business ideas, their competitive positions, the connection between the new business and the farm, as well as other business characteristics. The three types of entrepreneurs are triggered by a diversity of factors and this has implications for both policy development and future research.

The opportunity and the resource-based perspectives are rarely applied within agriculture research. This study shows that they may generate new and fruitful insights into the study of business pluriactivity or portfolio entrepreneurs in the farm sector, emphasising the importance of business opportunities and the availability of resources needed to recognise and exploit them. The rural sociology perspective might contribute to research by emphasising entrepreneurship as a strategy for household adaptation to changing economic conditions (Wheelock and Mariussen, 1997) and for business development in rural areas.

The heterogeneity among farm-based entrepreneurs implies that differentiated initiatives are needed to increase entrepreneurial activities among farmers. It also emerges that encouraging farmers to start new business activities could contribute to different aims at society level, depending on

which type of entrepreneurs respond to policy initiatives. Utilizing a multidisciplinary approach in this area reveals that different types of entrepreneurs are needed to solve economic as well as societal needs. All types of entrepreneurs can contribute to rural development, whether it is employment, the creation of economic activity from unique resources or the maintenance of the cultural landscape.

Note

- 1 Wright *et al.* (1998) argued that entrepreneurship is not only carried out through *de novo* businesses, but also through the purchase or inheritance of established businesses. The farm business may thus be seen as a result of a former (and ongoing) exploitation of a business opportunity, either through start-up, purchase or inheritance.

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**7.2 Portfolio entrepreneurship in the farm sector:
Necessity push or opportunity pull?**

**PORTFOLIO ENTREPRENEURSHIP IN THE FARM SECTOR:
NECESSITY PUSH OR OPPORTUNITY PULL?**

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PORTFOLIO ENTREPRENEURSHIP IN THE FARM SECTOR: NECESSITY PUSH OR OPPORTUNITY PULL?

ABSTRACT

The agriculture industry has a tradition of pluriactivity, i.e. the combination of farming with other gainful activities. Recently, it has been acknowledged that farmers who start new business activities in addition to their existing agricultural business(es) can be considered as portfolio entrepreneurs (Carter 1998). This study explores factors associated with farmers to become portfolio entrepreneurs. Growing attention is focusing upon the roles and contribution of portfolio entrepreneurs. This study is guided by the rural sociology perspective to farmers' pluriactivity and the entrepreneurship perspective of opportunity exploitation. Specifically we explore a model of the business founding process relating to three different milestones: intention, preparation and start-up of business activities. Several hypotheses are formulated and tested using logistic regression models. We found that entrepreneurial abilities and the farmers' capacity to recognise new business opportunities are significantly associated with business start-up intention, business preparation and actual business start-ups. These factors may be considered as pull factors to entrepreneurial activities. No support regarding push-factors to entrepreneurial activities was found. Neither poorer conditions for farming, the need for more income, difficulties to find a waged job, nor supporting environment for business start-ups were associated with the three measures on entrepreneurial activities.

Keywords: new business start-up rural sociology
 agriculture Norway
 portfolio entrepreneurship

INTRODUCTION

Entrepreneurship is seen as a mechanism that generates wealth creation and therefore as a solution to problems of social and regional inequality. Evidence from the Global Entrepreneurship Monitor (GEM) suggests that areas with high levels of new firm formation are associated with higher levels of prosperity (Reynolds et al. 2001). This aggregate evidence, however, fails to specifically explore the contribution made by portfolio entrepreneurs who own two or more businesses at the same time. In fact, no firm formation figures are distorted by the activities of portfolio entrepreneurs who stand for a substantial share of new business start-ups (Westhead & Wright 1999). Calls have been made to focus on the phenomenon and processes of portfolio entrepreneurship (Carter & Ram 2003). Most notably there is a lack of evidence relating to the motivations and behaviour of portfolio entrepreneurs (Westhead, Ucbasaran, & Wright 2003). Are the reasons for portfolio entrepreneurship found in the existing business' failing profitability or are the reasons found among pull factors? Are portfolio entrepreneurs 'pulled' or 'pushed' into pursuing an additional venture?

Agriculture is an industry with long tradition of portfolio entrepreneurship but yet not often focused upon in entrepreneurship research. The portfolio entrepreneurship 'tradition' is related to the old practice of combining farming activities with other sources of income, often called pluriactivity (Fuller 1990). Over the last decade, the promotion of entrepreneurship has been an important part of European agricultural policies as an instrument to increase the value creation of agricultural production. The restructuring of the agricultural sector as a result of changes in national and international policies, demands increased entrepreneurial activities among farmers. It has been argued that farm resources can be utilized in entrepreneurial activities, such as tourism or food processing, to generate increased economic activity in the region, and that more farmers hence should become portfolio entrepreneurs.¹

There is little knowledge about the factors that trigger the ownership of an additional business by portfolio entrepreneurs who are engaged in agricultural activities. We focus on the farmers and the conditions they face when they consider establishing an additional business. Two theoretical perspectives guide

this study: The rural sociology perspective relating to farm-based pluriactivity suggests that farmers may be ‘pushed’ into multiple business ownership. New business start-ups among farmers are seen as results of unfavourable conditions, and the start-up of additional business activities is often understood as a response to the lack of opportunities for full-time employment or full time farming (Eikeland & Lie 1999). Conversely, the opportunity recognition perspective within entrepreneurship research suggests entrepreneurs will identify market opportunities, and will be ‘pulled’ into establishing an additional business to exploit these opportunities (Kirzner 1973, Shane & Venkataraman 2000, Landström & Johannisson 2001).

Farm-based studies are generally solely conducted within a rural sociology perspective. This stream of research has focused upon the agrarian sector and how changes within this sector have affected farmers, including the farm households’ pluriactivity. Pluriactivity is defined as obtaining income from more than one economic activity at the same time (Eikeland & Lie 1999). Farm-based enterprises have been seen as a survival strategy for the farm household during recession within the agriculture industry. However, studies have failed to acknowledge the opportunity side of entrepreneurial activities such as business start-ups. This has led to an overemphasize on push-factors, even though some evidence also find pull factors to influence this kind of activities (e.g. McNally 2001). We therefore suggest supplementing the rural sociology perspective with an opportunity-oriented entrepreneurship perspective.

Agriculture has rarely been an empirical setting for entrepreneurship and small business research. In fact, agriculture has often been excluded from studies within entrepreneurship. However, as Carter and Rosa (1998) argued, farmers are primarily business owner managers and studies of farmers may give important insight also to entrepreneurship research. Though, up to now few studies have taken an entrepreneurship perspective to farming, with the exception of Carter (1996, 1998, 1999) and Kodithuwakku and Rosa (2002).

In this study we ask: Which factors are associated with farmers starting new business activities? More specifically, the following research question is explored: Are the likelihoods of farmers to consider, prepare and establish new business

activities associated with the institutional environments for farming, the institutional environments for new business start-ups, farmers' entrepreneurial abilities and/or their access to business opportunities?

The level of analysis for this study is the farm household defined as the farmer and his/her spouse. The household is the basic unit of production and organization in agriculture, and several studies show that the household is the key element in studying and understanding changes within the farm sector (Fuller 1990, Gasson & Winter 1992, Eikeland & Lie 1999). The fact that decisions regarding the development of family owned micro businesses most often are made within the household (Wheelock et al. 1999), also makes the household an appropriate unit of analysis when studying the process of starting a new business.

In the following sections, the conceptual framework of the study is discussed, starting with the milestones of the business founding process. Hypotheses are developed regarding to both 'push' factors relating to the rural sociology perspective and 'pull' factors relating to the opportunity recognition perspective. Further, the methods and measures of the study are discussed. The hypotheses are tested based on a survey among a representative sample of farmers in Norway. Finally, the findings are discussed together with the implications for practitioners and further research.

THE PROCESS OF STARTING NEW BUSINESS ACTIVITIES

Business start-up is an iterative, non-linear, and feedback driven process which may vary extensively between entrepreneurs (Bygrave & Hofer 1991, Bhave 1994, Carter, Gartner, & Reynolds 1996). When exploring factors triggering business start-ups this may impact on the process in different ways. Katz (1990, 1992) suggests there are several phases which an entrepreneur has to address to establish a new firm, however not necessarily in a certain chronological order. A number of milestones have been identified (Block & MacMillan 1985, Katz 1992, Starr, Bygrave, & Tercanli 1993). Business founders may move backwards and forwards through different phases and activities, but reaching certain milestones may be the necessary demonstration to the entrepreneur her/himself and to the surroundings that the process is in progress. Farmers who undertake activities and address

milestones relating to business start-up which demonstrate to others that the emerging business is 'real' are more likely to manage to start new business activities (Carter et al. 1996).

Following Katz (1990) we monitor farmer behaviour with regard to: 1) having an *intention* to start a business, 2) starting to *prepare* the business, and 3) *founding* the business. Katz argues that these milestones represent hurdles to the business start-up; some individuals fail to address all the hurdles and do not set up a new firm.² The first milestone suggests individuals need to aspire to become entrepreneurs. The second milestone suggests that some aspiring entrepreneurs fail to carry out preparation activities to try to establish a business and do not become nascent entrepreneurs (Reynolds & Miller 1992, Carter et al. 1996). Finally, nascent entrepreneurs who fail to found a new business that receives numerous sales of goods and services remain nascent rather than active entrepreneurs.

PUSH-FACTORS RELATED TO THE RURAL SOCIOLOGY PERSPECTIVE

Rural sociology is concerned with the study of rural communities and agriculture. Studies have focused on the farm or the farm household as the unit of analysis with regard to the role of agriculture as a mode of production in a rural society (Blekesaune 1997). In addition, studies have focused on agrarian restructuring. Specifically it has been explored how and why small scale farming survives despite industrialization and the capitalist transformation of the economy. Until the 1980s farmers, who also participated in gainful activities outside the farm, were largely recognized as 'part-time farmers' (Fuller 1990). Taking the household as the unit of social and economic analysis, studies focused on the 'pluriactive farm households', which are allocating resources between farm and non-farm activities (Efstratoglou-Todoulou 1990). Here, pluriactivity is seen as a mechanism to address constraints imposed by agricultural recession, as well as a survival strategy for the farm household (Ilbery 1991, Bowler et al. 1996, Damianos & Skuras 1996).

Pluriactivity studies have usually focused on income generating activities in general, and have often failed to make a distinction between incomes generated in

additional jobs compared to incomes from additional businesses owned by the farmer. Eikeland and Lie (1999) argued that it may be useful to differentiate the concept of pluriactivity, and used Fuller's (1990) separation between 'making jobs' (i.e. operating enterprises) and 'taking jobs' (i.e. wage earning). They found that pluriactivity is an important strategy in rural Norway. Approximately half of the pluriactive households based their incomes on 'making jobs', hence as self-employed. When rural sociology studies have considered the start-up of new business activities, these activities have been viewed as alternative farm enterprises (Bowler et al. 1996, Damianos & Skuras 1996), or diversification (Gasson 1988, Ilbery 1991, Edmond & Crabtree 1994, McNally 2001). These studies are limited to the study of businesses located at the farm holdings, often defined as the redeployment of farm resources into new products or services on the farm. Off-farm businesses are not taken into account with the exception of Ilbery, Healy and Higginbottom (1997).

Reduced incomes from the farming activities can push some farmers to engage in pluriactivity. A link between push factors and pluriactivity has been detected. Bowler et al. (1996) found that the dominant reason to start searching for an opportunity to establish another business was the need to maintain or increase the income generated by the farm. Similarly, Ilbery (1991) found that the need to generate extra income from new sources was the main reason for diversification into alternative enterprises. Further, McNally (2001) found that farmers expecting lower profits and those that wanted to spread their risks were more likely to engage in diversification activities. Also Evans and Ilbery (1992) found that financial reasons encouraged farmers to engage in farm-based accommodation enterprises. They concluded that pluriactivity is an 'accumulation strategy' on large farms, but a 'survival strategy' for smaller farms. Following the discussion above, the following hypothesis is suggested:

Hypothesis 1: Farmers who perceive insufficient or reduced income from their farming activity are more likely to consider, prepare and establish additional business activities.

Eikeland and Lie (1999) suggested that for farms located in sparsely populated areas, pluriactivity may constitute a way of maintaining agriculture. Here, a

considerable proportion of the rural population find themselves in a kind of 'classical rural economic opportunity situation' due to the lack of alternative employment opportunities. The combination of several income generating activities has often been analysed as a response to the lack of opportunities for full-time employment or full-time business activities. Rural areas in Norway have small markets and they are a considerable distance away from large population centres and labour markets (Eikeland & Lie 1999). The opportunities for off-farm employment are few, and consequently this may increase the propensity of farmers to consider additional business formation rather than employment. Hence, the following hypothesis is proposed:

Hypothesis 2: Farmers who perceive difficulties in obtaining employment position off the farm and/or in combining off-farm employment with their farming activities are more likely to consider, prepare and establish additional business activities.

PULL FACTORS RELATED TO THE ENTREPRENEURSHIP PERSPECTIVE

Entrepreneurship as a field of research is involved with the processes of discovery, evaluation and exploitation of opportunities to create future goods and services, the sources of such opportunities, the individuals or groups of individuals who act in these processes and the outcomes of such entrepreneurial behaviour (Stevenson & Jarillo 1990, Venkataraman 1997, Shane & Venkataraman 2000, Zahra & Dess 2001). In short, it can be summarized as creating new economic activity (Davidsson, Low, & Wright 2001). Farmers' additional business activities, understood in an entrepreneurship perspective, are viewed as a result of a process including identifying an opportunity, evaluating this opportunity and, if suitable exploiting it through the creation of a new business activity.

An opportunity-oriented perspective on entrepreneurship emphasize the opportunities as the fundamental aspect of the entrepreneurial process (Eckhardt & Shane 2003), and entrepreneurial activities are often understood through the nexus of opportunities and enterprising individuals (Shane 2003). Access to opportunities may pull individuals to create new business activities. On the other hand, whether

the individuals decide to pursue the opportunity depend on their evaluation of the opportunity. This evaluation is partly dependent on how the individuals perceive their own abilities to successfully pursue the opportunity, and partly on how they consider the environmental conditions for opportunity exploitation.

Opportunities

It is claimed that some entrepreneurs seem to be particularly good at discovering good business ideas (De Koning & Muzyka 1996, McGrath & MacMillan 2000). Ucbasaran and Westhead (2002) found that experienced entrepreneurs identified a greater amount of opportunities than novices. Shane (2000) argues that entrepreneurs discover opportunities related to the information that they already possess. Each person's idiosyncratic prior knowledge creates a "knowledge corridor" that allows him/her to recognize certain opportunities, but not others (Ronstadt 1988, Venkataraman 1997). Experience from founding, owning and managing a business may give access to information and knowledge which can become the basis of other valuable business ideas (Ronstadt 1988, Ucbasaran & Westhead 2002). Further, McGrath (1996) argues that experience increase the cognitive capabilities to evaluate information, and hence experienced entrepreneurs might have larger ability to recognize and take advantage of opportunities.

Gartner, Carter and Hills (2003) argue that opportunities are enacted, rather than discovered. Building upon Weick (1979), they see opportunities as an outcome of the sense-making activities of individuals. Opportunities are seen as emerging, that is they "come into existence out of the day-to-day activities of individuals." (Gartner et al. 2003:109). Opportunities will be occurring from activities that individuals are already involved with, and within a stream of other events and activities. Following this argument, the day to day activities as a farmer may be a source of which opportunities can emerge from. Since opportunities are an important starting-point of the entrepreneurial process, it can be argued that farmers who experience many opportunities coming out of their farming activities are more likely to be engaged in the creation of new business activities:

Hypothesis 3: Farmers experiencing good opportunities emerging from their farming activities are more likely to consider, prepare and establish additional business activities.

Entrepreneurial abilities

Ardichvili, Cardozo and Ray (2003) suggested that the individual's perceived abilities are a critical determinant of the entrepreneurial alertness. They argued that the individual's optimism of his or her own ability to achieve specific, difficult goals is related to the opportunity identification process. This is related to the concept of self-efficacy (Bandura 1986, Krueger & Brazeal 1994). Krueger (2000) argued that increased self-efficacy lead to increased initiative and persistence, and thus the likelihood of succeeding with the intended action.

Shane (2003) argues that persons with the right experience, knowledge and skills will "do a better job" at exploiting an opportunity. If they acknowledge these abilities themselves, they will be more likely to engage in the exploitation process. Further, this may be true also if they overestimate their entrepreneurial abilities, since overconfidence also encourage people to take action on their identified opportunities (Busenitz & Barney 1997, Busenitz 1999).

Those farmers who perceive that they possess entrepreneurial abilities can be anticipated to be more alert and therefore more likely to identify opportunities, and can also be more likely to exploit these opportunities through starting new business activities, since they are confident that they are able to. Hence, the following hypothesis is proposed:

Hypothesis 4: Farmers who perceive they have entrepreneurial abilities are more likely to consider, prepare and establish additional business activities.

Also de facto differences in competences and skills are connected to entrepreneurial activities. The human capital literature in entrepreneurship has shown that the likelihood to engage in entrepreneurial activities differs between individuals depending on personal characteristics such as age, education and experience (e.g. Bates 1985, 1995, Cooper & Gimeno-Gascon 1992, Cooper, Gimeno-Gascon, & Woo 1994). First, education can be argued to increase this likelihood since better educated people have information and skills that may increase their expected returns from opportunity exploitation (Cooper & Gimeno-Gascon 1992, Delmar & Davidsson 2000, Shane 2003). On the other hand, education is also related to more valuable alternatives for income generation, which

may lead educated people to demand higher expected results to engage in entrepreneurial activities (Cooper et al. 1994). Second, experience is also an important source for competence and skills. In particular, experience from currently owning and managing a business has been found to be related to the propensity to engage in new opportunity exploitation (Alsos & Kolvereid 1998, Rotefoss 2001). Third, age can be argued to increase the likelihood of engaging in new business activities since it incorporates the effects of experience in general. On the other hand, opportunity costs increases with age and also older age shorten the time horizon; which implies a negative impact of age on the propensity to starting new business activities (Shane 2003). Finally, the numbers of grown-up persons in the household can be associated with entrepreneurial activities, since more grown-ups represent more human resources in terms of work capacity, knowledge and skills. It has also been found that married people are more likely to engage in entrepreneurial activities since their spouse can contribute to the household income when the income from the new venture is uncertain (Shane 2003). Based on the above discussion, the following hypothesis is proposed:

Hypothesis 5: Human capital variables such as education, entrepreneurial experience, age, and number of persons in the household are associated with the likelihood to consider, prepare and establish additional business activities

Demand side issues

The institutional environments, including the economic, political and cultural context, influence people's willingness to engage in entrepreneurial activities (Shane 2003). Favourable environments for entrepreneurship may hence increase the possibility that identified opportunities actually are exploited. Environmental conditions affect the number and kinds of business opportunities available and the possibility to exploit them. Davidsson (1993) showed in his study that there are regional variations in entrepreneurial activity and suggested that some of these variations could be explained by different regional cultures and attitudes towards entrepreneurship.

While population ecologists (Hannan & Freeman 1977, 1989) argue that new business start-ups can be explained by the objective environment such as the de facto availability of resources, behavioural approaches to entrepreneurship

emphasises how the subjective perception of the environment is associated with the decision to become an entrepreneur. Entrepreneurial behaviour is seen as influenced by how the environment is represented in the mind of the individual, and by the individual's exercise of choice (Shaver & Scott 1991). Hence, it is how the environment is perceived which is associated with the choice of starting a new business. An environment perceived as favourable in fact reduces the perceived risk and hence increases the desirability of starting a new business. Favourable environments may be conceptualized as favourable framework conditions and as supportive communities to business start-ups, which lead to the following hypotheses:

Hypothesis 6: Farmers who perceive the framework conditions for business start-ups as favourable are more likely to consider, prepare and establish additional business activities.

Hypothesis 7: Farmers who perceive the local community as supporting new business start-ups are more likely to consider, prepare and establish additional business activities.

METHOD

Data for this study was gathered through a postal survey among farmers in Norway administered by Statistics of Norway. Questionnaires were sent to a stratified (by region) random sample of 3018 farmers drawn from an agriculture census. The questionnaires were addressed to the (main) farm owner. 21 questionnaires were returned due to farm closure, and were excluded from the population. After one postal reminder, 1019 filled in questionnaires were returned, resulting in a response rate of 34 %. Respondents who failed to present complete information were excluded. In total, responses from 748 farm households are discussed here. No statistical significant response bias was detected between the respondents and the non-respondents with regard to age and sex of main farm holder, or type of farm production. However, the respondents were slightly more likely to have larger farm sizes than the non respondents (mean: 168 decares as compared to 154 decares).

Farm size was not found to correlate significantly with any of the dependent variables.

The questionnaire was designed to measure whether farmers had started new business activities in addition to their farm business. New business activities were defined as any business activities other than traditional farming with an annual turnover larger than NOK 30 000³ owned and managed by the respondent. To address content and face validity of the questionnaire, academics in the fields of entrepreneurship and farm management was asked to comment on it. Further, a pilot study among practising farmers with or without other business activities was conducted. These were contacted by members of the research team at a face-to-face basis. No major problems were detected but suggestions related to minor changes and rephrasing of questions were incorporated.

Variables and measures

Dependent variables

Information relating to the intention, preparation, and start-up milestones was gathered based on three unidimensional dependent variables operationalised as follows: *Intention* was measured by the question: Are you or your spouse intending to start a new business other than farming during the next three years? *Preparation* was measured by the question: Are you or your spouse today trying to start a new business other than farming? *Start-up* was measured by the question: Are you or your spouse today the owner-manager of another business in addition to the farm business? Respondents provided yes or no responses to each question. Among the respondents 12.1 % reported entrepreneurial intentions, 11.7 % reported that they at the time were trying to start a business (preparation), and 30.9 % reported that they own another business in addition to the farm business (start-up). These measures are similar to the ones used by Alsos & Kolvereid (1998) and Rotefoss (2001).

Independent variables

Ten independent variables were collected relating to five-point Likert scales where a response of 1 indicates strongly disagree while a score of 5 indicates strongly agree.

Perceived conditions for farming. Respondents were asked to indicate whether they agree or disagree with the following two statements: ‘The farm contributes sufficiently to the household income’, and ‘Reduced income from farming makes it necessary to find other sources of income’. Responses to both statements were highly skewed. They were therefore transformed by taking the logarithm ($\ln(x)$) and the inverse logarithm (e^x) respectively.

Access to waged job. Respondents were asked to state whether they agree or disagree with the following two statements: ‘It is difficult to find waged employment’, and ‘It is difficult to combine farming with waged employment’. Responses to both statements were considerably skewed. The first statement was therefore transformed by taking the square root, while the second statement was squared.

Perceived external environmental conditions for business start-up. Respondents’ perceptions of the environment for business start-ups were explored with reference to thirteen statements. Principal component factor analysis was used to identify the following four independent variables: ‘favourable governmental policies’, ‘complicating laws and regulations’, ‘well-functioning business network’, and ‘supporting local community’ (Appendix 1). Component scores relating to the four components were considered as independent variables.

Perceived entrepreneurial opportunities and abilities. Respondents’ perception of their own abilities and opportunities to start a business was explored with reference to eight statements. Principal component factor analysis was used to identify the following two variables: ‘perceived abilities to start a business’ and ‘perceived opportunities from experience as a farmer’ (Appendix 1). Component scores relating to the two components were considered as independent variables.

Human capital. Age of the respondent, educational attainment (number of years after primary school) and whether the household was a couple or a single person, were selected as variables to measure human capital. For households consisting of couples, age was measured as the mean age of the two persons, while education was measured as the education of the person with the longest education. The educational attainment variable was highly skewed, and each response was

transformed by taking the square root. In addition, 'current portfolio entrepreneur' was used as an independent variable in the models for intention and preparation. The measure of this variable was equal to the measure of the dependent variable 'start-up'.

Table 1 summarizes the demographic characteristics and VIF values for all variables. Due to multicollinearity, the variable 'The farm contributes sufficiently to the household income' was not included in the analysis. There were no serious multicollinearity between the remaining variables; all VIF-values were below 1.2. Table 2 summarizes the correlations between the variables.

INSERT TABLE 1 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

ANALYSIS

Logistic regression models were calculated to test for multivariate relationship between the dependent and the independent variables. We calculated one model for each of the dependent variables; intention of new business start-up, preparation of new business start-up and actual start-up of new business activities (see table 3). The three models were all highly significant.

INSERT TABLE 3 ABOUT HERE

Table 3 shows that the variables related to conditions for farming and access to waged job gave no significant impact in the models of to entrepreneurial intention and preparation. In the start-up model, the two variables related to access to waged employment are significant but negative and not positive as hypothesized. Those who perceived waged job as difficult to get or difficult to combine were less likely to start a new business in addition to the farm. This indicates that farmers with many resources are more likely to become portfolio entrepreneurs, even though they believe they could have a waged job if they wanted to. Hence, hypotheses 1 and 2 are not supported.

Further, table 3 shows that the variables related to perceived opportunities give a highly significant impact both in the intention and in the preparation model. Also in the start-up model the beta value of perceived opportunities is positive, but here it is not statistically significant. The results indicate that farmer who experience new business opportunities emerging from their farming activities are more likely to start an entrepreneurial process by considering and preparing a start-up of new business activities in addition to farming. Hypothesis 3 is partly supported.

Entrepreneurial abilities show significant impact in all three models in table 3. Perceived entrepreneurial abilities seem to be strongly associated with both considering, preparing and establishing new business activities. Hypothesis 4 is thus supported. Regarding the human capital variables, age shows a significant B in all the three models, indicating that younger farmers are more likely to have intentions, preparing and actually start a new business in addition to the farm. However, the average age of farmers included in the study is 47, which indicates that younger farmers in this aspect are not youngsters, but more like middle-aged. Level of education is significant at the 10% level in the model explaining intentions, indicating that higher educated farmers more often have entrepreneurial intentions. Among the human capital variables, current portfolio entrepreneurship is the one with the largest impact in the models. The variable is highly significant in both the intention and the preparation model, indicating that farmers that already own and manage one additional activity in addition to the farm are more likely to consider and prepare for another business activity. Whether the farm household consists of a single person or a couple show no significant impact in the model. Following these results, hypothesis 5 is partly supported.

Table 3 shows that the variables related to demand side issues such as framework conditions and local community do not have significant impact in the preparation and start-up model. In the intention model, the variable 'complicating laws and regulations' shows a significant impact at the 10 % level in the hypothesized direction, indicating that farmer who perceive the laws and regulations for new business start-ups as complicating, are less likely to consider such start-ups. The variable 'well-functioning business network' gives a significant impact in the opposite direction of hypothesis 7, indicating that farmers perceiving business networks to be well-functioning are less likely to consider business start-up.

Hypothesis 6 is only weakly supported, while hypothesis 7 gains no support from the analysis.

DISCUSSION

The present study has investigated factors associated with farm households considering, preparing and establishing new business activities in addition to the farm. Hypothesis developed from the rural sociology perspective of farm pluriactivity as well as the opportunity perspective of entrepreneurship, have been tested using a mail survey of a representative sample of farmer in Norway. The results indicate that *intention* of starting new business activities are more likely among farmers which are younger, well educated and who currently are portfolio entrepreneurs (i.e. own and manage at least one business activity in addition to the farm). Farmers with entrepreneurial intentions are more likely believe they have the entrepreneurial abilities needed to start new business activities, and are slightly less prone to perceives laws and regulations for business start-ups as complicating than other farmers. Finally, these farmers to a larger extent than others experience new business opportunities emerging from their farming activities. *Preparation* of new business activity start-up is found to be more likely among younger farmers who currently are portfolio entrepreneurs. Farmers preparing business start-ups seem to be more confident with their own entrepreneurial abilities and are also able to see more business opportunities arising from their farming experiences, than other farmers. Actual business *start-ups* are found to be associated with younger farmers who strongly believe in their entrepreneurial abilities and who also believe they are relatively attractive in the labour market. All in all, the findings seem to emphasize opportunity pull rather than necessity push as the dominant mechanism for portfolio entrepreneurship in the farm sector.

The rural sociology perspective emphasizes other business activities in addition to the farm as an adaptation strategy farmers may chose when the conditions for farming are changing. This study gave no support for this view. Rather, it was the pull factors relating to business opportunities as well as entrepreneurial abilities and experience, which most strongly differed farmers considering, preparing and establishing new business activities from other farmers. This may indicate that difficult conditions for farming and reduced incomes are not sufficient factors for

starting new business activities. The tendency to find the conditions for farming as unsatisfactory and to experience reduced income from farming activities were widespread among the farmers in the sample (see table 1), while only some of them considered entrepreneurial activities as an option. In a study of farms in Scotland, Edmond and Crabtree (1994) found that negative conditions in agriculture act as a push factor for take up of off-farm waged employment, but not for starting new businesses at the farm. For starting new businesses, the regional opportunities measured as closeness to a larger market, were more important. This is in line with our findings suggesting that the farmers who consider and prepare for business start-up process possess abilities to recognise and exploit opportunities evolving from the farming experience. Establishing new business activities are also more likely among farmers with entrepreneurial abilities. The finding that farmers with additional business activities also find themselves more attractive on the labour market than other farmers, indicates that it is the most competent and resourceful farmers who go into new business activities. This is also in line with Edmond and Crabtree (1994) who found off-farm work to be higher in regions where off-farm work opportunities would be expected to be low.

Limitations and suggestions

This exploratory study is cross sectional and measure only three milestones of the start-up process. To gain further understanding of how different factors affect the different parts of the process, longitudinal studies following the potential entrepreneur through the process from intention, preparation and to actual start-up are needed. Further, more qualitative in-depth studies are needed to further understand how the perceptions are related to actual environments and actual opportunities, and also on how perceptions are created.

This study has looked into the factors associated with farmers becoming portfolio entrepreneurs. Further studies should also investigate whether portfolio entrepreneurship is a fruitful strategy for farmers resulting in better achievements than pursuing the stick-to-farming-only strategy. Further, the motivation of portfolio entrepreneurs may range from those who move their invested capital between various enterprises depending on the market conditions, to those who diversify their economic activities to cover both productive and distributive functions, to those who pursue the only available survival strategy for marginal

businesses (Carter & Ram 2003). For a deeper understanding of the phenomena investigated here, future studies should include such motivational aspects.

Implications for further research

This study shows that the entrepreneurship perspective may bring new and possibly fruitful angles into the study of business pluriactivity in the farm sector, emphasizing the importance of business opportunities and entrepreneurial abilities. By focusing not primarily on conditions for farming and characteristics with the farm and the farmers, but also emphasizing the entrepreneurial mindset; the ability to see and utilize new business opportunities, new knowledge can be created about why and how conventional farms are developed into pluriactive entrepreneurial entities. Further, the study shows the importance of differentiating between waged employment and new business start-ups when discussing pluriactivity in the farm sector.

The findings from the study indicates that the farmers who possess abilities to recognise and exploit opportunities are able to reorganize their resources into new areas when appropriate, utilizing their 'entrepreneurial mindset' (McGrath & MacMillan 2000). This is in line with Carter's (1996:349) claim that: '*Farmers are primarily businessmen who have always sought to respond to market opportunities. If changing market demands present non-agricultural opportunities for which farm resources can be used to advantage, farmers will respond.*'. There is thus no need to exclude farmers from studies in the entrepreneurship field of research, since farmers seem to organize their businesses and manage their opportunities in the same way as other business owners. In this sense, the results support the view within entrepreneurship research that opportunity is a crucial aspect of the entrepreneurial process (Kirzner 1979, Shane & Venkataraman 2000, Alvarez & Busenitz 2001, Ardichvili et al. 2003). Moreover, they support the suggestion that existing entrepreneurs have access to new business opportunities from their entrepreneurial experience which might be developed into new businesses (Ronstadt 1988, McGrath 1996).

The present research suggests that history matters. New opportunities arising from the present (farm) business activities and form the basis of new business activities,

and a portfolio of business activities may develop over time. The identification of new opportunities is path dependent (Alvarez & Busenitz 2001). Further, new business activities may be grounded upon assets developed through the history of prior and current entrepreneurial actions, including knowledge and capabilities developed from their prior owner-management experiences.

Implications for practitioners and policy makers

The last decade, the pursuit of farm-based entrepreneurship has been an important aspect of European agricultural policies as an instrument to increase the value creation from the agriculture production. Entrepreneurship is seen as a possible solution for farmers experiencing the restructuring of the sector following changes in national and international policies. If entrepreneurial activity is the goal, the results from this study suggest that promotion of new business activity start-up should focus upon increasing farmers' competence and abilities to carry out entrepreneurial activities, as well as at bringing forth business opportunities. Policy makers should notice the waged employment and portfolio entrepreneurship are two separate strategies for farmers wanting to increase their incomes. These strategies seem to be related to different contextual factors and also to different attitudes and abilities of the farmers. Policy efforts to support farm diversification should take these differences into account and should also focus more upon the internal resources of the entrepreneur and the farm. An unbalanced focus on the need for more income, may lead farmers into waged employment rather than entrepreneurship.

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NOTES

¹ This farm business is a result of a former (and ongoing) exploitation of a business opportunity; either through start-up, purchase or inheritance (see Wright, Westhead, & Sohl 1998). Farmers starting a new business in addition to the farm may therefore be viewed as portfolio entrepreneurs (Carter 1998).

² Katz's (1990) model originally discussed hurdles towards self-employment, but has been utilized with regard to business formation (Alsos & Ljunggren 1998, Rotefoss 2001, Rotefoss & Kolvereid 2002). Here, the model is adapted to consider the behaviour of farmers who already own a farm business and desire to start and own additional business activities (see also Alsos & Kolvereid 1998).

³Approx. € 3 800. NOK 30 000 equals the limit for VAT registration in Norway.

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APPENDIX 1 – PRINCIPAL COMPONENT ANALYSES

Perceived external environmental conditions for business start-up. Respondents' perceptions of the environment for business start-ups were explored with reference to thirteen statements. The respondents should state whether they agree or disagree with each statement relating to a five-point scale. Principal component analysis was used to identify the following four independent variables: 'favourable governmental policies', 'complicating laws and regulations', 'well-functioning business network', and 'supporting local community' (Table 4). Some of the items depart from the normality assumption. This may diminish the observed correlations, but this is not a problem when statistical significance tests are not applied to the factors (Hair et al. 1998). The measure of sampling adequacy (MSA) is 0.80 for the total analysis, and ranging from 0.682 to 0.865 for the included items, which indicates that a factor analysis is appropriate. The four factors represented a cumulative variance of 70.7 %, and had all Eigenvalues larger than 1. All factors gave Chronbach's alphas above 0.75 in a reliability test.

INSERT TABLE 4 APPROXIMATELY HERE

Perceived entrepreneurial opportunities and abilities. Respondents' perception of their own abilities and opportunities to start a business was explored with reference to eight statements. Principal component analysis was used to identify the following two variables: 'perceived abilities to start a business' and 'perceived opportunities from experience as a farmer' (Table 5). The measure of sampling adequacy (MSA) is 0.86 for the total analysis, and ranging from 0.834 to 0.894 for the included items, which indicates that a factor analysis is appropriate. The two factors represented 69.2 % of the variance, and both had Eigenvalues larger than 1. Reliability statistics gave Chronbach's alphas above .80 for both scales.

INSERT TABLE 5 APPROXIMATELY HERE

Table 1 Demographic characteristics and VIF values

	Mean	St.dev.	VIF-values 1	VIF-values 2
1. Intention	0.13	0.33		
2. Preparation	0.13	0.33		
3. Start-up	0.31	0.46	1.099	1.099
4. Couple household	1.12	1.12	1.067	1.067
5. Age	47.55	9.82	1.072	1.069
6. Education ($\sqrt{}$)	2.30	0.58	1.124	1.116
7. Gives sufficient income (ln)	0.39	0.53	1.306	
8. Reduced incomes (e^x)	102.54	58.41	1.222	1.064
9. Difficult to get a job ($\sqrt{}$)	1.58	0.42	1.137	1.136
10. Difficult to combine (X^2)	13.32	8.98	1.145	1.101
11. Favouring policies	0.007	0.98	1.041	1.027
12. Laws and regulations	0.023	1.00	1.050	1.050
13. Business network	-0.023	0.99	1.133	1.125
14. Local environment	0.012	1.00	1.029	1.019
15. Entrepreneurial abilities	0.047	0.99	1.125	1.122
16. Perceived opportunities	0.020	1.00	1.153	1.124

VIF-values 2 = after removing 'gives sufficient income' from the analysis

Table 2 Correlations between dependent and independent variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Intention	-														
2. Preparation	.754**	-													
3. Start-up	.163**	.263**	-												
4. Couple household	-.007	.004	-.051	-											
5. Age	-.158**	-.108**	-.114**	.040	-										
6. Education	.102**	.046	.043	-.183**	-.182**	-									
7. Gives sufficient income	-.033	-.010	-.027	.034	.070	-.109**	-								
8. Reduced incomes	.059	.048	.049	-.050	-.046	.034	-.376**	-							
9. Difficult to get a job	-.063	-.062	-.120**	.008	.133**	-.163**	-.018	.095**	-						
10. Difficult to combine	-.044	-.016	-.088*	.065	.031	-.125**	.195**	-.037	.222**	-					
11. Favours policies	.070	.053	.038	-.040	-.007	.042	.146**	-.103**	-.074*	.009	-				
12. Laws and regulations	-.043	-.013	.008	.053	-.031	-.052	-.029	.141**	.118**	.116**	-.001	-			
13. Business network	-.016	.006	.021	.062	-.077*	.008	.124**	-.074*	-.065	-.093**	-.014	-.004	-		
14. Local environment	-.014	.009	.010	-.001	.006	-.001	-.063	.007	-.050	.045	.012	.002	-.026	-	
15. Entrepr. abilities	.167**	.150**	.255**	-.111**	-.104**	.158**	.012	.008	-.127**	-.057	.065	-.040	-.064	.014	-
16. Perc. opportunities	.218**	.204**	.057	-.080*	-.029	-.002	.155**	.041	-.048	.042	.049	.038	.266**	.107**	-.018

Note: * indicates $p < 0.05$, ** indicates $p < 0.01$ N=748

Table 3 Logistic regression models; intention, preparation and start-up.

	Dependent variables					
	Intention		Preparation		Start-up	
	<i>B</i>	<i>Exp(B)</i>	<i>B</i>	<i>Exp(B)</i>	<i>B</i>	<i>Exp(B)</i>
Human capital						
Couple household	0.464	1.591 ^{ns}	0.467	1.596 ^{ns}	- 0.188	0.829 ^{ns}
Age	- 0.054	0.948 ^{***}	- 0.028	0.973 ^{**}	- 0.020	0.980 ^{**}
Education	0.414	1.513 [*]	0.143	1.153 ^{ns}	- 0.120	0.887 ^{ns}
Current portfolio e-ship	0.723	2.060 ^{***}	1.411	4.102 ^{***}	-	
Conditions for farming						
Reduced incomes	0.003	1.003 ^{ns}	0.002	1.002 ^{ns}	0.002	1.002 ^{ns}
Access to waged job						
Difficult to get a job	0.184	1.202 ^{ns}	0.054	1.056 ^{ns}	- 0.389	0.678 [*]
Difficult to combine job	- 0.018	0.982 ^{ns}	- .002	0.998 ^{ns}	- 0.017	0.983 [*]
Conditions for e-ship						
Favouring policies	0.174	1.191 ^{ns}	0.115	1.122 ^{ns}	0.059	1.061 ^{ns}
Laws and regulations	- 0.216	0.805 [*]	- 0.117	0.889 ^{ns}	0.050	1.051 ^{ns}
Business network	- 0.291	0.747 ^{***}	- 0.172	0.842 ^{ns}	0.032	1.033 ^{ns}
Local environment	- 0.035	0.966 ^{ns}	- 0.048	0.953 ^{ns}	0.007	1.007 ^{ns}
Opportunity recognition						
Entrepreneurial abilities	0.520	1.682 ^{***}	0.375	1.455 ^{***}	0.574	1.776 ^{***}
Perceived opportunities	0.882	2.416 ^{***}	0.775	2.170 ^{***}	0.129	1.137 ^{ns}
Constant	- 2.074	0.126 [*]	- 2.696	0.067 ^{**}	1.211	3.357 ^{ns}
Overall model fit						
Initial -2LL	569.459		573.302		934.205	
Model -2LL	463.948		474.405		862.867	
Model chi-square	105.511 ^{***}		98.896 ^{***}		71.337 ^{***}	
Goodness of fit ³⁴	8.161		18.760		10.270	
Nagelkerke R ²	0.247		0.231		0.128	
Cox & Snell R ²	0.132		0.124		0.091	
Over all hit ratio	88.0 %		87.4 %		70.2 %	
N	748		748		748	

Level of significance: *** indicates p<0.01, ** indicates p<0.05, * indicates p< 0.1

³⁴ Hosmer and Lemeshow Test

Table 4 Principal component analysis, perceived environments for start-up

	Favouring government policies	Complicat. laws and regulations	Well-funct. business network	Supporting local community	Communalities
My impression is that the government is positive to new business start-ups among farmers	0.865				0.794
My impression is that the government assists farmers who start a new business	0.879				0.711
My impression is that agricultural policies support farmers who start new businesses	0.840				0.737
My opinion is that regulations and bureaucracy complicate new business start-ups among farmers		0.838			0.702
My opinion is that duties and taxes make it difficult to own a business in addition to farming		0.855			0.736
My impression is that the local municipality policies complicate bus. start-ups among farmers		0.735			0.627
If starting a new business: My network within agriculture would be of good help			0.797		0.679
If starting a new business: My network in the local community would be of good help			0.834		0.748
My impression is that there is a good network among portfolio farmers			0.730		0.679
In my local community starting a business is positively regarded				0.794	0.624
In my local community innovation and entrepreneurship is seen as the source to success				0.781	0.757
Entrepreneurs are looked up to in my local comm.				0.860	0.657
Farmers who start a new business are looked up to				0.788	0.604
Eigenvalue	2.245	1.611	1.230	4.106	
% of variance	18.3	15.6	15.5	21.3	
Reliability test of scales					
Chronbach's alpha	0.8552	0.7569	0.7549	0.8410	
Mean correlation between items	0.6631	0.5092	0.5066	0.5694	
Descriptive statistics for scales					
Mean	2.74	3.20	2.83	3.11	
Standard error	1.01	1.03	0.87	0.85	

Factor loadings less than .5 are suppressed.

Table 5 Principal component analysis, perceived abilities and opportunities.

	Perceived abilities	Perceived opportunities	Communalities
I have got the necessary knowledge to start a new business	0.841		0.724
I believe I could handle the insecurity related to starting a new business	0.843		0.739
I know how to get information about the market	0.777		0.673
I am sure I would manage to start a new business if I tried to do so	0.801		0.704
My experience from farming has helped me see many good business opportunities I would not otherwise have recognized		0.798	0.647
Farming is a good starting-point for new business start-up		0.820	0.727
If I wanted to start a new business in addition to the farm, I have got several business opportunities to choose from		0.686	0.639
My network as a farmer gives access to several good business opportunities		0.814	0.697
Eigenvalue	4.125	1.412	
% of variance	36.447	32.761	
Reliability test of scales			
Chronbach's alpha	0.8622	0.8285	
Mean correlation between items	0.6100	0.5470	
Descriptive statistics for scales			
Mean	3.15	3.04	
Standard error	1.03	0.93	

Factor loadings less than .5 are suppressed.

7.3 Opportunities and prior knowledge: A study of experienced entrepreneurs

OPPORTUNITIES AND PRIOR KNOWLEDGE: A STUDY OF EXPERIENCED ENTREPRENEURS



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ABSTRACT

This study investigates how opportunity generation is related to the prior knowledge base of experienced entrepreneurs. The paper explores how prior knowledge is used in the process of opportunity generation and whether this varies dependent on how opportunities come into existence. Opportunities may be the result of serendipity or deliberate search, and may be (objectively) discovered or (subjectively) created. Combining these two axes gave four types of processes: opportunity discovery, opportunity search, opportunity creation, and opportunity occurrence. Based on interviews of farm-based entrepreneurs in Finland and Norway, it is detected that different processes of opportunity generation related to the situations of the entrepreneurs, their former experiences, and their social networks.

INTRODUCTION

Opportunities are central to entrepreneurial activities. Without opportunity there is no entrepreneurship. Until recently this aspect has been offered quite little attention in the literature. However, the last decade or so there has been a growing interest into the process of opportunity generation, resulting in a number of published studies in the area. This growing interest in opportunities has resulted in thoughtful discussions about definitions of opportunity as a concept (Gartner, Carter, & Hills, 2003), exploration of opportunity generation processes (Corbett, 2002; Craig & Lindsay, 2001; Shepherd & DeTienne, 2001; Shepherd & Levesque, 2002) and opportunity exploitation processes (Samuelsson, 2001), as well as the value of the opportunity concept to entrepreneurship research (Eckhardt & Shane, 2003; Gartner et al., 2003; Kirzner, 1997). However, in spite of a growing amount of published work focusing on entrepreneurial opportunities, there is by now offered little empirical exploration or investigation in this area.

One of the main puzzles research relating to entrepreneurial opportunities have dealt with is why, when and how some persons generate opportunities while others do not (Shane & Venkataraman, 2000). Shane (2000) argues that entrepreneurs discover opportunities related to their prior knowledge. This is in line with McGrath (1996) and Ronstadt (1988) who both argue that existing entrepreneurs may have access to opportunities others could not detect because of the specific knowledge they have generated from their entrepreneurial experiences. Recent literature on habitual entrepreneurship also indicate that opportunity generation may be fuelled by knowledge resulting from prior entrepreneurial experience (Ucbasaran, Howorth, & Westhead, 2000; Ucbasaran & Westhead, 2002).

Two central debates within the opportunity literature are whether opportunities are the result of serendipity or deliberate search (eg. Chandler, Dahlquist, & Davidsson, 2002; Gaglio & Katz,

2001), and whether they are objectively discovered or subjectively created (eg. Gartner et al., 2003). Prior knowledge can be assumed to affect both the ability to search for useful information and the ability to take advantage of elements of coincidence or luck. Further, both discovery and creation of opportunities may be supported by the prior knowledge of the discoverer/creator. We argue that these two debates not solely represent different ontological views, but may also be considered as illustrate the heterogeneity of opportunity detection processes. Both elements of search and coincidence, as well as elements of discovery and creation may be included in such processes. These four concepts may be viewed as placed on different ends of two axes describing the variety of opportunity generation situations.

The study of Chandler et al. (2002) indicates that the type of opportunity detection process may impact the subsequent implementation processes. Studies have found that prior knowledge impact opportunity generation (Shane, 2000; Shepherd & DeTienne, 2001). We suggest that also this relationship may differ depending on the type of opportunity generation process.

The aim of this paper is twofold. Firstly, taxonomy of opportunity generation processes is developed. Secondly, the link between prior knowledge and new opportunities is explored based on opportunity stories of experienced farm-based entrepreneurs. Differences in use of prior knowledge depending on the type of opportunity generation process are discussed.

The structure of the paper is as follows: First, the two axes of opportunity generation processes are discussed in light of present literature. This discussion ends with the development of taxonomy. Further, the relationship between prior knowledge and opportunity generation is discussed. After a brief account of the method of the study, the developed taxonomy is used to categorize the opportunity processes developed from the empirical data. Then, an analysis of the use of prior knowledge relating to the different types of opportunity processes is conducted. Finally, the conclusions and implications of the study are discussed.

THEORETICAL FRAMEWORK

Business Opportunity

A business opportunity can be seen as a potential to serve customers differently and better than they are being served at present (Wickham, 2001). Opportunity may appear as an imprecisely-defined market need, or as un- or under-employed resources or capabilities (Kirzner, 1997). Shane and Venkataraman (2000) argue that "Entrepreneurial opportunities are those situations in which new goods, services, raw materials, and organizing methods can be introduced and sold at a greater price than their cost of production", and thereby linking their concept of opportunities both to Schumpeter (1934) and Casson (1982).

Shane (2003:18) defines an entrepreneurial opportunity as "a situation in which a person can create a new means-ends framework for recombining resources that the entrepreneurs *believes* will yield a profit". He emphasizes that opportunities are not necessarily profitable, and may differ significantly in expected value. Viewing opportunities *ex ante* an eventual exploitation, it is difficult to tell their value. For opportunity to be a construct that can be examined, and even to exist, it must be identifiable *before* it is exploited (Gaglio & Katz, 2001; Singh, 2001). Further, entrepreneurs will act upon opportunities only if they themselves perceive them to be (potential profitable) opportunities.

Opportunities begin unformed and become developed through time. They may begin as simple concepts and become more elaborated as developed by the entrepreneur (Ardichvili, Cardozo, & Ray, 2003). The opportunity detection process is a process of forming and transforming, and change is a fundamental part of it (Hench & Sandberg, 2000). Opportunities can therefore best be described as processes of opportunity generation or development. Such processes are the focus of this study.

Opportunities as Result of Active Search or Serendipity

One central question within the opportunity literature is whether entrepreneurial opportunities are the result of serendipity or deliberate research (Gaglio & Katz, 2001). Some authors have emphasized information search as a central element of opportunity generation. Based on the work of Stiegler (1952), Caplan (1999) argues that opportunity identification is the outcome of a successful rational search process. Shaver and Scott (1991) argue that entrepreneurs identify opportunities as a result of superior information processing ability, search techniques or scanning behaviour. Also Fiet (1996) places the investment in information at the centre of opportunity discovery.

Kirzner (1997) argues that discovery of opportunities is neither a result of deliberate search for information (relating to standard search theory) nor a result of pure chance. In stead it is something in between: the result of alertness to possible opportunities:

“Without knowing what to look for, without deploying any deliberate search technique, the entrepreneur is at all times scanning the horizon, as it were, ready to make discoveries. Each such discovery will be accompanied by a sense of surprise” (Kirzner, 1997:72).

The view of opportunity discovery as happening without deliberate search is shared by several authors (Eckhardt & Shane, 2003; Gaglio & Katz, 2001; Kaish & Gilad, 1991; Shane, 2000).

According to this view, opportunity detection is seldom only the result of pure luck. As Friedel (2001) put it: “serendipity is no accident.” However, it might be argued that the process of opportunity generation may be more or less pushed by an actively searching entrepreneur. Depending on the extent of search activity, we might identify different types of opportunity detection processes (Chandler et al., 2002). We see such processes varying along an axis where active search and passive luck represent the two extreme points.

Opportunities as Objective Realities or Subjective Creations

Another central debate is whether opportunities are objective realities or subjective creations, related to the questions: are opportunities discovered or created? Shane & Venkataraman (2000) argue that opportunities themselves are objective phenomena but that they are not known to all parties at all times. Some persons are more able to recognize and/or exploit particular opportunities than others due to the heterogeneity in individuals' sensitivity to opportunities. These individual differences may come from variations in individuals' genetic makeup, background and experience, and/or in the amount and type of information they possess (Ardichvili et al., 2003). According to Casson (1982), individuals differ in their access to information, and that the essence of the entrepreneur is to have a different perception of the situation (because of perceived differ-

ence in the totality of information). The ability to discover opportunities demands the possession of the necessary information as well as the cognitive ability to evaluate the information. Opportunities are therefore both the result of environmental conditions and the result of entrepreneurial ability as well as access to and processing of information (Ucbasaran et al., 2000). In this perspective entrepreneurial experience could be the source of relevant information needed to discover an opportunity, and/or as a way of increasing the ability to process information, and hence the alertness to opportunities.

Against this objectivistic view, Ardichvili et al. (2003) argue that while elements of opportunities may be "recognized", opportunities are made, not found. Also De Koning (1999) holds the view that opportunities are formed, rather than discovered or identified. Hench and Sanberg (2000) state that opportunities exist in the mind of the entrepreneur as creative constructions. Gartner et al. (2003) argue that opportunities are enacted. Building upon Weick (1979), they see opportunities as an outcome of the sense-making activities of individuals. This follows a view of the environments as socially constructed, subjective and a product of the actions of individuals. Opportunities are seen as emerging, that is they "come into existence out of the day-to-day activities of individuals." (Gartner et al., 2003:109). Opportunities will be occurring from activities that individuals are already involved with, and within a stream of other events and activities.

These two views represent different ontological perspectives viewing the world as consisting of objective facts or of subjective constructions. However, several authors argue that opportunity generation processes may both include the recognition of objective facts and construction of subjective beliefs. Emphasis is put on the subjective *perception* of (objective) resources, market needs, etc. (Eckhardt & Shane, 2003; Shaver & Scott, 1991), or on (objective) information and the individuals (subjective) ability to learn from this information (Corbett, 2002). Elements of opportunities may be recognized, even if most of the process is about creation (Ardichvili et al., 2003). We argue that opportunity generation processes may include both discovering and creating elements. Opportunities may be seen as varying along an axis where pure objective discovery and subjective creation represent the two extreme points.

Taxonomy of Opportunity Generation Processes

By now we have identified two axes describing the heterogeneity of opportunity generation processes: the active-passive axis and the subjective-objective axis. The combination of these two axes makes it possible to separate between four broad categories of processes (Figure 1): opportunity discovery (passive-objective), opportunity search (active-objective), opportunity creation (active-subjective) and opportunity occurrence (passive-subjective). *Opportunity discovery* takes place when the opportunity objectively exists, and it can be recognized by the entrepreneur even though (s)he is not actively searching. *Opportunity search* supposes for more active search for finding a business opportunity, considering that the opportunity can be objectively recognized. *Opportunity creation* and *opportunity occurrence* on the other hand are the opportunity generation processes in which the entrepreneur's (subjective) abilities, experiences, prior knowledge and actions make the opportunities to come into existence. The opportunities are therefore formed rather than recognized. The difference between these two categories lies in the extent of active search. Opportunity creation takes place when the entrepreneur actively searches for a business opportunity and uses her subjective capacity and resources to create the opportunity. In some cases the

opportunity can occur due to entrepreneur's special skills and resources, even though (s)he is not actively looking for (this particular) opportunity, i.e. opportunity occurrence.

The Role of Prior Knowledge and Experience

Entrepreneur's personality traits, social networks, and prior knowledge are seen as antecedents of entrepreneurial alertness to business opportunities. Entrepreneurial alertness, in its turn, is a necessary condition for the success of the opportunity identification triad: recognition, development and evaluation (Ardichvili et al., 2003). Shane argues that entrepreneurs discover opportunities related to the information that they already possess. They discover opportunities because prior knowledge triggers recognition of the value of the new information (Shane, 2000). Each person's idiosyncratic prior knowledge creates a "knowledge corridor" that allows him/her to recognize certain opportunities, but not others (Ronstadt, 1988; Venkataraman, 1997). According to Kirzner (1973), entrepreneurs are selling not just products, but, rather, their knowledge, the ability to assemble resources, and the resources already available to them. This perspective allows entrepreneurs to move away from analyzing *what is* to discussion of *what is possible*, and opens an opportunity for entrepreneurial discovery (Ardichvili et al., 2003).

Habitual entrepreneurs are stated to be particularly good at recognising and developing opportunities (MacMillan, 1986; McGrath, 1996; McGrath & MacMillan, 2000). Founding and running of a business may give access to information and knowledge which become the basis of new business ideas. Ronstadt (1988:31) suggests that "the mere act of starting a venture enables entrepreneurs to see other venture opportunities they could neither see nor take advantage of until they had started their initial venture". McGrath (1996) argues that entrepreneurs with access to a large end well-functioning network, for instance through an existing business, probably will have access to a large number of good "shadow options", i.e. latent business ideas. Also Singh et al. (1999) state that a large social network with many weak ties going beyond close friends and family, relates positively to idea identification and opportunity recognition.

Further, entrepreneurial experience may also increase the cognitive capabilities to evaluate this information. McGrath (1996) suggests that experienced entrepreneurs often will have larger ability to recognize and take advantage of such latent ideas, since their experience increases their sense-making ability. An existing business can therefore be a source of new business ideas both in it self, through the entrepreneurs experience with it, as well as through the network developed through the owner-management of the business. Hence, existing owner-managers may possess information about business opportunities that are hidden for others. In their view of opportunity recognition as a creative process, Hills, Shrader and Lumpkin (1999), argue that this process starts in the base of experience and knowledge of the entrepreneur.

According to Shane (2000) three major dimensions of prior knowledge are important to the process of entrepreneurial discovery: prior knowledge of markets, prior knowledge of ways to serve markets, and prior knowledge of customer problems. Prior entrepreneurial experience provides a source of information and skills which are useful also to the pursuit of opportunity (besides the recognition of opportunity). Shane (2003:95) argues that general business experience, industry experience, functional experience in marketing, product development or management, and previous start-up experience all provide some of the information and skills that increase the likelihood of opportunity exploitation.

Overall, it seems that prior experience contributes to opportunity generation processes in at least two ways: through the knowledge and skills gained from the experience, and/or from a broadened social network. However, the heterogeneity of opportunity generation processes as suggested above, encourage an exploration of a possible variation between in the role of prior knowledge relating to the type of process in question.

Research Questions

This exploratory study addresses the following broad research question: How is opportunity recognition related to the prior knowledge base of experienced entrepreneurs? More specifically, the study will explore:

- Can the four suggested types of opportunity generation processes be identified empirically?
- What characterizes and differentiates the four types of processes?
- In what way is prior knowledge and experience of the entrepreneur related to the four types of processes?

METHOD

The data for this study consist of qualitative long in-depth interviews (McCracken, 1988) of thirty-one farm-based entrepreneurs in Finland and Norway. The informants were farmers who have started new business activities in addition to the farm, or are seriously considering doing so. In the cases the farm household consisted of a couple who both were involved in the farm and/or in the new business activity, both spouses were interviewed when possible. During the interviews, they were asked how business opportunities had come into existence in their lives. The stories revealed several opportunity detection episodes where some of the opportunities were rejected, some resulted in new ventures, and some are still being considered for the future. These opportunities were included in the study regardless of the present outcome of them, since focusing only on opportunities that are carried out may cause scholars to overlook a large number of venture possibilities that were seriously considered by an entrepreneur (Fiet, 1996:421).

The origin of this study is in two separate but similar studies conducted in Norway and Finland, both focusing on rural micro firms. The interviewed farm-based entrepreneurs were located in the Northern Savo region in Finland and the Nordland and the Møre regions in Norway. These regions have many similarities, for instance their rurality and their dependence on primary production and small businesses. But there are also differences, not least regarding the different policy efforts of Finland, as an EU member, and Norway.

In an analysis of farms in the UK using a small business approach, Carter and Rosa (1998) found that farms share many of the characteristics of other rural enterprises. They argued that the similarities are likely to increase over time, and that the farm sector should not be excluded in analysis of rural small firms. Farmers have experience, often through generations, from self employment, and they have historically been known for commitment to independence and entrepreneurial ideals (Carter, 1996). In accordance with these arguments, we see farmers as primarily business owner managers. However, the restructuring of the farm sector as a result of policy changes, may motivate farmers to considering new business opportunities.

The level of analysis for this study is the entrepreneurial opportunity. An opportunity is defined as a perceived situation where a good and/or a service can be introduced which the entrepreneur believes will yield a profit. One entrepreneur may detect several opportunities, and therefore the interviews of thirty-one entrepreneurs (or couples) gave us a data consisting of fifty-nine opportunity generation processes. The opportunities were categorized according to the passive-active and objective-subjective axes, using the following procedure: Each opportunity was first categorized separately by each of the authors. Secondly the categorizations were compared. In the cases of disagreement, the categorization was discussed between the authors until an agreement was reached.

ANALYSIS

Identifying Types of Opportunity Generation Processes

Each of the fifty-nine opportunity generation processes identified from the stories of thirty-one farm-based entrepreneurs were categorized according to the passive-active and the objective-subjective axes, and thereby to the four type taxonomy (Figure 2). We found opportunity generation processes of each category from both Finnish and Norwegian firms. In category *opportunity discovery* were placed 17 opportunity generation processes (9 Finnish, and 8 Norwegian), in *opportunity search* category 17 (10 Finnish, 7 Norwegian), in *opportunity creation* category 13 (7 Finnish, 6 Norwegian), and in *opportunity occurrence* 12 (5 Finnish, 7 Norwegian). Thus, all four types of opportunity generation processes from the developed taxonomy were identified in the empirical data.

The opportunity stories also revealed that the opportunity generation process may change, starting as one type of process and then moving to another type. In the empirical data there were examples of generation processes starting as discovery or search, and then moving more in the direction of creation. However, most of the processes in this empirical data seemed to stay within the same category.

Characteristics of Opportunity Generation Categories

A more detailed investigation of the opportunity generation processes related to each of the four categories, revealed that opportunities in each category have some similar features which differ from opportunities in other categories. The detected characteristics of each of the four categories are described below:

Opportunities in the category *opportunity discovery* are often related to pluriactive farms, where new business opportunities are considered as a way to increase the income for the owning family. Exploiting business opportunities are seen as an alternative to searching for waged employment. The opportunities are typically related to something which traditionally has been done in farms such as small-scale food-processing and farm-tourism. The farm resources are often central also to the new opportunities. Opportunities are often something generally talked about; pushed by government policies or imitations of other local (farm-based) business activities. Some of these opportunities were "given" to the entrepreneurs from others (group in the down-corner). These opportunities are originally "seen" by someone else, and the entrepreneur is asked whether (s)he would be interested in seizing it. Examples of this are development organisation asking entrepreneur to start farm-based small scale care institution, or bigger food-processing firm asking entre-

preneur to make certain products for them as a subcontractor. Opportunities in this category relate mainly to local markets, and are often "low potential" opportunities when it comes to growth.

Opportunities in the category *opportunity search* are less related to the farms than the discovery opportunities. They are often but not always related to other industries than farm-based industries. Entrepreneurs searching for opportunities in this way are typically the ones who have chosen the path of developing other business activities in stead of growing their farm, as a response to policy demands of efficient large-scale farming, or as a response to the need for more income than farming can give. These opportunities are often imitations of other businesses locally or in other areas. The active opportunity search has been conducted looking for "known" opportunities that might fit the entrepreneur's competence, resources and situation. Similar to the discovered opportunities, the searched opportunities are mainly related to a small and local market, and also often related to a small growth potential.

Opportunity creation processes often seem to lead to opportunities related to areas from which the entrepreneur has already got experience. This experience may be the result of prior business ownership, due to a hobby, or work experience. The new opportunity is therefore often a continuance of earlier practice. The opportunity often seems to be created as a combination of the entrepreneur's experience and a perceived market need. These opportunities are generally more innovative than the ones resulting from search or discovery, as they are tied to the specific competences and world views of the entrepreneurs. Farm resources are seldom crucial to the opportunities, but they may still make use of such resources. These opportunities are often, but not always, related to larger growth potential (or ambitions) than the earlier described categories. Further, they are usually related to regional or national markets, and if/when successfully exploited they would have the potential of replacing the farm as the main business activity of the owners.

In the category of *opportunity occurrence* the opportunities typically occurred due to the entrepreneur's special skills, unique knowledge or distinct resources, even though (s)he has not actively searched for (this particular) opportunity. The opportunities occurring seem to be more innovative than those resulting from the three other categories of opportunity generation processes. They often involve relation to unique competences or resources controlled by the entrepreneur. Further, they are typically not or only marginally related to farm resources, and if/when they are successfully exploited they would in most cases replace the farm as the main business activity and also exceed the income and size of the farm considerably. These opportunities are usually related to national or even international markets.

The Role of Prior Knowledge and Experience

After categorizing the opportunities according to the taxonomy and identifying the characteristics of each category, we explored the role of prior knowledge in the four types of opportunity generation processes.

Opportunities resulting from *opportunity discovery* typically utilize the prior knowledge gained in farming, as they often are dependent upon farm resources. The knowledge resulting from farming experience utilized is usually practical skills, knowledge on production or raw materials, or knowledge on *local* markets. One subgroup of opportunities in this category consists of opportu-

nities suggested from others. For these opportunities networks originated from earlier contacts are the main source of opportunity information. Secondly, the reason why this opportunity is "offered" is that the entrepreneur has some particular, but not unique, experience or skills which are acknowledged by these network contacts.

Opportunity search typically result in opportunities relying on knowledge on production and small-scale services typical for the local area. In some cases, this knowledge is newly acquired with the intent of searching for business opportunities. Knowledge of other local businesses also tends as a source of imitation opportunities. However, the opportunity search processes seem to be more characterized with lack rather than utilization of prior knowledge. For instance, knowledge on potential markets and customer needs often seem to be insufficient. This usually leads the search for opportunities in direction of what is typical and traditional for firms in the same industry and local area.

Prior knowledge and experience play very critical role in the two more subjective opportunity generation processes. The business opportunities in firms of both these categories are in a way conducted from the earlier experiences of the entrepreneurs. The processes of *opportunity creation* are often related to or directly resulting from experiences from earlier business activities, employed work, or hobbies. Prior knowledge of industry, markets, ways to serve markets and customers as well as comprehensive knowledge or competence regarding the production process form a basis of the opportunity generation. Furthermore, the competence to search for and obtain new knowledge when needed, seem to be present among the entrepreneurs creating opportunities in this category. Many of them develop the opportunity further by searching for new knowledge. Moreover, they make use of networks going beyond friends and relatives, which give them access to new information relevant to opportunity generation.

In the category *opportunity occurrence* serendipity plays a visible role; entrepreneurs have realized that the knowledge and experience which they have acquired (often for totally different reasons) can be utilized to seize an occurred business opportunity, which they have not earlier known to exist. These opportunities often occur from a broad knowledge of a particular industry, markets, customers and/or competitors, and from a variation of skills (e.g. practical, sales and organizing skills). However, the knowledge is creatively transformed into something else from which quite innovative business opportunities occur. Several of the entrepreneurs generating opportunities this way, also rely on prior entrepreneurial experience other than farming. Further, the entrepreneurs' broad social network is an important source of information within the opportunity generation process.

Several of the stories of the farm-based entrepreneurs revealed two or three separate opportunities. These opportunities were not necessarily in the same category, indicating that one person can conduct different types of opportunity generation processes. In particular, we found examples of the opportunity generation processes forming a continuum, where gaining knowledge and experience on business, industry, markets and customers from generating and exploiting their first opportunities leads entrepreneurs to generate more subjective opportunities the second or third time around. This finding may have some connection to findings in Carter's (2001) study stating that the process of additional business activities in farm-based firms can be viewed as a continuum, from monoactive farming, through relatively simple forms of structural diversification, to the ownership of a portfolio of business interests.

A story of one entrepreneur describes well the continuum of opportunity generation processes:

Helena is a Finnish female entrepreneur, who together with her husband decided to give up cow farming in 1995 for two main reasons: firstly, their farm was not large enough to give sufficient income (Finland's joining EU enforced the demand for efficiency in agriculture) and they did not want to invest on growing it larger, and secondly, Helena had started to get allergic symptoms while working with cows. In that situation Helena's husband was already working outside the farm, and Helena began to *search for a business opportunity* for she wanted to have her own business. She had former education on catering and she participated to a project for beginning food-processing entrepreneurs. After that (1997) Helena found a firm which made salad-sauces and marmalades, operating mainly in direct sales. She was minded to develop her knowledge and skills further, and she attended a course for cooks who arrange events and make food in woodlands (near Helena's home is one preserved woodland). This course was one of the very first in Finland. Therefore she *created a business opportunity* by acquiring new skills which together with her resources formed a basis for her new venture. After she had operated in this business for some years a new *business opportunity occurred*: she was asked to start acting as an instructor for new beginning woodland-cooks, for she had gained experience on how to operate in this business area, as well as general entrepreneurial experience. Nowadays the main income to Helena's firm comes from these teaching-services.

DISCUSSION

The results from this exploratory study indicate that there is a heterogeneity among opportunity generation processes which needs to be taken into account when discussing the relationship between prior knowledge and opportunity generation. A taxonomy of opportunity generation processes based on the extent of which the process includes active and deliberate search or more passive serendipity or coincident, and on the extent of which the opportunity is objectively discovered/recognized or subjectively created, was developed and found applicable to empirical data on opportunity generation among farm-based entrepreneurs. The processes were categorized as opportunity discovery, opportunity search, opportunity creation or opportunity occurrence. The opportunity resulting from discovery and particularly search processes were found to be more imitative and related to lower growth potential. On the other hand, processes related to creation and particularly occurrence processes were found to be more innovative and seem to have larger potential for growth if successfully exploited.

An investigation of the role of prior knowledge and experience relating to four categories of opportunity processes, gave several interesting findings. Firstly, prior knowledge seems to play quite different roles depending on the type of process. Opportunity creation and occurrence seem to be related to a more extensive knowledge base of the entrepreneur than the other processes. Opportunity discovery seem to be based on the farm-based knowledge or skills, while opportunity search to some extent seem to stem from the lack of particular knowledge. Secondly, entrepreneurs with extensive experience from other areas than farming, e.g. prior employed work, prior business activities or hobbies, seem to be more able to undertake generation processes which includes more subjective creation than less experienced entrepreneurs. This finding supports the suggestions that experienced entrepreneurs face an opportunity corridor (Ronstadt, 1988). Experienced entrepreneurs have also often developed a broad social network, which can promote de-

tecting opportunities (McGrath, 1996). Thirdly, the motivation of the entrepreneur was found to have an impact on the type of process conducted. Entrepreneurs pushed by the need for extra income or from the need to change their activities from farming to something else, were more active in their opportunity generation processes. These entrepreneurs were often also more objectively searching for opportunities, and therefore their processes often fell in the category of opportunity search. Fourthly, it seems that entrepreneurs when gaining experience from prior opportunity generation and exploitation may move from opportunity discovery or search to more occurrence or creation in their subsequent generation processes, indicating that there might be an experience curve of entrepreneurial opportunity generation (see MacMillan, 1986).

This study represents an early exploration into the heterogeneity of opportunity generation and influence of prior knowledge, and has given some insights which ask for further investigation. This study has several limitations. The empirical base for this study has been farm-based entrepreneurs in Norway and Finland, and further studies into other industry and geographic contexts are needed to test the transferability of our findings. Also longitudinal studies following entrepreneurs through their opportunity generation processes can further illuminate the dynamics of these processes. In this way, the problems related to retrospective reconstruction of the processes can be dealt with. Despite the limitations, the findings from the present study have implications for future research into this area. First, subsequent studies should take into account the great variation among opportunity generation processes. Secondly, the prior knowledge base of the entrepreneur should be considered as a potentially important resource of entrepreneurs generating new opportunities. In the cases where the knowledge base constitutes valuable, inimitable and rare resources, it may give the entrepreneurs competitive advantages in generating and exploiting new opportunities (Barney, 1991). Finally, this study has indicated that prior entrepreneurial experience may be related to different types of opportunity generation processes. This shows the relevance of studying the processes and characteristics among experienced entrepreneurs (Ucbasaran & Westhead, 2002; Westhead & Wright, 1998).

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Figure 1
Taxonomy of Opportunity Generation Processes

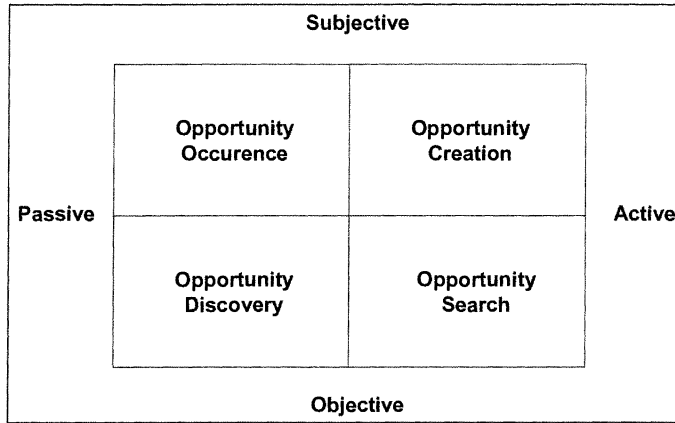
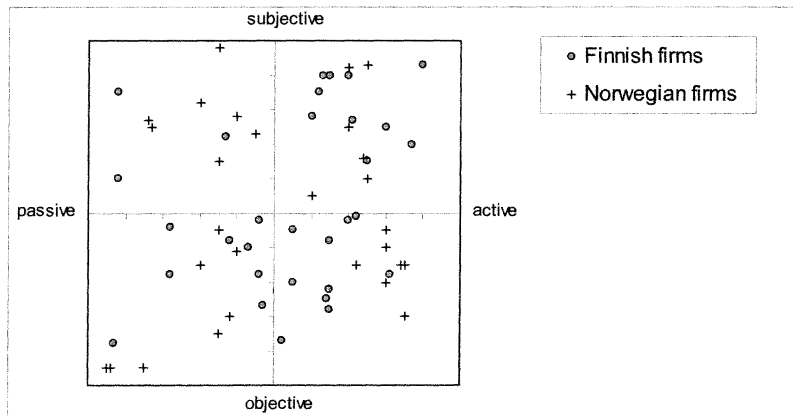


Figure 2
Categorization of Opportunity Generation Processes



7.4 Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences



Multiple business ownership in the Norwegian farm sector: Resource transfer and performance consequences

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Abstract

This paper examines the case of multiple business ownership in the Norwegian farming sector, focusing on the extent of resource transfer between farms and their newly created ventures and the subsequent effects on the performance of these new ventures. The results demonstrate that substantial resource transfer takes place, mediated both by the resource richness of the farm and the degree of similarity in the activities of the farm and the new venture. The results also demonstrate a complex relationship between resource transfer and the performance (measured in terms of profitability) of the new venture. The transfer of physical resources tends to enhance, while the transfer of organizational and knowledge-based resources tends to reduce, new venture performance.

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1. Introduction

Pluriactivity is an important feature of the Norwegian agriculture sector. Eikeland and Lie (1999) reported that half (51%) of Norwegian farmer households combine agriculture with income from other business ownership activities. The practice of industrial pluriactivity (Eikeland, 1999) has a long tradition and remained a feature of Norwegian farming throughout the decades when agricultural policy focused on specialization. Changes in the strategic environment of the agriculture sector have revived the notion of pluriactivity, and the combination of farming with other business activities has become one of the main targets within the current agricultural policy in Norway, known as “Agriculture Plus”. Pluriactivity is seen as a strategy for rural development as well as a strategy for gaining more value creation from the farm sector. In particular, resources controlled by the farmers, including land and natural resources, buildings and installations, financial capital and human resources have been identified as constituting a foundation for new business development (St.meld. no. 19, 1999/2000, p. 81).

Research investigating pluriactivity has generally been conducted from a sociological or economics-based perspective (Fuller, 1990; Jervell, 1999). The focus has been the farm business and/or household, and pluriactivity has been viewed mainly as a strategy for farm continuation in a context of policy reform and falling incomes. New business start-ups among farmers are seen as a consequence of unfavourable conditions in farming and an individualized response to the lack of opportunities for full-time employment or full-time farming (Brox, 1984; Eikeland and Lie, 1999). While this perspective has given us extensive knowledge about the motivations, push factors and consequences of pluriactivity for farm development, studies focusing on the development and performance of the new, non-farm business are still scarce within the pluriactivity literature.

The parallels between farm household pluriactivity and multiple business ownership in the non-farm sectors have been noted within the small business and entrepreneurship research literature (Carter, 1996, 1998; Alsos et al., 2003; Scorsone et al., 2004). In this literature, multiple business ownership—sometimes conceptualized as portfolio entrepreneurship—has recently become a key theme. Premised in the belief that prior experience of business ownership endows business owners with both greater knowledge and resource access, the importance of

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'portfolio entrepreneurship' has been viewed in terms of the anticipated superior performance of ventures started by experienced entrepreneurs (Hofer and Sandberg, 1987; MacMillan and Katz, 1992). While this view has both logical and intuitive appeal, to date research has failed to provide empirical support that previous experience of business ownership leads to success in subsequent ventures (Kolvereid and Bullvåg, 1992; Westhead and Wright, 1998). Many studies have called for further exploration of the processual and contextual underpinnings of portfolio entrepreneurship in order to clarify the linkages between the originating business and subsequent business ventures (Carter, 1999; Rosa and Scott, 1999; Ucbasaran et al., 2001; Carter and Ram, 2003).

This study seeks to contribute to the growing research literatures on both portfolio entrepreneurship and farm pluriactivity. Taking a resource-based perspective, this study investigates the extent to which farmers engaging in multiple business ownership transfer resources from their farm business into new ventures and how the transfer of resources impacts on the performance of the new venture. Clearly, there are many different types of resources that entrepreneurs can accrue, including capital assets, organizational resources, as well as the more intangible human capital and knowledge-based resources (Penrose, 1959; Becker, 1975; Barney, 1991). It is equally clear that the quantity and quality of resources within each farm differs and that the degree of resource richness within the originating farm may affect the transfer of resources into a secondary venture. It is also possible that resource transfer is affected by the degree of similarity and complementarity in the activities of the originating farm and the new venture. By analysing pluriactive farm owners in Norway, this study investigates resource transfer from originating farm to new venture, and the relationship between resource transfer and the subsequent performance of the new venture.

2. Multiple business ownership

It has long been recognized that a substantial proportion of business founders have had previous experience of business ownership and that many own more than one firm (Donkels et al., 1987; Birley and Westhead, 1993; Rosa and Scott, 1999; Ucbasaran et al., 2001). Research suggests that the rate of multiple business ownership varies from 12% of firms across a broad range of sectors (Westhead and Wright, 1998), 21% of business owners in agriculture (Carter, 1998), to "about one-fifth of all business founders and about one-third to four-fifths of the founders of limited [i.e. incorporated] companies" (Rosa and Scott, 1999, p. 33). Other studies suggest that distinct variations may occur by sector (Westhead and Wright, 1998), region (Rosa and Scott, 1999), gender (Rosa and Hamilton, 1994) and ethnicity of owner (Ram et al., 2000).

Multiple business ownership is assumed to be beneficial as the knowledge, skills and resources gained in a primary

business converge to reduce the individual's risk in their subsequent business ventures. However, while many studies have speculated that previous venture experience endows entrepreneurs with a greater propensity for future business success, there is almost no evidence of this in the research literature. Despite increasingly sophisticated analyses, no study has yet been able to identify superior performance within businesses started by multiple business owners (Hofer and Sandberg, 1987; Birley and Westhead, 1993; Kolvereid and Bullvåg, 1992; Westhead and Wright, 1998). There may be several explanations for this apparent anomaly. Firstly, several studies focusing on experienced founders have failed to differentiate multiple business owners from other types of habitual business founders. Unlike serial founders who discard their initial venture before starting another, multiple business owners retain their original business while starting other ventures (Westhead and Wright, 1998; Ucbasaran et al., 2001), and are thus able to draw upon resources in the existing firm while founding the new venture. Secondly, as Starr and Bygrave (1992) argued, it is possible that the entrepreneurial experience accrues both assets and liabilities for the founder. Thus, resource transfer from one business to another may have detrimental as well as beneficial results. However, the types of resources that may prove beneficial and those that may be detrimental has yet to be established. It is also possible that these effects may be context or sector specific, adding a further layer of complexity to empirical design. Finally, few studies so far have investigated the underlying processes of portfolio entrepreneurship supposed to lead to better performing firms.

2.1. Multiple business ownership in the farm sector

The parallels between multiple business ownership in the non-farm sectors and farm household pluriactivity have been noted within the small business and entrepreneurship research literature (Carter, 1999; Alsos et al., 2003; Scorsone et al., 2004). Many farm businesses combine agricultural production with other income-generating activities; indeed, pluriactivity has always been an important and distinctive feature of the farm sector (Hill, 1982; Bouquet, 1985; Gasson et al., 1988; Bryden et al., 1992). Eikeland and Lie's (1999) analysis based in rural Norway argued for differentiation in concepts of pluriactivity, using Fuller's (1990) distinction between 'making jobs' (founding and operating additional enterprises) and 'taking jobs' (wage earning). Eikeland and Lie (1999) reported that more than two-thirds (69%) of Norwegian farms were pluriactive and, of these, the majority (51%) focused on additional business activities rather than paid employment.

The frequency of pluriactivity in the Nordic countries has been found to vary between regions and over time (Brox and Seierstad, 1966; Brox, 1984; Jervell, 1999). While the dominant tendency in agricultural development has been specialization, the macro-level trend is now

diversification—usually adding-on branches of production. Many farmers chose to start an additional enterprise besides the farm business to facilitate the diversification attempt (Djurfeldt and Waldenström, 1999; Kaikkonen, 2005). Estimates suggest that in 2002 Norwegian farmers collectively spent 19,000 man-years operating additional enterprises, compared with about 25,000 man-years spent in milk production (Rønning, 2004). Nordic research on pluriactivity has often viewed industrial pluriactivity as a survival strategy in rural areas with few other opportunities for income-generating activities (Kaikkonen, 2005). Eike-land (1999), however, argued that industrial pluriactivity is also seen in areas with plenty of income-generating options. Thus, the combination of farming with one or more additional business ventures may be not only a survival strategy, but also the preferred choice.

While farm household pluriactivity has commanded more research attention than multiple business ownership in the non-farm sectors, the parallels are clear. Small business and entrepreneurship researchers have only relatively recently been alerted to the rich literature exploring market, enterprise and income diversification within small, family farming (Carter, 1996; Carter and Ram, 2003). In contrast, there have been long-standing calls by rural scholars highlighting the potential benefits that may accrue from crossing disciplinary boundaries (Newby, 1982) and analysing farms and farm-based pluriactivity in terms of small business and entrepreneurship paradigms (Friedmann, 1986; Gasson et al., 1988; Bryden et al., 1992; Hill, 1993). This is taken into consideration in this paper.

2.2. *Resource-based perspective*

Building on the resource-based perspective, this study examines how specific resource bundles contribute to performance, by focusing on the resources transferred from the original business to the new venture. Penrose's (1959) theory of the growth of the firm predicated that firm growth depended on the creation of an organization that structures the growth of knowledge, and the rate and direction of growth are both strongly influenced by that organization. This approach, developed by strategic management theorists into a resource-based perspective (Wernerfelt, 1984; Conner, 1991), has been successfully applied in an entrepreneurship setting (Dollinger, 1995; Greene et al., 1999; Rotefoss, 2001). The resource-based perspective views organizations as consisting of heterogeneous bundles of resources. Each firm is unique in the sense that it creates its own capabilities from its particular and constantly changing socially organized set of skills. The skills of the firm are inseparable from the skills of its managers and their pattern of experience, and thus change over time in patterns that cannot be pre-determined. By combining resource bundles in specific ways, a firm creates unique capabilities and develops sustainable competitive advantage. Resource bundles include both material and

non-material assets controlled by the firm, such as physical resources, organizational resources, financial resources, human capital resources and social resources (Barney, 1991; Greene and Brown, 1997).

When starting a new business, multiple business owners almost certainly make use of resources made available through their existing business. These resources may include knowledge resources that accrue from experiential learning; organizational resources such as routines, employees and networks of the existing businesses; physical resources such as buildings and equipment; and financial resources in terms of equity, working capital and capital assets such as premises (MacMillan, 1986; Birley and Westhead, 1993; Reuber and Fisher, 1999; Westhead et al., 2004). While the literature has focused particularly on the transfer of experiential knowledge, Carter's (1999) analysis of portfolio entrepreneurship in the UK farming sector suggested that the availability of physical assets such as land and buildings is crucial in enabling the development of business opportunities. Resources may be transferred from the farm to the new business or shared between enterprises, and it is often difficult to distinguish between them. For the purpose of this study, the term 'resource transfer' accommodates both transferred and shared resources.

A resource-based perspective suggests that multiple business owners have an advantage over their inexperienced counterparts, being able to access and mobilize proven business resources. Yet the assumption that resource transfer materializes into superior performance in the new venture has yet to be proven. Mosakowski (2002) criticized the resource-based view for its focus on the positive consequences of resources, arguing that a firm's resource endowments may favour, but equally may also impair the ability to discover and exploit new business opportunities. Four costs associated with resource endowments were identified: core rigidities, reduced experimentation, reduced incentive intensity and increased strategic transparency (Mosakowski, 2002). Drawing from a larger resource-base is not necessarily a competitive advantage, therefore. While in some ventures resource transfer may contribute to enhanced performance, in others resource transfer may have a negative impact, derived from a 'liability of staleness', since the resources available from the original firm are not always suitable for the new venture (Starr and Bygrave, 1992). The possibility of resource transfer having both positive and negative impacts on performance may, in fact, be one reason why previous studies have failed to find empirical support for the presumed advantage of experienced entrepreneurs.

This study was designed to investigate resource transfer within the farm sector, focusing on the extent of resource transfer from originating farm business into new ventures and the subsequent effect on new venture performance. There were three specific research questions:

1. To what extent are different types of resources transferred from the farm business into the new venture?

2. To what extent does the resource richness of the farm influence the resources that are transferred?
3. Which transferred resources, if any, are associated with enhanced performance in the new venture?

3. Methodology

In common with most European countries, there have been great changes in the Norwegian agriculture sector. Being outside of the EU, the restructuring process has been slower and Norwegian farms are still relatively small compared with other European countries. The vast majority are family owned and operated and most employ only family labour. It is also quite usual for one or more individuals in the farm household to be engaged in off-farm employment. The labour market in rural areas of Norway has probably given better access to waged jobs than in other parts of Europe. In particular, a large public sector has been an important source of full-time and part-time employment for farm women. Over the past decade, a policy orientation towards entrepreneurship in agriculture has intensified, stimulating the use of farm resources in new business activities, such as tourism, food processing and caring industries. Farmers are encouraged to engage in entrepreneurial activities and to start new business ventures in addition to their farm production.

The sample frame was drawn from the agriculture census (1999), including only the farms still registered as active in 2002. From this sample frame, a representative sample of 3018 farm households from all regions of Norway was selected. The survey instrument was designed by the research team and administered by postal mail-out by Statistics of Norway, in Spring 2002. From the original sample, 21 questionnaires were returned because of farm closure and excluded from the population, and 1018 completed questionnaires were returned, resulting in a usable response rate of 34%. For this study, only data drawn from multiple business owners was used. Multiple business owners were defined as respondents who own and manage at least one business venture in addition to their farm business. Additional business ventures were included if they entailed activities other than traditional farming, commanded an annual turnover larger than NOK 30,000¹ owned and were managed by the respondent. After excluding cases with missing data on the variables used for this paper, 207 cases were left for analysis.

New business ventures were categorized according to their industry relation to farming into the following: (1) unrelated to farming, (2) farm-based diversification, (3) downstream integration from farming and (4) upstream integration from farming. For some purposes only the dummy variable "related to farming" are used, giving category 1 value zero and categories 2–4 value one. Following univariate analysis, four composite variables

and measures were developed for the purpose of the multivariate analysis:

3.1. Profitability

The dependent variable is an additive scale based on three items. Respondents were asked to estimate the profitability of the new business activity over the past 3 years as compared to (a) their own goals, (b) similar small businesses and (c) other businesses in the same industry. A five-point Likert-type scale ranging from "much poorer" to "much better" was used to measure each of these items. The items loaded on the same factor in a principal component analysis with an eigenvalue of 2.241, explaining 74% of the variance. The Cronbach's α value was .83.

3.2. Resource transfer

This was measured using 15 items: six related to the transfer of knowledge generated from the farm; three related to the transfer of physical resources from the farm and six related to the transfer of organizational resources from the farm. Respondents were asked to estimate the extent to which the new business makes use of the resources of the original farm business. A five-point Likert-type scale ranging from "not at all" to "to a very large extent" was used for these measures. Some of these items were highly correlated. A principal component analysis revealed three underlying factors: the transfer of knowledge resources, physical resources and organizational resources (see Table 1). The transfer of knowledge resources included six items all describing the transfer of various categories of knowledge (Cronbach's $\alpha = .8792$). The transfer of physical resources included three items all describing the use of various categories of premises (Cronbach's $\alpha = .7655$). The transfer of organizational resources included six variables: four of which described the transfer of network and contacts, one the transfer of production skills and one the transfer of farm equipment (Cronbach's $\alpha = .8251$). It could be expected that production skills relate to knowledge resources and that farm equipment relates to physical resources. When these two items load on the factor describing organizational resources, we interpret these two items as being specific to farming activity and thus the farm business organization. In this sense, they differ from general knowledge and physical resources. Three new variables based on the factor scores were produced. These variables were used in the regression analysis. Since the variable 'organizational resources' showed a skewed distribution, it was transformed by the formula $\ln(x+3)$.

3.3. Resource richness

The resource richness of the farm business was measured by four variables: farm size in terms of land area (decares) in use; the previous year's sales turnover; the previous

¹Approximately € 3800. NOK 30,000 equals the limit for VAT registration in Norway.

Table 1
Principal component analysis: resource transfer from originating business

	Knowledge resources	Organizational resources	Physical resources
Calculation and financial management knowledge	.837		
General business operations knowledge	.824		
Financing knowledge	.771		
Pricing knowledge	.730		
Sales and marketing knowledge	.711		
Quality management knowledge	.583		
Suppliers		.753	
Distribution channels		.742	
Business idea from network		.699	
Production skills		.664	
Farm equipment		.626	
Networks		.612	
Sales premises			.821
Production premises			.808
Office premises			.799
Eigenvalue	3.705	3.212	2.326
% Of variance	24.701	21.416	15.508
Cumulative % of variance	24.701	46.117	61.625
<i>Reliability test of scales</i>			
Chronbach's α	.8792	.8251	.7655
Mean correlation between items	.5481	.4402	.5211

Factor loadings less than .5 are suppressed.

year's operational profits; and a dummy variable indicating livestock. Because of the land area and capital requirements associated with livestock, these farms are generally regarded as more resource rich than arable farms. The three metric variables were all skewed, so a double square root (X^{-4}) transformation was conducted to satisfy the normal distribution criterion.

3.4. Motivation

The motivation for starting the new business venture was measured using nine items. Respondents were asked to state the extent to which they agreed with statements regarding motivations for new business start-up on a five-point Likert-type scale ranging from "totally disagree" to "totally agree". A principal component analysis revealed three motivation factors (see Table 2). Three new variables were computed based on the factor scores: idea-oriented motivation; employment-oriented motivation; and income-oriented motivation. Idea-oriented motivation and income-oriented motivation were both transformed by the formula $(x+4)^2$ due to a skewed distribution.

4. Results

4.1. Resource transfer from originating farm into to new business venture

The first research question concerned the extent of resource transfer from the farm business into the new venture. This was explored using descriptive statistics (see

Table 3). Means and standard deviations were calculated for each of the items within the three resource categories (knowledge, physical and organizational) with potential for transfer from the original farm into the new venture. The results indicate that there is extensive transfer of resources from the originating farm into the new venture; however, some resources are more commonly transferred than others. Of the six knowledge-based resources, the three most frequently transferred into the new venture are calculation and financial management (mean 3.30), general business operations (mean 3.24) and financing (mean 3.11). Interestingly, knowledge about sales and marketing (mean 2.38) was the least likely to be transferred into the new venture. This may be because the sales and distribution system for farm products in Norway has resulted in practically no contact between the farmer and the market for farm products, and hence has removed farmers' experience from and knowledge about sales and marketing. The results also show a considerable transfer of physical resources from the original business into the new venture. Particularly noticeable is the use of farm office premises that are used to accommodate the new venture (mean 3.43). The transfer of organizational resources, including farm equipment and production skills, is less comprehensive. Even the organizational resources that showed the highest levels of transfer; farm equipment (mean 2.60), networks (mean 2.53) and production skills (mean 2.52) were transferred to a lesser extent than physical resources and most types of knowledge resources. It is also notable that existing distribution channels (mean 1.57) and suppliers (mean 1.95) were seldom transferred into the new venture,

Table 2
Principal component analysis: motivation for new business start-up

	Idea-oriented motivation	Employment-oriented motivation	Income-oriented motivation
I/we saw an opportunity in the market	.771		
I/we wanted to utilize our own resources and abilities	.719		
I/we had a good business idea	.677		
I/we wanted to create more jobs on the farm		.818	
I/we wanted to make more efficient use of the farm resources		.747	
It was difficult to find a good job	-.430	.549	
I/we wanted to create more activity in the local area	.421	.427	
I/we needed additional income to be able to continue the farming activities			.904
I/we needed more income than the farm can supply			.858
Eigenvalue	2.131	1.832	1.716
% Of variance	23.678	20.358	19.068
Cumulative % of variance	23.678	44.036	63.105
<i>Reliability test of scales</i>			
Chronbach's α	.6985	.6004	.6203
Mean correlation between items	.3667	.2730	.3526

Factor loadings less than .4 are suppressed.

Table 3
Means and ANOVA: resource transfer

Resources transferred	All new firms		Related Mean	Not related Mean	F-value
	mean	S.D.			
<i>Farm-based knowledge</i>					
Calculation and financial management	3.30	1.25	3.58	2.89	16.229*
General business operations	3.24	1.25	3.42	2.98	6.421**
Financing	3.11	1.31	3.40	2.69	15.431*
Quality management	2.84	1.39	3.13	2.41	14.180*
Pricing	2.65	1.24	2.95	2.20	19.386*
Sales and marketing	2.38	1.20	2.52	2.16	4.718**
<i>Farm-based physical resources</i>					
Office premises	3.43	1.71	3.65	3.12	4.730**
Sales premises	2.79	1.67	3.00	2.48	4.861**
Production premises	2.63	1.69	2.94	2.16	11.320*
<i>Farm-based organizational resources</i>					
Farm equipment	2.60	1.61	3.13	1.81	39.675*
Networks	2.53	1.41	2.76	2.18	8.557**
Production skills	2.52	1.43	2.90	1.96	23.110*
Business idea from network	1.99	1.32	2.29	1.54	17.074*
Suppliers	1.95	1.35	2.23	1.53	13.921*
Distribution channels	1.57	1.05	1.77	1.29	10.672*
N	207		124	83	

Statistic significance: ** indicates $p < .05$ and * indicates $p < .01$.

and that new business ideas seldom discovered through existing farm-based networks (mean 1.99).

These results demonstrate that farm resources are often transferred into new business ventures. However, the extent to which resources can be transferred and their relevance to the new venture may depend on the compatibility between the original and the new venture. In order to determine

compatibility, new businesses were categorized based on the extent to which they were related to farming in terms of vertical or horizontal expansion. Means were calculated for each of these groups and one-way ANOVA analyses used to test for differences between the groups (see Table 3). As expected, the extent of resource transfer was greater when the activities of the new venture were in some way related

Table 4
Correlations (Spearman's ρ): resource richness and resource transfer

Resources transferred	Farm size	Livestock farm	Farm turnover	Operating profits farm
<i>Farm-based knowledge</i>				
Calculation and financial management	.272*	.122	.295*	.279*
General business operation	.270*	.222*	.246*	.280*
Financing	.254*	.137***	.282*	.229*
Quality management	.140***	.261*	.156**	.184**
Pricing	.131***	.223*	.168**	.153**
Sales and marketing	.057	.175**	.014	.040
<i>Farm-based physical resources</i>				
Office premises	.230*	.012	.274*	.228*
Sales premises	.033	.103	.079	.028
Production premises	-.007	.032	.051	.072
<i>Farm-based organizational resources</i>				
Farm equipment	.218*	.260*	.257*	.210*
Networks	.212*	.167**	.142***	.137***
Production skills	.239*	.211*	.227*	.232*
Business idea from network	.137***	.131***	.097	.155**
Suppliers	.182**	.204*	.237*	.194**
Distribution channels	.053	.139***	.036	-.001

$N = 166$. Statistic significance: *** indicates $p < .10$, ** indicates $p < .05$ and * indicates $p < .01$.

to farming. This proved to be statistically significant for all of the different types of resource transfers measured in this study.

4.2. Resource richness and resource transfer

The second research question explored the extent to which the resource richness of the farm influenced the transfer of resources into the new venture. Correlations were calculated to explore this relationship (see Table 4). Four measures of resource richness were used: farm size (land area); whether or not it was a livestock farm; the previous year's sales turnover; and the previous year's operating profits. Since the variables were not normally distributed, Spearman's ρ was used as the correlation coefficient. The results show statistically significant correlations between the resource richness of the farm and the transfer of resources into the new venture. This was particularly apparent in the transfer of knowledge resources (with the exception of sales and marketing) and organizational resources (with the exception of distribution channels). Interestingly, the correlations were generally low between the transfer of physical resources into the new venture and the resource richness of the originating business. Only the transfer of office premises showed statistically significant correlations with three of the resource richness measures.

4.3. The effects of resource transfer on new venture performance

The results of the first two research questions demonstrate both a substantial transfer of resources from farms

into new business ventures and that the extent of resource transfer is dependent on the resource richness of the originating farm business. The third research question examined whether resource transfer leads to enhanced performance in the new venture, and if so, which transferred resources most affect new venture performance. Since resource transfer is most extensive when the new business venture is in some way related to farming, the analysis focused only on new ventures operating in a related activity.

A hierarchical linear regression analysis was conducted to investigate the relationship between resource transfer and profitability (see Table 5). In model 1, the control variables farm size (representing resource richness) and business type were included. This model gave an adjusted R^2 of .036 and was not statistically significant. Thus, the resource richness of the farm and type of new business does not alone explain profitability differences in the new businesses.

In the second step, variables representing the motivation for the new business venture were included in the model (model 2). These variables added an R^2 change of .087 up to .123, and the model became statistically significant. The only motivation variable that was statistically significant in the model was 'idea-oriented motivation', indicating that new businesses started on the basis of 'a good business idea' or 'an identified market opportunity' performed better when it came to profitability.

In the third step, the three resource transfer scales were included in the model (model 3). The R^2 increased by .103 up to .226, providing a substantial amount of explanation of variance in the profitability measure. This model was highly statistically significant. All of the resource scales

Table 5
Hierarchical linear regression: resource transfer and profitability

	Model 1	Model 2	Model 3
<i>Control variables</i>			
Farm size	.046	.038	.086
Business type: forward integration	-.173***	-.155	-.228**
<i>Motivation</i>			
Idea oriented		.267*	.237**
Growth oriented		-.105	-.114
Need oriented		.140	.138
<i>Resources</i>			
Knowledge			-.172***
Physical			.161***
Organizational			-.211**
<i>Model characteristics</i>			
F-value	2.005	2.939**	3.717*
Adjusted R ²	.036	.123	.226
ΔR ²		.087	.103

N = 111. Statistic significance: *** indicates $p < .10$, ** indicates $p < .05$ and * indicates $p < .01$.

emerged as statistically significant in the model, but two of them only at the 10% level. Physical resources showed a significant positive effect on profitability, while knowledge resources and organizational resources emerged as having a negative effect. This model demonstrates a complex relationship between resource transfer and new venture performance, with both beneficial and detrimental effects.

5. Conclusion

Profound changes in the strategic environment of farming have come from the demand side, where changing consumer preferences and growing retail concentration have led farmers towards the development of a more market orientated approach, and from changes in the policy and regulatory environment where policy liberalization has pushed farmers towards a re-assessment of their strategic management. A major strategic choice for farmers is the decision to specialize in the production of food or to combine food production with other business interests. This choice influences how growth is achieved. For farmers choosing to combine food production with non-food activities, decisions must be made regarding which business resource or combination of resources are used in the diversification process. Resources available to farmers include their personal skills, resources and assets. Importantly, farmers who chose to diversify their business interests also retain control over the originating farm and may also chose to maximize capacity in that business as well.

The results of this study suggest that there is a substantial transfer of resources from farm businesses into new ventures within the Norwegian farm sector. Resource transfer is particularly apparent when the activities of the

new business venture are closely related to the farm business, in terms of horizontal or vertical expansion, and is greater when the farm is relatively resource rich. This implies that farmers who have been successful in creating one well functioning and resource rich business are able to transfer a greater volume of resources into their new ventures. This is in line with findings in other industries (Alsos et al., 2004).

Further, these findings suggest that many farmers are already engaging in activities advocated by Norwegian "Agriculture Plus" policies; utilizing existing farm resources in new business development. These new farm-based ventures may result in greater value creation from farm resources, thus contributing to economic development in rural areas.

How and in what ways resource transfer affects the profitability of the new venture is a more complex and intractable issue. When the activities of the new venture are closely related to the originating farm business, resource transfer appears to explain a substantial amount of difference in the profitability of new ventures. Future studies should, therefore, take into account the relationship between existing and new ventures in their analyses of multiple business owners in both the farm and the non-farm sectors. To date, research studies have shied away from direct examination of the relationship between the activities of existing firms and new ventures. The results presented here suggest this relationship may be crucial to our understanding of the potential advantages of multiple business owners and how the performance of their ventures may be inter-related. Such research would also greatly contribute to our knowledge of the more processual aspects of multiple business ownership and pluriactive farming.

Resource transfer was both positively and negatively related to the new venture's profitability performance. While the transfer of physical resources appeared to enhance the new venture's profitability, the transfer of knowledge and organizational resources appeared to reduce it. In part, this can be explained by the particular characteristics of the Norwegian farm sector. The sector is still highly regulated, the main policy implements being production quotas, relatively large subsidies and import restrictions. Annual negotiations for subsidy regimes taking the form and rhetoric of wage negotiations illustrate the political and administrative, rather than market driven, status of the sector. A long tradition of large-scale cooperatives with the obligation to buy total production and links between farm production and fixed prices has resulted in farmers having little or no contact with the market. As a consequence, most Norwegian farmers have little knowledge of marketing, sales, pricing and distribution. It is not surprising, therefore, that pluriactive farmers transfer few of these types of knowledge resources to their new ventures. The finding that the transfer of these types of knowledge resources has a negative impact on new venture performance can be explained by 'liabilities of staleness' (Starr and Bygrave, 1992) or overconfidence

(Westhead et al., 2004). Extensive transfer of knowledge resources may indicate that farmers think they know what is needed and therefore do not act to gain new knowledge. Transfer of existing knowledge resources may lead to reduced experimentation and existing knowledge may be core rigidity rather than core resource (Mosakowski, 2002).

Similar arguments can be advanced related to the negative impact of the transfer of organizational resources, including resources such as contact with distribution channels, suppliers and networks. Organizational resources here include farm equipment and production skills, both highly specialized for farming activities. A transfer of these highly specialized resources to new businesses may not be appropriate to the different needs and requirements of other types of production. This may illustrate the value of specialized knowledge and other resources as being highly context dependent (Starr and Bygrave, 1992). The value of a resource will differ depending on the type of business, business strategy, the other resources controlled by the business and the environment (Chandler and Hanks, 1994). While some farm resources may have large value to new business start-ups, others may not be applicable to the demands of the new business and should not be transferred.

These results suggest that farmers should consider carefully which of their current resources are applicable for their new business, and where they should renew their resource base to provide the strongest start for a new and profitable business. In particular, they should evaluate their knowledge resources critically, as it appears that the knowledge and experience they have gained as farmers is insufficient for the challenges a new business presents. Further, networks, contacts and other types of organizational resources should also be assessed. Nevertheless, some resource transfer is of great value for the new business, significantly increasing its performance. The ability to transfer such resources, in particular general physical resources, constitutes an important competitive advantage to farmers engaging in new business ventures.

These findings also have implications for policy makers. When identifying farm resources as a foundation for new business development (St.meld. no. 19, 1999/2000, p. 81), it should be taken into account that these resources are not necessarily appropriate to new ventures outside farming. In addition, policy makers should stress the need for supplementing the resource base through the acquisition of new resources. Programs including knowledge and network development may be important initiatives in the "Agriculture plus" policy.

These findings are most likely context and sector specific. Notwithstanding this, the complexity of the relationship between resource transfer and new venture performance, in particular the finding that resource transfer can have negative as well as positive effects, is an important finding that might equally apply to other sectors and contexts. The research literature has often speculated on the performance advantages of experienced business owners, but has failed

to demonstrate it empirically. These results, revealing both positive and negative impacts of resource transfer, question the long-held assumption that experienced entrepreneurs have performance advantages. As Starr and Bygrave (1992) argued and as this study has empirically demonstrated, there are clearly both assets and liabilities connected to the entrepreneurial experience.

Future research into multiple business ownership in the farm and non-farm sectors should focus on the processes involved in establishing an additional business venture and investigate what happens when existing owner-managers start new businesses in addition to their existing one(s). This will require the use of qualitative, in-depth analysis focusing on the experiences of a variety of farm households locating in different types of rural setting. Researchers may also take into consideration both the effects of resource transfer on the new venture and the potential effects of resource depletion on the originating farm business. Given the contextual specificity of this study, future research may also be advised to consider how specific rural knowledge, property and values construct the conditions for new economic activities in different types of rural settings.

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