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1. Introduction

Research in the business management literature among small, medium-sized, and large firms, shows a positive relationship between entrepreneurial proclivity (EP) and performance (Lumpkin and Dess, 2001; Madsen, 2007; Matsuno, Mentzer, and Ozsomer, 2002; Slater and Narver, 2000; Wiklund and Shepherd, 2003, 2005). Entrepreneurial proclivity, i.e. the propensity to act entrepreneurial, enables firms to respond to changes in their environment more effectively than competitors do, for instance through strategic renewal, innovation or growth. Firms, therefore, are advised to develop entrepreneurial proclivity. Likewise entrepreneurial proclivity is propagated for farmers and horticultural growers (Bergevoet *et al.*, 2004; Clark, 2009; Knudson *et al.*, 2004; Morgan *et al.*, 2009; Olsson, 1988; Phillipson *et al.*, 2004; Pyysiäinen *et al.*, 2006). Empirical evidence for a positive relationship between EP and performance among farmers or horticultural growers, however, is scant, with a few exceptions (Bergevoet *et al.*, 2004; Verhees and Meulenbergh, 2004).

The importance of EP for the performance of farmers and horticultural growers is questioned. First, EP may only improve performance in dynamic environments (Wiklund and Shepherd, 2005). For firms that serve markets for commodities and that operate in static environments, such as farms do, the relationship between EP and performance may be negative (Bjerke and Hultman, 2002; Wiklund and Shepherd, 2005). Markets for agricultural produce, however, are getting more dynamic (Clark, 2009; Olsson, 1988; Phillipson *et al.*, 2004). Second, considerable variance in the positive influence of EP on performance across studies is unexplained and thus empirical evidence for a positive relationship between EP and performance remains ambiguous (Rauch *et al.*, 2009). Third, in empirical research EP is often defined at the level of the organization as an organizational characteristic or culture. These definitions are not directly applicable to micro firms, such as farms and greenhouses where one owner-manager makes most decisions and often does most of the work himself.

Arguments for a positive relationship between EP and performance resemble the arguments for a positive relationship between market orientation (MO) and performance. Market orientation reflects a firm's propensity to adopt the marketing concept, entailing the belief that the best way for firms to achieve its objectives is to satisfy customers more effectively and efficiently than competitors do. MO emphasizes responsiveness to market dynamics (i.e. customers and competitors) while EP emphasizes responsiveness to a broader range of environmental forces, including new technologies, legislation and societal concerns.

Market-oriented firms are expected to perform particularly well in highly competitive and turbulent market environments, because market responsiveness is important in such environments (Grewal and Tansuhaj, 2001; Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). In technologically turbulent environments a market orientation is not expected to contribute to performance, because R&D driven innovation then becomes more important (Grewal and Tansuhaj, 2001; Jaworski and Kohli, 1993; Kohli and Jaworski, 1990). However, empirical evidence for a moderating influence of

environmental turbulence on the relationship between MO and performance is mixed and inconclusive (Kirca, Jayachandran, and Bearden, 2005).

This research will investigate empirically whether EP and MO contribute to the performance of farmers and horticultural growers. We test hypotheses about the relationship between EP, MO, and performance on a sample of Dutch farmers and horticultural growers. Coefficients for the relationships between EP, MO and performance are estimated across and within agricultural branches to account for differences in environmental dynamics between agricultural branches.

Results of this research show a positive influence of EP and MO on performance across agricultural branches, which supports the advice to farmers and horticultural growers to be market oriented and entrepreneurial. Some differences between branches, however, make the results ambiguous and suggestions for further research are provided.

2. Theoretical framework

Entrepreneurial proclivity is defined as ‘the organization’s predisposition to accept entrepreneurial processes, practices, and decision making, characterized by a preference for innovativeness, risk taking, and proactiveness’ (Matsuno, Mentzer, and Ozsomer, 2002). Innovativeness, in this definition, is the organization’s willingness ‘to engage in and support new ideas, novelty, experimentation, and creative processes’; it is a ‘basic willingness to depart from existing technologies or practices’ (Lumpkin and Dess, 1996). Risk taking is the organization’s willingness to commit resources to projects with a reasonable chance of costly failures. Proactiveness is defined as the organization’s willingness to act in anticipation of future problems, customer needs, or changes in the market environment. Together these dimensions of EP allow firms to renew their organization and drive markets by offering an alternative and potentially superior customer value proposition (Matsuno, Mentzer, and Ozsomer, 2002).

Farmers’ and horticultural growers’ decision-making reflects their entrepreneurial proclivity (Bergevoet *et al.*, 2004). EP of farmers and horticultural growers, therefore, is defined as their routines, decision making, and practices characterized by a preference for innovativeness, risk taking, and proactiveness. Innovativeness, risk taking, and proactiveness are characteristics of farmers and horticultural growers that allow them to renew their businesses by offering an alternative and potentially superior customer value proposition.

Market orientation is defined from three perspectives: from a cultural, a behavioral, and a capabilities perspective (Schindehutte, Morris, and Kocak, 2008). From a cultural perspective MO is defined as “the organization culture that most effectively and efficiently creates the necessary behavior for the creation of superior value for buyers and thus continuous superior performance for the business” (Narver and Slater, 1990). Within this perspective three behavioral components are identified: customer orientation, competitor orientation and interfunctional coordination. Customer orientation is the sufficient understanding of one's target buyers and, subsequently, the sufficient response to their needs, through which one continuously creates superior value for the buyers. Competitor orientation means that a seller must understand the short-term strengths and weaknesses, as well as the long-term capabilities and strategies of both the key current competitors and the key potential competitors. Interfunctional coordination means that a seller must draw on all its resources, integrate these effectively, and adapt these when

necessary, in its continuous effort to create superior value for buyers. From a behavioral perspective MO is defined as the organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it (Kohli and Jaworski, 1990). From a capabilities perspective MO is a firm-level capability that links a firm to its external environment (Day, 1994; Hult and Ketchen, 2001; Kyriakopoulos and Moorman, 2004).

To understand MO of farmers and horticultural growers it is important to understand marketing in small firms (SFs). Marketing is a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders. Marketing as an academic discipline has focused on large corporate organizations and has overlooked SFs (Hills, Hultman, and Miles, 2008). However, SFs are different from large firms and, thus, marketing in such firms is likely to be different too.

Compared to large firms, SFs and thus most farmers and horticultural growers, are more likely to (1) lack economies of scale, (2) experience severe resource constraints, (3) have a limited geographic market presence, (4) have a limited market image, (5) have little brand loyalty or market share, (6) have little specialized management, (7) make decisions under more imperfect information conditions, (8) have limited time per major management task, (9) rarely have professional managers, and (10) have a mixture of business and personal goals (Bjerke and Hultman, 2002; Carson et al., 1995; Carson and Gilmore, 2000; Hills, Hultman, and Miles, 2008; O'Dwyer, Gilmore, and Carson, 2009).

To overcome some of these limitations marketing in SFs is a personal, social activity, based on close customer relationships (Bjerke and Hultman, 2002). It is a personal activity and, thus, dominated by competences of the entrepreneur, owner, or manager (Carson and Gilmore, 2000). Compared to marketing in large firms entrepreneurial SFs are more likely to (1) have a superior understanding of customer needs, market trends, and market positioning (Carson and Gilmore, 2000; Hills, Hultman, and Miles, 2008; O'Dwyer, Gilmore, and Carson, 2009) (2) create value adding differences in their marketing programs rather than adopting a cost-based advantage (Carson and Gilmore, 2000; Hills, Hultman, and Miles, 2008; O'Dwyer, Gilmore, and Carson, 2009) (3) exploit and create turbulent markets (Kirzner, 1974; Schumpeter, 1934) (4) lack rational, sequential, formal strategic marketing planning, but constantly adapt to opportunities to improve customer value (Carson and Gilmore, 2000; Hills, Hultman, and Miles, 2008; O'Dwyer, Gilmore, and Carson, 2009) (5) seize opportunities through the innovation of products, processes, or strategy (Covin and Miles, 1999; O'Dwyer, Gilmore, and Carson, 2009), (6) identify opportunities intuitively and subjectively, rather than via formalized market research activities (Bjerke and Hultman, 2002; Carson and Gilmore, 2000; Hills, Hultman, and Miles, 2008; O'Dwyer, Gilmore, and Carson, 2009), (7) have highly integrated "structures" for decision-making, which allows for rapid decision-making (Hills, Hultman, and Miles, 2008), and mix personal and financial goals (Carson and Gilmore, 2000; O'Dwyer, Gilmore, and Carson, 2009). Moreover, marketing is considered as the core business function by many SF owner-managers (Hills, Hultman, and Miles, 2008).

3. Model and hypotheses

Figure 1 shows the model we propose. The rationale for a positive relationship between EP and performance lies in dynamic business environments. Product life cycles are getting shorter and, therefore, seeking and acting on new opportunities is getting more and more important for firms to be successful (Hult, Snow, and Kandemir, 2003; Rauch *et al.*, 2009; Wiklund and Shepherd, 2003, 2005). Entrepreneurial firms are better positioned to take advantage of a dynamic business environment because they want to drive markets by offering an alternative and potentially superior customer value proposition (Zahra, 1993a, 1993b; Zahra and Covin, 1995). Several empirical studies find support for a positive impact of EP on performance (Matsuno, Mentzer, and Ozsomer, 2002; Slater and Narver, 2000; Wiklund and Shepherd, 2005; Zahra, 1991; Zahra and Covin, 1995).

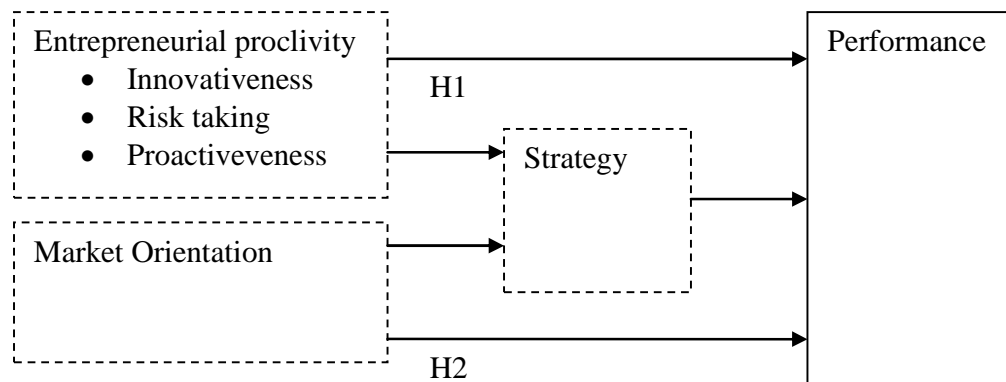


Figure 1. The influence of entrepreneurial proclivity and market orientation on performance of farmers and horticultural growers

EP is hypothesized to have a positive influence on the performance of farmers and horticultural growers, because their business environment is dynamic. First, agricultural markets have changed from supplier markets to consumer markets, and from local or regional markets to global markets (Meulenbergh, 1997). Consequently, entrepreneurial farmers respond to global changes in consumer needs, wants, and demand, and to strategies from global competitors. EP is assumed to increase responsiveness and thus performance. Second, dynamic business environments outside agricultural markets also create opportunities for farmers. Consequently, some farmers diversify their business by starting additional business activities such as recreational activities and farm shops (Carter, 1998; Clark, 2009; Pyysiäinen *et al.*, 2006). Third, societal groups are powerful and farmers need to respond to concerns about the societal impact of their activities (Grunert *et al.*, 1996a; Grunert *et al.*, 1996b; Knudson *et al.*, 2004). EP is assumed to stimulate a farmer's response to such concerns in order to keep his 'licence to produce'. Finally, advances in technology offer opportunities for process innovation. EP is expected to stimulate early adoption of such innovations and the agricultural treadmill effect explains that early adopters profit from cost reducing innovations (Cochrane, 1979).

Hypothesis 1: Entrepreneurial proclivity of farmers and horticultural growers has a positive influence on their performance.

The positive influence of market orientation (MO) on performance is widely acknowledged (Cano, Carrillat, and Jaramillo, 2004; Kirca, Jayachandran, and Bearden, 2005). Market orientation allows a firm to adapt to its market environment and thus outperform a firm that is not adapted to its market environment. Consequently, the effect of a market oriented culture and market information processing on performance is mediated by organizational responsiveness (Hult, Ketchen, and Slater, 2005). More specific market-oriented firms rapidly adapt to customer needs, trying to outperform competitors by creating more value for customers than competitors do (Narver and Slater, 1990). Consequently, market orientation has a positive influence on quality, customer loyalty and customer satisfaction (Kirca, Jayachandran, and Bearden, 2005).

Market orientation also increases performance for small firms (Kara, Spillan, and DeShields, 2005; Li et al., 2008; Pelham, 2000; Verhees and Meulenbergh, 2004). The rationale for a positive relationship between MO and performance for small firms is the same as for large firms: market-oriented small firms continuously try to create superior value for customers and thus pay attention to and respond to changes in the market environment in which they operate. MO is considered even more important for SFs than for large firms because SFs cannot achieve competitive advantage through economies of scale (O'Dwyer, Gilmore, and Carson, 2009).

Hypothesis 2: Market orientation of farmers and horticultural growers has a positive influence on performance.

Based on the mission, goals and preferences of a farmer, opportunities in the firm's external environment and the firm's strength and weaknesses an appropriate farm strategy for creating business value will be selected and executed (e.g., low cost, integration of other supply-chain stages, product diversification). EP and MO are expected to influence the assessment and selection of an appropriate strategy (Morgan, Vorhies, and Mason, 2009). Some of these strategies may turn out to be more lucrative than others, irrespective of the EP and MO of the farmer. Thus it is hypothesized that

Hypothesis 3a: A farmer's or horticultural grower's strategy mediates the relationship between entrepreneurial proclivity and performance.

Hypothesis 3b: A farmer's or horticultural grower's strategy mediates the relationship between market orientation and performance.

4. Methods

4.1 Sample

A sample of 1359 firms was drawn from firms participating in the Dutch Farm Accountancy Data Network (FADN). This accountancy network provides a representative sample of all Dutch farmers and horticultural growers.

The respondents received a questionnaire by regular mail, including an introductory letter to motivate them to complete the questionnaire. A return envelope was provided with postage and return address. It was also possible for them to complete the questionnaire online. The questionnaires were sent to the farmers and horticultural growers in April 2010. After one month, 391 questionnaires were returned. A reminder was sent in June 2010. After 3 months 621 questionnaires were returned and 597 questionnaires did not have any missing values. These 597 questionnaires were used for the analyses.

In addition, 18 agricultural experts (e.g. agricultural economists, bankers, government officials, farmers' representatives, and management consultants) were asked to assess each agricultural branch on market dynamics, competition, and technological dynamics, using existing scales from the literature.

4.2 Measures

All the concepts in our model were measured using questionnaires. The questionnaires were first developed in English because most scales used were originally in English. Then the questionnaire was translated by a native Dutch person. Two rounds of personal interviews were conducted to test whether the questions were understandable for farmers and horticultural growers operating in different sectors (such as greenhouse horticulture, arable farming, dairy farming and intensive livestock farming). Questions were adapted based on remarks from respondents and first quantitative analyses to test for the dimensionality and reliability of the measures. Appendix A gives the statements used for each measure.

Respondents rated the statements on a 7-point Likert scale anchored by 'not agree' (1) versus 'agree' (7). For all measures average scores are used in further analyses.

A description of the measurement properties is provided in Table 1a. Measurement properties are assessed with principal component analysis (PCA) and reliability analysis (Cronbach's Alpha). The PCA of each measure should provide support for a one component solution. Indications for a one component solution are a scree plot with a sharp decrease in Eigenvalue from the first to the second component and a gradual decrease in Eigenvalues from the second component onwards; an Eigenvalue of the second component, which is smaller than one, and a first component that accounts for a minimum of 50% of the variance in the items (Hair, Anderson, and Tatham, 1992). Moreover, all items should have a loading on the first component (before rotation) higher than 0.6. Finally the reliability of the scale as indicated by Cronbach's Alpha should be higher than 0.6.

Table 1a measurement scale properties

Scale	# of items	Eigenvalue second component	Variance accounted for	Lowest item loading	Cronbach's Alpha
<i>Entrepreneurial proclivity</i>	3	0.38	82%	0.86	0.89
• Innovativeness	6	0.60	67%	0.76	0.90
• Risk taking	9	1.25	57%	0.66	0.91
• Proactiveness	9	0.73	69%	0.78	0.94
<i>Market Orientation</i>	9	0.91	62%	0.61	0.92
<i>Performance</i>	5	0.62	77%	0.83	0.92
<i>Strategy (n=9x617)</i>	3	0.34	81%	0.88	0.89
• Reduce costs	3	0.43	77%	0.86	0.85
• Increase scale	3	0.24	87%	0.92	0.93
• Increase quality	3	0.45	78%	0.82	0.86
• Increase price	3	0.32	82%	0.89	0.89
• Cooperate with buyers	3	0.44	80%	0.83	0.87
• Start new activities	3	0.32	84%	0.89	0.90
• Supply-chain integration	3	0.39	81%	0.86	0.88
• Decrease debts	3	0.53	66%	0.80	0.74
• Increase CSR	3	0.23	91%	0.93	0.94

All measures meet these criteria and will not be discussed further, except for ‘risk taking’ (see Table 1a). Risk taking has an Eigenvalue of the second component that is slightly above one. All other criteria, however, are met and thus all items are maintained in the measure.

The scales for market dynamics, competition, and technological dynamics were also assessed for their measurement properties, using the data obtained from the 18 agricultural experts. Table 1b shows the measurement scale properties. Each expert rated six agricultural branches and thus each scale was completed 108 times. Respondents rated the statements on a 5-point Likert scale anchored by ‘not agree’ (1) versus ‘agree’ (5). For all measures average scores are used in further analyses.

Table 1b measurement scale properties

Scale	# of items	Eigenvalue second component	Variance accounted for	Lowest item loading	Cronbach’s Alpha
<i>Environmental Dynamics</i>					
• Market Dynamics	3	0.77	60%	0.64	0.66
• Competition	3	1.00	54%	0.37	0.53
• Technological Dynamics	4	0.77	56%	0.64	0.73

One item in the competition scale had a very low loading and was discarded for further analyses.

5. Results

Column 2 in Table 2a shows the results of an ordinary least-squares (OLS) regression of performance on EP, MO, branch and strategy. EP has a positive influence on performance of farmers and horticultural growers ($b = 0.24, p < 0.01$), which confirms hypothesis 1. MO also has a positive influence on performance of farmers and horticultural growers ($b = 0.24, p < 0.01$), which confirms hypothesis 2. Strategy ($F = 3.43, p < 0.01$) influences performance of farmers and horticultural growers, but branch does not ($F = 1.35, p = 0.23$).

Table 2a: Regression of performance on entrepreneurial proclivity, market orientation, branch and strategy

	Performance				
	Overall	Arable farming		Dairy farming	
EP	0.24**	0.48**	0.48*	0.31**	0.19*
MO	0.24**	0.19	0.14	0.24**	0.18**
Size	-0.000	0.000	0.000	0.003*	0.002
Branch	n.s.				
Strategy	**	n.s.		**	
R ²	0.13	0.27	0.20	0.21	0.10
F	5.1**	3.59**	9.89**	5.09**	8.04**
N	590	120	120	226	226

n.s.= not significant i.e. $p > 0.1$; * $p < 0.05$; ** $p < 0.01$

Columns 3 to 6 of Table 2a elaborate on these results by repeating the analyses for two specific branches: arable farming and dairy farming. EP has a positive influence on performance of arable farms ($b = 0.48, p < 0.01$), which confirms hypothesis 1, also

when strategies are included as dependent variables ($b = 0.48, p < 0.01$). Strategy ($F = 1.18, p = 0.32$) does not influence the performance of arable farms. Thus strategic choices do not affect the positive influence of EP on the performance of arable farms. EP also has a positive influence on performance of dairy farms ($b = 0.19, p = 0.04$), in line with hypothesis 1. This positive influence of EP is even stronger ($b = 0.31, p < 0.01$) when Strategy is included in the model. Strategy ($F = 3.69, p < 0.01$) influences the performance of dairy farms, but the positive influence of EP on the performance of dairy farms is not mediated by strategic choices.

The relationship between MO and performance of arable farms is weak when Strategy is included in the regression model ($b = 0.19, p = 0.08$) and unclear when strategy variables are omitted. For dairy farming the effect of MO on performance is positive without strategy variables ($b = 0.18, p < 0.01$) as well as with strategy variables ($b = 0.24, p < 0.01$). The positive influence of MO on the performance of dairy farms is not mediated by strategic choices.

Table 2b: Regression performance of entrepreneurial proclivity, market orientation, branch and strategy.

	Intensive livestock		Performance Greenhouse flowers and plants		Greenhouse vegetables	
EP	0.27	0.18	-0.22	-0.24	-0.25	-0.30
MO	0.24	0.24	0.45	0.37	0.37	0.46*
Size	0.001	0.002	0.000	0.00	0.00	0.00
Strategy	n.s.		n.s.		n.s.	
R ²	0.18	0.13	0.15	0.05	0.25	0.12
F	1.14	3.29*	0.84	1.10	1.60	2.82*
N	71	71	65	65	65	65

n.s.= not significant i.e. $p > 0.1$; * $p < 0.05$; ** $p < 0.01$

The results in columns 2 and 3 of Table 2b for intensive livestock are in line with previous results for dairy farming; a positive influence of EP ($b = 0.27, p = 0.15$) and MO ($b = 0.24, p = 0.11$) on performance. However, the results are unclear because the number of respondents is limited.

The situation in greenhouse horticulture was extraordinary in 2009, the year prior to the questionnaire. Low product prices and high prices for natural gas, resulted in poor and highly variable (depending on contracts for natural gas) financial results. Consequently, the variables in our model were unable to explain performance for this branch. Results should therefore be interpreted with great caution. It is interesting, however, that EP has a negative influence in these analyses while MO has a positive influence on performance.

Table 3 shows the average scores for each agricultural branch on market dynamics, competition and technological dynamics based on the assessment of 18 agricultural experts. Average scores between branches are different for market dynamics ($F = 18.0, p < 0.01$), competition ($F = 4.2, p < 0.01$), and technological dynamics ($F = 10.5, p < 0.01$). Market dynamics are higher for horticultural growers than for farmers. Competition is more intense for horticultural growers and intensive livestock farmers

than for arable farmers and dairy farmers. Finally, technological dynamics are higher in greenhouse horticulture than in other agricultural branches.

Combined with the earlier findings, these results suggest that market dynamics (and to a lesser extent competition and technological dynamics) has a negative influence on the relationship EP and performance (i.e. the relationship is negative for branches that score high on market dynamics), which is opposite to the arguments provided to support our hypotheses. The exceptional situation in greenhouse horticulture in 2009, however, does not allow to draw conclusions.

Table 3: Environmental dynamics across agricultural branches

	Arable farming	Dairy farming	Intensive Livestock	Greenhouse horticulture (flowers and plants)	Greenhouse horticulture (vegetables)	Fruit orchards
Market dynamics	2.55	2.35	2.53	4.08	3.57	3.29
Competition	3.33	2.86	3.83	3.89	4.06	3.53
Technological dynamics	3.13	3.00	3.21	4.10	4.06	3.21

6. Conclusions and suggestions for further research

EP has a positive influence on the performance of farms, which supports the advice to be entrepreneurial. Effect sizes (i.e. correlations) in our research ($r = 0.31$) are comparable to effect sizes found for other micro firms ($r = 0.35$) and high compared to average effect sizes ($r = 0.24$) (Rauch *et al.*, 2009). Validation of these results with other research methods, however, is needed, for example, by using other indicators than the self-reported measures in this research, and by using experimental set-ups.

Our research indicates that EP had a negative and MO a positive influence on the performance of greenhouse horticulture in 2009. A hypothesis for further research may be that EP, associated with risk-taking is negative to performance in tough years whereas market orientation, associated with customer loyalty is beneficial under these circumstances. Further research should include the performance of other (more normal) years and investigate the relationship between EP and fluctuations in performance.

Strategy choice does not mediate the relationship between EP and performance, but EP influences performance independent of strategy. EP influences performance because EP increases responsiveness to changes in a firm's environment. There are very diverse mechanisms that can explain the relationship between entrepreneurial proclivity and performance of farms and horticultural growers. Further research is needed to identify these mechanisms and to clarify the role of EP.

MO has a universal positive influence on the performance of farmers and horticultural growers, which supports the advice to farmers to be market oriented. This seems to hold across different contexts. The effect size (i.e. correlations) found in our research among farmers and horticultural growers ($r = 0.49$) is high compared to mean correlations found in other researches ($r=0.32$) (Kirca, Jayachandran, and Bearden, 2005).

Appendix A

Innovativeness

- (1) If I see opportunities, I am willing to start activities that are new to me
- (2) I look for opportunities to work on something new
- (3) If I see opportunities, I am good at starting activities that are new to me
- (4) I see opportunities to work on something new
- (5) If I see opportunities, I start activities that are new to me
- (6) I am always working on something new

Risk taking

- (1) If I see opportunities, I am willing to take great risks (with chances for very high profits)
- (2) I want to have the courage to seize opportunities
- (3) If I see opportunities, I am good at taking great risks (with chances for very high profits)
- (4) I believe I have to take great financial risks to seize opportunities
- (5) I can have the courage to seize opportunities
- (6) I know how to take great financial risks to seize opportunities
- (7) If I see opportunities, I am starting to take great risks (with chances for very high profits)
- (8) I have the courage to seize opportunities
- (9) I take great financial risks to seize opportunities

Proactiveness

- (1) I am willing to start activities that other firms do not do, yet
- (2) If I see opportunities, I like to respond before other firms do
- (3) If there are opportunities, I believe I have to be one of the first firms to use them
- (4) I am good at starting activities that other firms do not do, yet
- (5) If I see opportunities, I can respond before other firms do
- (6) If there are opportunities, I know how I can be one of the first firms to use them
- (7) I start activities that other firms do not do, yet
- (8) If I see opportunities, I respond before other firms do
- (9) If there are opportunities, I am one of the first firms to use them

Performance

- (1) Compared to colleagues, I have a good profit margin on my products.
- (2) Compare to colleagues, I have good financial result with my firm
- (3) Compare to colleagues, I have a profitable firm.
- (4) I have a good income from my firm.
- (5) I get excellent financial results with my firm.

Strategy

- Cost reduction
 - (1) I like to look for possibilities to reduce costs for my firm
 - (2) I am good at reducing costs for my firm
 - (3) I am more busy with reducing costs than colleagues are
- Increase Scale
 - (1) I like to look for possibilities to increase the scale of my firm
 - (2) I am good at increasing the scale of my firm
 - (3) I am more busy with increasing the scale of my firm than colleagues are

Market dynamics

- (1) Customer wishes constantly change
- (2) Customers constantly search for new products
- (3) At one time customers are very price sensitive and next time they are not
- (4) Firms in this branch constantly supply the same customers

Competition

- (1) Competition is killing
- (2) Everything a company can deliver can almost immediately be delivered also by another company
- (3) Competition is mainly focussed on price

Technological dynamics

- (1) Technology is changing fast
- (2) Technological advances offer great opportunities
- (3) Technological advances offer great opportunities for new products
- (4) Technological advances are not spectacular

References

- Bergevoet RHM, Ondersteijn CJM, Saatkamp HW, Van Woerkum CMJ, Huirne RBM. 2004. Entrepreneurial behaviour of dutch dairy farmers under a milk quota system: Goals, objectives and attitudes. *Agricultural Systems* **80**(1): 1-21
- Bjerke B, Hultman CM. 2002. *Entrepreneurial marketing : The growth of small firms in the new economic era*. Edward Elgar: Cheltenham.
- Cano CR, Carrillat FA, Jaramillo F. 2004. A meta-analysis of the relationship between market orientation and business performance: Evidence from five continents. *International Journal of Research in Marketing* **21**(2): 179-200
- Carson D, Cromie S, McGowan P, Hill J. 1995. *Marketing and entrepreneurship in sme's: An innovative approach*. Prentice Hall: London.
- Carson D, Gilmore A. 2000. Sme marketing management competencies. *International Business Review* **9**(3): 363-382
- Carter S. 1998. Portfolio entrepreneurship in the farm sector: Indigenous growth in rural areas? *Entrepreneurship and Regional Development* **10**(1): 17-32
- Clark J. 2009. Entrepreneurship and diversification on english farms: Identifying business enterprise characteristics and change processes. *Entrepreneurship and Regional Development* **21**(2): 213-236
- Cochrane WW. 1979. *The development of american agriculture : A historical analysis*. University of Minnesota Press: Minneapolis.
- Covin JG, Miles MP. 1999. Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship Theory and Practice* **23**(3): 47-63
- Day GS. 1994. The capabilities of market-driven organizations. *Journal of Marketing* **58**(4): 37-52
- Grewal R, Tansuhaj P. 2001. Building organizational capabilities for managing economic crisis: The role of market orientation and strategic flexibility. *Journal of Marketing* **65**(2): 67-80
- Grunert KG, Baadsgaard A, Larsen HH, Madsen TK. 1996a. *Market orientation in food and agriculture*. Kluwer Academic Publishers: Boston.
- Grunert KG, Harmsen H, Meulenbergt MTG, Kuiper WE, Ottowitz T, Declerck F, Trail B, Goransson G. 1996b. Innovation in the food sector: Investigating the link between r & d and market orientation. In J Beracs, A Bauer, J Simon (Eds.), *Marketing for an Expanding Europe*, 25 ed.: Budapest, Hungary.
- Hair JF, Anderson RE, Tatham RL. 1992. *Multivariate data analysis with readings*. Macmillan: New York.
- Hills GE, Hultman CM, Miles MP. 2008. The evolution and development of entrepreneurial marketing. *Journal of Small Business Management* **46**(1): 99-112
- Hult GTM, Ketchen DJ. 2001. Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic Management Journal* **22**(9): 899-906
- Hult GTM, Ketchen DJ, Slater SF. 2005. Market orientation and performance: An integration of disparate approaches. *Strategic Management Journal* **26**(12): 1173-1181
- Hult GTM, Snow CC, Kandemir D. 2003. The role of entrepreneurship in building cultural competitiveness in different organizational types. *Journal of Management* **29**(3): 401-426
- Jaworski BJ, Kohli AK. 1993. Market orientation - antecedents and consequences. *Journal of Marketing* **57**(3): 53-70
- Kara A, Spillan JE, DeShields OW. 2005. The effect of a market orientation on business performance: A study of small-sized service retailers using markor scale. *Journal of Small Business Management* **43**(2): 105-118
- Kirca AH, Jayachandran S, Bearden WO. 2005. Market orientation: A meta-analytic review and assessment of its antecedents and impact on performance. *Journal of Marketing* **69**(2): 24-41
- Kirzner IM. 1974. *Competition and entrepreneurship*. Un. of Chicago: Chicago [etc.].
- Knudson W, Wysocki A, Champagne J, Peterson HC. 2004. Entrepreneurship and innovation in the agri-food system. *American Journal of Agricultural Economics* **86**(5): 1330-1336
- Kohli AK, Jaworski BJ. 1990. Market orientation - the construct, research propositions, and managerial implications. *Journal of Marketing* **54**(2): 1-18
- Kyriakopoulos K, Moorman C. 2004. Tradeoffs in marketing exploitation and exploration strategies: The overlooked role of market orientation. *International Journal of Research in Marketing* **21**(3): 219-240
- Li Y, Zhao YB, Tan J, Liu Y. 2008. Moderating effects of entrepreneurial orientation on market orientation-performance linkage: Evidence from chinese small firms. *Journal of Small Business Management* **46**(1): 113-133

- Lumpkin GT, Dess GG. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review* **21**(1): 135-172
- Lumpkin GT, Dess GG. 2001. Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing* **16**(5): 429-451
- Madsen EL. 2007. The significance of sustained entrepreneurial orientation on performance of firms - a longitudinal analysis. *Entrepreneurship and Regional Development* **19**(2): 185-204
- Matsuno K, Mentzer JT, Ozsomer A. 2002. The effects of entrepreneurial proclivity and market orientation on business performance. *Journal of Marketing* **66**(3): 18-32
- Meulenbergh M. 1997. Market orientation in food and agriculture - grunert,kg, baadsgaard,a, larsen,hh, madsen,tk. *European Review of Agricultural Economics* **24**(1): 150-151
- Morgan NA, Vorhies DW, Mason CH. 2009. Market orientation, marketing capabilities, and firm performance. *Strategic Management Journal* **30**(8): 909-920
- Morgan SL, Marsden T, Miele M, Morley A. 2009. Agricultural multifunctionality and farmers' entrepreneurial skills: A study of tuscan and welsh farmers. *Journal of Rural Studies*
- Narver JC, Slater SF. 1990. The effect of a market orientation on business profitability. *Journal of Marketing* **54**(4): 20-35
- O'Dwyer M, Gilmore A, Carson D. 2009. Innovative marketing in smes. *European Journal of Marketing* **43**(1-2): 46-61
- Olsson R. 1988. Management for success in modern agriculture. *European Review of Agricultural Economics* **15**(2-3): 239-259
- Pelham AM. 2000. Market orientation and other potential influences on performance in small and medium-sized manufacturing firms. *Journal of Small Business Management* **38**(1): 48-67
- Phillipson J, Gorton M, Raley M, Moxey A. 2004. Treating farms as firms? The evolution of farm business support from productionist to entrepreneurial models. *Environment and Planning C-Government and Policy* **22**(1): 31-54
- Pyysiäinen J, Anderson A, McElwee G, Vesala K. 2006. Developing the entrepreneurial skills of farmers: Some myths explored. *International Journal of Entrepreneurial Behaviour and Research* **12**(1): 21-39
- Rauch A, Wiklund J, Lumpkin G, Frese M. 2009. Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice* **33**(3): 761-787
- Schindehutte M, Morris MH, Kocak A. 2008. Understanding market-driving behavior: The role of entrepreneurship. *Journal of Small Business Management* **46**(1): 4-26
- Schumpeter JA. 1934. *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*. Oxford University Press: London.
- Slater SF, Narver JC. 2000. The positive effect of a market orientation on business profitability: A balanced replication. *Journal of Business Research* **48**(1): 69-73
- Verhees FJHM, Meulenbergh MTG. 2004. Market orientation, innovativeness, product innovation, and performance in small firms. *Journal of Small Business Management* **42**(2): 134-154
- Wiklund J, Shepherd D. 2003. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal* **24**(13): 1307-1314
- Wiklund J, Shepherd D. 2005. Entrepreneurial orientation and small business performance: A configurational approach. *Journal of Business Venturing* **20**(1): 71-91
- Zahra SA. 1991. Predictors and financial outcomes of corporate entrepreneurship - an exploratory-study. *Journal of Business Venturing* **6**(4): 259-285
- Zahra SA. 1993a. A conceptual model of entrepreneurship as firm behavior: A critique and extension. *Entrepreneurship Theory and Practice* **17**(4): 5-21
- Zahra SA. 1993b. Environment, corporate entrepreneurship, and financial performance - a taxonomic approach. *Journal of Business Venturing* **8**(4): 319-340
- Zahra SA, Covin JG. 1995. Contextual influences on the corporate entrepreneurship performance relationship - a longitudinal analysis. *Journal of Business Venturing* **10**(1): 43-58