



Entrepreneurial Skills and their Role in Enhancing the Relative Independence of Farmers

Results and Recommendations from the Research Project Developing Entrepreneurial Skills of Farmers



Edited by Christine Rudmann

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Developing Entrepreneurial Skills of Farmers ESOF

The project Developing Entrepreneurial Skills of Farmers (ESoF) is a Specific Targeted Research Project, funded under the Sixth Framework Programme for Research & Technological Development of the European Commission. The project was running from 2005-2008.

The ESoF project examined the economic, social and cultural factors hindering or stimulating the development of entrepreneurial skills of farmers.

The primary concern of the project was to recommend ways how conditions of the social, economic, political and cultural framework can be changed in order to facilitate the adoption of entrepreneurial skills for farmers and how farmers themselves can improve their entrepreneurial skills. The guiding idea comprises the persuasion that the kind of necessary entrepreneurial skills is strongly dependent on the strategic orientation of the farm.

Besides recommendations a diagnostic tool was elaborated with which farmers can be positioned according to their entrepreneurial strategy and their entrepreneurial skills. This tool can be used by decision makers to evaluate and advise farmers to become more entrepreneurial, and farmers can assess themselves, learning their strengths and weaknesses concerning entrepreneurship.

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Project *Developing Entrepreneurial Skills of
Farmers***

Edited by Christine Rudmann

The editor gratefully acknowledges financial support from the Commission of the European Communities, under Priority Area 5 (Food Quality and Safety) of the Sixth Framework Programme for Research, Technological Development and Demonstration, within the Specific Targeted Research Project SSPE-ct-2005-006500 (Developing the Entrepreneurial Skills of Farmers) and co-funding by the Dutch Ministry of Agriculture, Nature and Food Quality. The contents of this report do not necessarily reflect the Commission's views and in no way anticipate the Commission's future policy in this area.

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Preface

This report constitutes the final report of the research project *Developing Entrepreneurial Skills of Farmers ESOF*, funded by the European Commission under Priority Area 5 (Food Quality and Safety) of the Sixth Framework Programme for Research, Technological Development and Demonstration, Key Area 8 (Policy Oriented Research) and co-funded by the Dutch Ministry of Agriculture, Nature and Food Quality.

In the context of the ESOF project, we carried out a literature review, conducted two different rounds of qualitative interviews and organised national workshops and an international EU seminar. Each stage of the project generated a separate public report; these reports are available on the project website. So far, the following reports have been published:

- McElwee (2005): *Developing Entrepreneurial Skills of Farmers: A Literature Review of Entrepreneurship in Agriculture*
- De Wolf & Schoorlemmer (Eds.) (2007): *Exploring the Significance of Entrepreneurship in Agriculture*.
- Vesala & Pyysiäinen (Eds.) (2008): *Understanding Entrepreneurial Skills in the Farm Context*.

The first part of this report describes each work package in turn (chapters 1-5). This section is followed by two chapters which analyse specific aspects of the results and place them in a broader context: chapter 6 discusses the policy context of the project, while chapter 7 considers the special situation in Eastern European countries. The final chapter 8 summarises and synthesises the results of the project and formulates recommendations for the EU Commission and groups in the socio-technical network of the farming sector.

On behalf of the consortium, I would like to thank the EU Commission and the Dutch Ministry of Agriculture for funding the project.

Furthermore, I would like to thank all the researchers involved for their contribution. Without the commitment of the project partners it would not have been possible to work together in such a positive way.

A special thank you is due to the farmers and national stakeholders for their willingness to participate in interviews and workshops and to provide the information we needed.

I am also grateful to the members of the Advisory Board who contributed to an improved overview by providing additional information specific to particular countries and disciplines. It is not easy to write a report for such a diverse group of readers as scientists, advisors, education experts and policy makers. I hope we were able to address the interests of all groups equally.

Last but not least, a big thank you to Helga Willer and Claudia Kirchgraber for editing and illustrating the public reports of each work package.

Frick, March 2008

Christine Rudmann

Table of Contents

Executive summary	7
1 General introduction	13
<i>Christine Rudmann</i>	
1.1 Research context	13
1.2 Research objectives and research questions	14
1.3 Overall methodology	15
1.4 Project management	17
1.5 References	18
2 Literature review and segmentation framework (Work package 2)	19
<i>Gerard McElwee</i>	
2.1 Introduction	19
2.2 Methodology	20
2.3 Results	20
2.4 Conclusions	23
2.5 Summary	24
2.6 Research proposals for the pilot stage	25
2.7 References	25
2.8 Deliverables and publications	26
3 Exploring the significance of entrepreneurial skills in agriculture (Work package 3)	27
<i>Pieter de Wolf and Hermann Schoorlemmer</i>	
3.1 Introduction and methodology	27
3.2 Results and discussion	28
3.3 Conclusions	31
3.4 Preview for the main stage	33
3.5 References	34
3.6 Deliverables and publications	34
4 Understanding entrepreneurial skills in the farm context (Work package 4)	
<i>Kari Mikko Vesala and Jarkko Pyysiäinen</i>	35
4.1 Introduction	35
4.2 Entrepreneurship and entrepreneurial skills as key concepts of the study	36
4.3 Approach and research questions	39
4.4 Methods	39
4.5 Results	41

4.6	Conclusions	46
4.7	References	48
4.8	Deliverables and publications	48
5	Developing strategies and tools to promote the development of entrepreneurial skills (Work package 5)	49
	<i>Christine Rudmann and Jennifer Jäckel</i>	
5.1	Introduction	49
5.2	Methodology	49
5.3	Results of the national and EU seminars	50
5.4	E-learning and self-assessment tool – developing entrepreneurial skills	53
5.5	References	58
5.6	Deliverables and publications	59
6	Special situation of Eastern European Countries	61
	<i>Krzysztof Zmarlicki and Lilianna Jabłońska</i>	
6.1	General introduction to land ownership during socialism	61
6.2	Transition of agriculture to the free market economy	62
6.3	Comparison of the Polish results of the main stage with those from the other countries	64
6.4	Conclusions	65
6.5	References	66
7	The ESoF project within its policy context: CAP reform, global change and the response of farmers	67
	<i>Selyf Morgan, Mara Miele and Terry Marsden</i>	
7.1	Introduction	67
7.2	Harnessing multifunctionality to rural development	68
7.3	Farmer behaviour and the uneven distributions of farmers' entrepreneurial skills	70
7.4	Developing entrepreneurial skills among farmers	72
7.5	Rural development plans: institutional contexts for entrepreneurial farmers	73
7.6	The global context: from overproduction to scarcity?	78
7.7	How farmers are framed: beliefs and perceptions	79
7.8	Summary	80
7.9	References	83
8	Synthesis and recommendations	85
	<i>Christine Rudmann, Kari Mikko Vesala, Jennifer Jäckel</i>	
8.1	Introduction	85
8.2	A key concept of entrepreneurial skills for the farming business	86

8.3	Putting the farmer into context – factors influencing the learning of entrepreneurial skills	90
8.4	Relevance of entrepreneurial skills for rural and regional development	93
8.5	Recommendations	95
8.6	References	107
9.	Appendix	110
	Overview of tool structure	110
	Segmentation framework	114

Authors

List of Tables

Table 1:	Partners and staff in the ESoF project	18
Table 2:	Advisory Board of ESoF	19
Table 3:	Skills categories mentioned in the interviews in six European countries.	31
Table 4:	Skills-related remarks, made by interviewees in six European countries	31
Table 5:	State controlled agriculture in selected countries of Central Europe, 1950-1980	63
Table 6:	Changes in the total agricultural production in the countries of Central and Eastern Europe in 1992-2002	64
Table 7:	Explanatory factors affecting uneven distribution of Entrepreneurial skills	72
Table 8:	% of total public expenditure (including EU contribution) in each country/region devoted to each axis	76
Table 9:	Axis 1: Enhancement of the competitiveness of the agriculture and forestry sectors	76
Table 10:	Axis 2: Improvement of the environment and countryside	76
Table 11:	Axis 3: Quality of life in the countryside and diversification of rural economy	76
Table 12:	Research questions and according sub-chapters	86

List of Figures

Figure 1:	Change of perspective as a common denominator in the development of skills	45
Figure 2:	Structure of the e-learning tool	58
Figure 3:	The Entrepreneurial Skills of Farmers in their Policy and Market Context	83
Figure 4:	The individual in entrepreneurship research	88
Figure 5:	Pyramid of skills	89
Figure 6:	Hypothesised contributions of farmers' entrepreneurial skills to rural and regional development	95
Figure 7:	Factors of influence and their different levels	96

Executive summary

Introduction

In the last few years the aims of the EU's Common Agricultural Policy have moved towards a more market orientated framework, coupled with a shift in the associated policy instruments from price support to direct payments. Furthermore, the role of agriculture is no longer limited to the production of food and fibre; it also contributes actively towards sustainable and rural development.

As a result of these changes, farmers have the chance to benefit from market opportunities and to take greater responsibility for the success of their businesses; in other words, farmers theoretically have more freedom to farm as they wish. As a consequence, the demands placed on farmers with regard to the skills they require have also changed. Unfortunately, decades of payments under CAP have encouraged farmers to look to the state to give them guidance on farm management rather than helping them to anticipate or to innovate as individual farm entrepreneurs. Even though there has been a shift in farmers' awareness, in the agricultural business, among researchers and within government in the last few years towards an entrepreneurial culture in the farming business, the expectation directed at farmers is still that they should become more entrepreneurial.

The EU funded project *Developing Entrepreneurial Skills of Farmers*, of which this publication constitutes the final report, was initiated in order to find answers to some crucial questions connected with the subject and to elaborate recommendations on how to support farmers in developing entrepreneurial skills. The project's objectives were

- To identify and analyse the economic, social and cultural factors which hinder or stimulate the development of entrepreneurial skills, reflecting the strategic orientation of the farm
- To elaborate strategies and tools for improving these factors for different farming strategies

These objectives were pursued at two levels:

- a) At the level of the political, economic, social and cultural framework
- b) At the level of farmers' own skills

The research questions which addressed this challenge were as follows:

- What is the relevance of the concept of entrepreneurship for the farming business?
- How could a concept of entrepreneurial skills relevant to the farming business be described?
- Which skills can be called 'entrepreneurial' and why?
- How and why do farmers develop entrepreneurial skills?
- From the point of view of farmers: which economic, political, social and cultural factors influence the development of farmers' entrepreneurial skills in a positive or negative way?
- How can the development of farmers' entrepreneurial skills be promoted both at the level of the overall (political, economic and institutional) framework and at the level of the farmer himself?

Overall methodology

As an overall methodology, the project took an approach that combined analytical top-down analysis with bottom-up empirical research. The empirical analysis was conducted in England, Finland, Italy, the Netherlands, Poland and Switzerland.

The *initial stage* of the project involved reviewing the existing scientific literature on entrepreneurship and entrepreneurial skills in agriculture. It formed the basis for a) an initial overview of the relevance of the concept of entrepreneurship to agriculture and the elaboration of more specific research questions, and b) devising a segmentation framework of entrepreneurial farmers.

The *pilot stage* continued the work of highlighting the relevance of entrepreneurship for agriculture by means of approximately 20 expert interviews in each participating country and concluded with a list of skills that farmers need in general today in order to succeed in their business and, more specifically, which entrepreneurial skills they need in view of the ongoing developments taking place in and around agriculture. The results were discussed in national stakeholder workshops. Three strategic orientations were identified which, we assumed, have an influence on the importance of entrepreneurial skills.

These entrepreneurial skills were analysed in the *main stage* of the project, again taking into account the three strategic orientations identified in the pilot stage. About 25 farmers in each participating country were interviewed. The results were discussed in national stakeholder workshops. The concept of entrepreneurial skills was also elaborated in detail in the main stage of the project.

The project concluded with a *synthesis stage* in which the analytical and empirical results were linked in order to produce concrete recommendations and tools for the promotion of entrepreneurial skills. National stakeholder workshops and an international seminar in Brussels were held in order to discuss the project results and develop recommendations. Furthermore, a web-based e-learning tool was devised in relation to farmers' entrepreneurial skills.

Results and conclusions

Ongoing developments in the agricultural environment include market globalisation, changing EU and national policy, changes in consumer demands and in the supply chain, and climate change. These changes have an impact on the individual farming businesses. In the pilot stage three main strategic orientations applied by farmers in order to meet these challenges were identified:

- cost reduction and enlargement
- adding value to agricultural products
- non-food diversification

In science and research, the concept of entrepreneurship is not only connected to competitive strategies but also to entrepreneurial personality as a determinant of entrepreneurial behaviour. The emphasis lies on understanding which personality traits determine entrepreneurial behaviour and success (e.g. concepts such as 'locus of control'). From this angle, the person is seen as a separate, independent entity, and personality traits are perceived as stable dispositions.

At the same time, a quite different view of entrepreneurship exists, namely as a competence that can be learned. The focus here is on entrepreneurial skills as a requirement for entrepreneurial behaviour. Skills can be described as the best or proper way of carrying out tasks related to the farming business. As such, skills emerge through the interaction of the individual (and his knowledge about the tasks) with the environment (application of knowledge in a certain context). Thus, the skill concept is a relational concept, connecting the individual with a certain context, in contrast to the personality traits view.

Both points of view emerged in the experts' and farmers' interviews – personality traits were expressed as being one factor that influences the development of entrepreneurial skills.

The advantage of focusing on the skill concept rather than the personality traits concept with regard to entrepreneurship lies in the connection between the individual farmer and the changing environment. Given that it is becoming more difficult to succeed in farming in a changing environment, there is a greater need for skills which support the actor in coping with this increased complexity. Fostering entrepreneurial skills can therefore be seen as one way of supporting farmers to succeed, since they constitute the activity-related aspect of entrepreneurship and, as such, are capable of being influenced.

In the pilot stage of our project, experts were asked which skills farmers need today in order to succeed in business. Five categories of skills were mentioned:

- Professional skills (technical skills, production skills)
- Management skills (financial management, administrative skills)
- Opportunity skills (recognising and realising business opportunities)
- Strategy skills (developing and evaluating a business strategy)
- Co-operation/networking skills (networking and utilising contacts)

The last three categories were ultimately held to be proper entrepreneurial skills, because they have to do with creating and developing a profitable business and are therefore located at a higher level than professional and management skills, which serve the day-to-day running of a firm/farm. Furthermore, it is argued in our study that the three entrepreneurial skills are more complex than the others, necessarily encompassing other skills. Thus, entrepreneurial skills are actually skill sets. The category of networking skills, for example, includes communication skills, team-working skills and cooperation skills. In addition, networking and strategy skills serve the purpose of recognising and realising business opportunities. Thus, entrepreneurial skills are intertwined with and depend on each other.

The three categories of entrepreneurial skills were used for the interviews with farmers in the main stage. The farmers who were interviewed generally confirmed that these skills are relevant to the farming business. Most of them demonstrated that they possessed the skills, at least to a certain extent. However, there were also clear statements that there is still potential for improvement and that this would be useful, although some statements suggested that nothing should be done actively to foster the development of entrepreneurial skills.

One important conclusion concerning the development of these skills is that it is a learning process. Learning was associated in particular with experiential learning – with learning by doing and trial-and-

error – and not so much with learning through formal education. A common perception in farmers' statements was that learning entrepreneurial skills happens through a change of perspectives. This means that learning happens when farmers are confronted with new ideas or different ways of doing things, which broadens their own perspectives.

There are many different factors that support or hinder the change of perspectives: internal factors relating to the farmers themselves (e.g. personality traits) and external factors such as new policy incentives, new market requirements or provision of education and extension opportunities, and – a third category linking the internal and external factors – networks and contacts. Networks and contacts (especially beyond the farming community) are found to be crucial for accessing necessary information and being confronted with different perspectives.

One other highly significant conclusion of the main stage interviews was that most factors can be experienced as both hindering and stimulating the development of entrepreneurial skills. Often, it is the context that determines whether a factor is experienced in one way or the other. Context here refers to the cultural/social context, history and policy, and education and extension.

Apart from being influenced by various external factors, entrepreneurial skills also have an effect on the environment. When entrepreneurial skills are linked with innovation, social capital and productivity, they contribute, we argue, to rural and regional development and to a region's competitiveness.

Recommendations

Recommendations are formulated with regard to, first, creating an optimal learning environment and, second, motivating farmers directly to take advantage of learning opportunities.

In practical terms, recommendations are formulated with regard to:

- increasing farmers' motivation (overcoming negative cultural/social influences)
- increasing farmers' awareness about the importance of entrepreneurial skills
- creating an optimal knowledge system to increase entrepreneurial skills among farmers
- implementing the Rural Development Regulation and CAP in general, in order to foster the development of entrepreneurial skills
- the importance of networks and clusters in the environment of farming in order to support the development of entrepreneurial skills among farmers

Increasing farmers' motivation (overcoming negative cultural/social influences)

The local/regional culture has a considerable influence on farmers' attitudes and behaviour. Regional and national culture can have an influence on how CAP is implemented and is also important in relation to discourses on entrepreneurship and the framing of farmers' roles in society. It is therefore important to understand these dynamics in order to find a common understanding between farmers and actors in the political and socio-technical environment of agriculture. The focus lies on building

cultural capital. However, the dynamics of different discourses and the building of cultural capital in connection with entrepreneurship in farming are not well understood. Thus, recommendations in this section point mainly towards further research needs.

Increasing farmers' awareness about the importance of entrepreneurial skills

Personal contact between disseminators and farmers along with direct incentives to encourage farmers to take advantage of existing education and extension offers are proposed. Programmes such as the pilot project 'ERASMUS for young entrepreneurs' or a farmer-specific LEONARDO programme are examples of such incentives. Also important are suggestions aimed at easing the time constraints faced by farmers so that they are able to participate in such programmes.

Creating an optimal knowledge system to increase entrepreneurial skills among farmers

With regard to lower levels of education, consideration should be given to including lower level skills, which are an important component of the higher level entrepreneurial skills, more effectively in curricula. This refers, for example, to 'soft' aspects such as communication training, team working, reflection skills, how to find necessary information, and so on. At more advanced levels, the skill training can become more complex and include practising more complex tasks, such as establishing and running fictitious farms or even other non-farming businesses or mini enterprises. The key point is to increase farmers' opportunities for learning by trial and error and for practical experience.

Furthermore, there should be a focus on the change of perspectives at all levels of education, as a means of developing entrepreneurial skills. A systemic approach is needed which connects the farming community with the non-farming community, in both vertical and horizontal dimensions.

In general, the agricultural knowledge system should be changed from the conventional linear chain of 'research – education/extension – farmers' (the 'diffusion of scientific knowledge') to a systemic approach that includes the elaboration of scientific and practical knowledge in cooperation with all relevant actor groups. Thus, in addition to those already mentioned, the principles of such a systemic approach would be as follows:

- The target should switch from the farmer to the farming business. Taking into consideration the importance of cross-sectoral experiences and perspectives, we could even argue that the region or the rural area should be the target, rather than the farming business.
- Vertical linkages between all actors in the knowledge system. Knowledge transfer should also take place between the farmer and extension, education and research, and not only the other way around.
- Inclusion of more action research-based research programmes, including farmers in SME research programmes as full partners, strengthening cross-sectoral research programmes.
- Horizontal linkages beyond the agricultural knowledge chain and beyond the farming business (LEADER approaches).

Implementation of the Rural Development Regulation and CAP in general, in order to foster the development of entrepreneurial skills

A further strengthening of Pillar II in contrast to Pillar I would be advantageous in relation to the development of entrepreneurial skills. The relevant Rural Development Regulation contains all the elements necessary for promoting the development of entrepreneurial skills among farmers. However, as regulations can be implemented in different ways, the recommendations should be seen as principles to consider for the implementation of the Rural Development Regulation at EU, national and regional level.

Within Axis 1 the cross-sectoral aspect of promoting knowledge and improving human potential should also be considered. The measures foreseen in Axis 2 seem to have the least effect on the development of entrepreneurial skills of farmers. From the point of view of developing the entrepreneurial skills of farmers, the measures contained in Axis 3 can be seen as the most important ones, because they take best account of entrepreneurial learning principles, such as enhancing networks and contacts within and beyond the farming community, or cross-sectoral cooperation. With regard to fostering entrepreneurial skills, then, the measures of Axis 3 also contribute to the aims of Axis 1. Thus, we suggest that a re-distribution of funds in favour of Axis 3 should be considered, especially for member states that dedicate a very small proportion to it so far. Axis 4 LEADER approaches are seen as highly valuable for the development of farmers' entrepreneurial skills.

Importance of networks and clusters in the environment of farming in order to support the development of entrepreneurial skills among farmers

Suggestions point towards fostering networks between stakeholder groups at all levels – regional, national and European – and cooperation between various DGs, especially between DG Enterprise and the rural/regional/agricultural focused DGs; this is important because, in terms of entrepreneurial skills, no essential differences are detectable between farmers and other micro and small entrepreneurs.

1 General introduction

Christine Rudmann

1.1 Research context

In the last few years the aims of the EU's Common Agricultural Policy have moved towards a more market orientated framework, coupled with a shift in the associated policy instruments from price support to direct payments. Furthermore, the role of agriculture is no longer limited to the production of food and fibre; it also contributes actively towards sustainable and rural development.

As a result of these changes, farmers have the chance to benefit from market opportunities and to take greater responsibility for the success of their businesses; in other words, farmers theoretically have more freedom to farm as they wish.

As a consequence, the demands placed on farmers with regard to required skills have also changed. Some years ago, the skills a farmer needed were related in the first instance to the production of good quality food and operational management. Today, with the changes in the political and market environment, farmers need additional skills in the fields of marketing and selling, strategic management, networking and, above all, skills in finding and realising new business opportunities – in other words: in addition to production skills, farmers nowadays need entrepreneurial skills.

Unfortunately, decades of payments under the CAP have encouraged farmers to look to the state to give them guidance on farm management rather than helping them to anticipate or to innovate as individual farm entrepreneurs. In addition, farm associations and other collective bodies have focused on administering and lobbying for CAP payments rather than on developing the capacities of their members in terms of entrepreneurialism (see Winter 1997 for the example of England). The same could be said of farm education institutions, colleges and universities.

In the last few years there have been changes in farmers' awareness, in the agricultural business, among researchers and within government towards an entrepreneurial culture in the farming business (e.g. De Lauwere et al., 2002). But the expectation directed at farmers is still that they should become more entrepreneurial, as the call for this project demonstrates.

The EU funded project *Developing Entrepreneurial Skills of Farmers*, of which this publication constitutes the final report, was initiated in order to find answers to some crucial questions connected with the subject and to elaborate recommendations on how to improve the political and economic framework in order to support farmers in developing entrepreneurial skills.

1.2 Research objectives and research questions

1.2.1 Research objectives

In addressing the issues described in the previous section, the objectives of the project were twofold:

- To identify and analyse the economic, social and cultural factors which hinder or stimulate the development of entrepreneurial skills, reflecting the strategic orientation of the farm
- To elaborate strategies and tools for improving these factors for different farming strategies

These objectives were pursued at two levels:

- a) At the level of the political, economic, social and cultural framework
- b) At the level of the personal skills of farmers

1.3 Research questions

The idea of focusing on skills in the debate about entrepreneurship is relatively new (Vesala 2008). In more recent publications, such as EC (2006b) or CEDEFOP (2008), skills are mentioned but are not defined or even named specifically. Consequently, to avoid a discussion similar to those about the concept of entrepreneurship as summarised in McElwee (2005) and Vesala (2008), it was necessary to develop a common understanding of the concept of entrepreneurial skills and their importance for the farming sector and rural development.

The research questions which addressed this challenge were as follows:

- What is the relevance of the concept of entrepreneurship for the farming business?
- How could a concept of entrepreneurial skills relevant to the farming business be described?
- Which skills can be called 'entrepreneurial' and why?

Farmers themselves have an understanding of their own entrepreneurial capability and skill set and are able to say how that skill set needs to be developed. Thus, the empirical research questions were:

- How and why do farmers develop entrepreneurial skills?
- From the point of view of farmers: which economic, political, social and cultural factors influence the development of farmers' entrepreneurial skills in a positive or negative way?
- How can the development of farmers' entrepreneurial skills be promoted both at the level of the overall (political, economic and institutional) framework and at the level of the farmer himself?

Thus, the focus of the analysis lies on the view of farmers, which is then compared with the view of experts from the agricultural socio-technical network.

In order to cope with the new environment, different strategic routes are available to farmers. One is to intensify conventional production by increasing volume, thereby engendering efficiency and effectiveness, and by pursuing selective and well-managed specialisation. However, a number of diversification strategies are also available. For example, the farm enterprise may be expanded by

adding on tourism or other forms of non-agricultural business, or by forward or backwards integration in the value chain, by engaging in food processing, by direct marketing, or by organic production. These strategic alternatives are not necessarily mutually exclusive but can be used in various combinations.

The idea of taking the diversity of strategic orientations as a possible starting point for studying the development of entrepreneurial skills is supported by the fact that the emergence of multifunctional farm enterprises is in line with the aims of Agenda 2000, which emphasizes the contribution of agriculture to sustainable rural development. Rural development, as the second pillar of the CAP, implies that a new, more active and market-oriented relation to the agro-food supply chain as well as to surrounding rural areas in general will be adopted on farms. However, it is evident that the actual manifestations of these entrepreneurial relations vary, for example, between the cases of monoactive conventional farms and diversified farms. Therefore, a careful examination of how the development of entrepreneurial skills is related to the above-mentioned strategic alternatives and to the contextual factors of these alternatives in rural areas has also been integrated into the project's structure.

1.4 Overall methodology

As an overall methodology, the project followed an approach that combined analytical top-down analysis with empirical qualitative research.

Analytical top-down analysis was present in every phase of the project, connected in feedback loops with the empirical part. The empirical part consisted of qualitative in-depth interviews and workshops with stakeholders from the agricultural socio-technical network.

Due to the qualitative focus of the project, no statistical analysis of the empirical data has been undertaken. Although statistical data from a survey concerning entrepreneurial skills are presented within the main stage of the project, these data are not part of the project at hand.

The empirical analysis was conducted in each partner country: England, Finland, Italy, the Netherlands, Poland and Switzerland. The results were commented on and augmented by the members of the advisory board who come from six additional European countries and from the Netherlands and Finland.

The following figure shows the stages of the project with their corresponding operational objectives and the methods applied.

The initial stage of the project (Work package 2) involved reviewing the existing scientific literature on entrepreneurship and entrepreneurial skills in agriculture. It formed the basis for a) an initial overview of the relevance of the concept of entrepreneurship to agriculture and the elaboration of more specific research questions, and b) devising a segmentation framework of entrepreneurial farmers.

The pilot stage (Work package 3) continued the work of highlighting the relevance of entrepreneurship for agriculture and concluded with a list of skills a farmer needs in general today in order to succeed in his business and, more specifically, which entrepreneurial skills a farmer needs

today. Three strategic orientations were identified which, we assumed, have an influence on the importance of entrepreneurial skills.

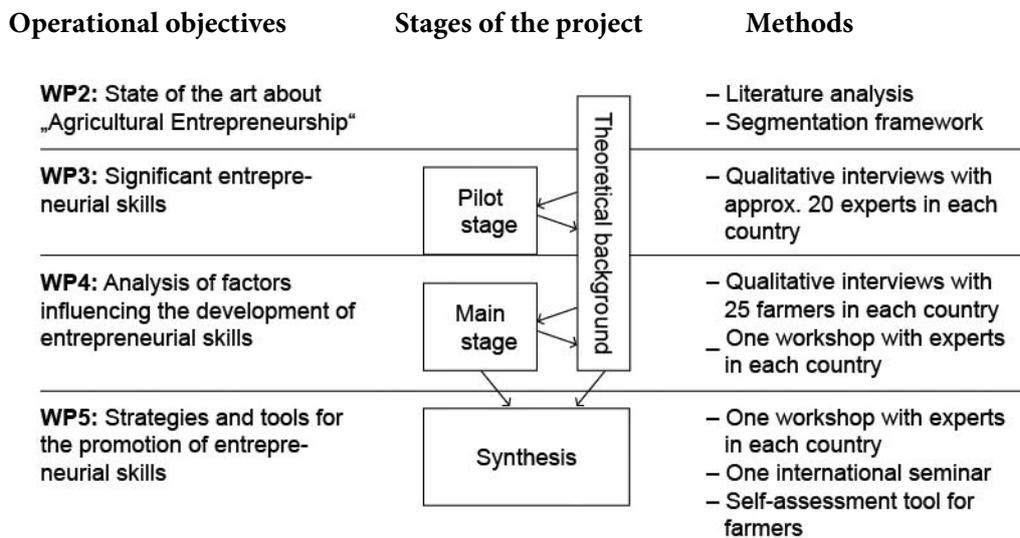


Figure 1: Project structure

These entrepreneurial skills were analysed in the main stage of the project (Work package 4), again taking into account the three strategic orientations identified. Also in the main stage, the concept of entrepreneurial skills was elaborated in detail.

The project concluded with a synthesis stage (work package 5) in which the analytical and empirical results were linked in order to produce concrete recommendations and tools for the promotion of entrepreneurial skills.

Work package 1 is not shown in Figure 1, as it contained the project management.

1.5 Project management

Table 1 gives an overview of participating partners

Table 1: Partners and staff in the ESoF project

Partner no.	Partner name	Short name	Country	Type of organisation	Personnel involved
P1	Research Institute of Organic Agriculture; Frick	FiBL	CH	Private non-profit research institution	Christine Rudmann, Jennifer Jäckel, Conradin Bolliger, Darren Halpin
P2	University of Lincoln	UL	UK	University	Gerard McElwee, Charlotte McClelland, Jackie Baker, Leslie Firth
P3	University of Helsinki	UHEL	FI	University	Kari Mikko Vesala, Jarkko Pyysiäinen
P4	Applied Plant Research; Lelystad	PPO	NL	Private non-profit research institution	Pieter de Wolf, Herman Schoorlemmer, Bartold van der Waal, Noen Jukema
P5	Research Institute for Pomology and Horticulture, Skierniewice	RIPF	PL	Governmental research institute	Krzysztof Zmarlicki, Lilianna Jabłońska
P6	University of Pisa	UNIPI	IT	University	Diego Pinducciu, Antonella Ara, Selyf Morgan, Mara Miele, Terry Marsden

Each of the four work packages was organised by one of the partners. All empirical work was conducted in all partner countries. For each of the work packages a public report was written and has been published on the project web page at www.esofarmers.org/publications.html. For Work package 3 and Work package 4 printed versions, which differ slightly from the reports delivered to the EC, are also available.

All public reports have been sent to the Advisory Board of ESoF for comments, including this final report.

The Advisory Board consisted of 10 people from different academic disciplines and work backgrounds. Table 2 shows a list of the Advisory Board members.

Table 2: Advisory Board of ESoF

A	W. Schiebel	Research: economics
CZ	V. Majerova	Research: sociology
DE	Jan Plagge	Extension
FI	H. Vihinen	Research: politics
FR	G. Allaire	Research and extension
HU	Z. Hajdu	Extension
NL	H.F. Massink	Ministry
NL	K.J. Poppe	Research: economics
RO	D. Dragomir	Extension
RO	R. Panait	Extension

The authors are fully aware of the role of women in agriculture and the existence of female farmers and entrepreneurs. In order to simplify the reading, though, the authors decided to use only the male formulation.

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2 Literature review and segmentation framework (Work package 2)

Gerard McElwee

2.1 Introduction

Work package 2 examined the concept of entrepreneurship with particular reference to farmers. In order to determine what constituted entrepreneurship in agriculture, the following objectives were addressed:

- (a) To carry out a review of the relevant literature and, subsequently,
- (b) to develop a segmentation framework (SF) which categorised farmers in a standard way by different criteria, in order to provide a gap analysis of the core skills which farmers have and the skills and support which they need in order to become more entrepreneurially successful. The farmers themselves were invited to comment on their own skill set.

In detail, the objectives of the work package were:

- To outline the academic literature on farm entrepreneurship
- To achieve a common understanding of entrepreneurship and entrepreneurial activity in relation to farmers
- To identify the relevant entrepreneurial skills necessary in farming, and to identify the ways in which farmers develop effective entrepreneurial strategies
- To describe the way in which segmentation frameworks can be used to provide a coherent understanding of the entrepreneurial farming business.

This chapter has three aims. First, it describes the aims and methodology of the literature review. Second, it discusses the most important outcomes and conclusions of the literature review, augmented into recommendations for the pilot stage. Third, it describes the function and design of the segmentation framework as well as describing how the segmentation framework was utilised for the main stage interviews.

2.1.1 Objectives of the Literature Review

The aim of the literature review was to consider the models, methodologies, techniques and data papers published on the subject of farmers' skills and entrepreneurial capacity in an attempt to determine which (if any) theoretical and methodological trends and themes have emerged. In addition, the key themes and foci of all publications were analysed and grouped by distinctive criteria.

The literature review dealt with an important question for rural policy – the potential for and implications of farm entrepreneurship and the future of the farm as currently understood.

The literature review provided an account of farm entrepreneurship in the literature. Furthermore, it examined the extent to which policy implications are considered in the entrepreneurship literature and whether published work addresses practical outcomes or has an effect on policy and the everyday life of farmers.

In summary, the objectives of the literature review were as follows:

- To provide a narrative account of farm entrepreneurship based on an analysis of the publication patterns and themes in farm entrepreneurship research, in an attempt to provide initial definitions of farm entrepreneurship and entrepreneurial skills
- To determine the pressures and barriers facing farmers
- To determine which methodological approaches are used to understand the phenomena of farmer entrepreneurship
- To explore what policy implications are considered in the literature.

2.2 Methodology

Little empirical analysis has been undertaken of the content of publications on farm entrepreneurship and farmers' skills in terms of analysis of the dominant research paradigms utilised and the specific focus of the literature.

This review was based on a qualitative examination of the changing foci of interest in farm entrepreneurship and farm skills within a number of publications, rather than as representative of the full body of literature.

A secondary challenge consisted in comparing the farm entrepreneurship literature across diverse countries, as this posed both cultural and definitional problems. To resolve this challenge, a generic template was used, as it was deemed to have been successful in an earlier study of entrepreneurship publications undertaken by McElwee and Atherton (2005).

2.3 Results

2.3.1 Definitions of farm entrepreneurship

A variety of definitions became apparent.

For McElwee (2004) farmers are defined as those employed on a part or full time basis in a range of farming activities; they are primarily dependent on the farm and agriculture in the practice of cultivating the soil, growing crops and raising livestock as the main source of income.

For Dollinger (2003), entrepreneurship is the creation of an innovative economic organisation (or network of organisations) for the purpose of gain or growth under conditions of risk and uncertainty. This definition, however, assumes that all farmers are engaged in the farm business for financial gain or growth, and clearly this is not the case.

Schiebel (2002) showed that successful entrepreneurs differ in terms of three personality traits (success factors):

- Locus of control of reinforcement (belief in the ability to control events)
- Problem-solving abilities
- Social initiative is expressed through a person's dominance, liveliness, social boldness and abstractedness. This empirical assessment of social initiative, using a representative sample of male and female farmers in Austria (881 respondents), showed a very low degree of social boldness and that liveliness increases with age. Female farmers were found to have a higher degree of dominance than their male equivalents.

2.3.2 Entrepreneurial skills

The environment in which agricultural entrepreneurs operate is constantly changing and developing, as farmers adapt to the vagaries of the market, changing consumer habits, enhanced environmental regulations and so on. Running an enterprise successfully in this dynamic setting requires substantial tangible resources, such as physical or financial capital. Besides material assets, the success of the enterprise is also dependent on the more intangible resources embedded in the enterprise, such as entrepreneurial capital. It is recognised that in markets characterised by dynamic change some entrepreneurs become alert and develop knowledge, making (deliberate) information investments that others do not (Busenitz et al., 2004).

2.3.3 Pressures on farmers

In the past, farmers have not needed to raise capital from sources external to the family network. For Gasson (1988) the family is the potential source of risk capital – capital, labour and information. As a consequence, this provided advantages to the farm enterprise. In more recent years, however, the 'natural inheritance' of farms has been eroded as a consequence of farmers' children becoming more mobile and less desirous of remaining in a declining industry. Property prices in villages and rural communities have escalated, which has had the effect of precluding ownership by indigenous community members.

Other uncertainties in the farming industry include unpredictable seasonal climate changes, invasive pests, CAP reform, and labour market changes. Community changes in the rural economy are also becoming more evident, as the sector does not appear to regenerate its ageing population. The lack of younger farmers entering the farm business may well have serious implications for the farm sector.

In a study of the transition of the Dutch agrarian sector, Poot et al. concluded that entrepreneurs who want to diversify nearly always have to deal with obstructions, particularly from law and legislation. An important example of a barrier to diversification is that local development plans of the local government never take account of non-agricultural activities in the agrarian area. Another barrier to diversification is that the legislation around working conditions and food safety frequently causes

problems in the combination of care and agriculture. The last important obstruction may be protests and resistance to new developments (McElwee, 2006).

Clearly, the political, social and economic environment is important. For example, Polish agriculture is characterised by a highly fragmented agrarian structure. Small-scale production has a major influence on the functioning and competitiveness of Polish farms and results in high transaction costs and problems with sales (Halicka and Rejman, 2001).

Other farmers continue to run their farm business while taking paid employment, either within the sector (usually as agricultural sub-contractors) or outside the sector.

Interestingly, Sikorska (2001) concluded that the entrepreneurial activities of farmers in Poland are strictly connected with the demand for their services within the neighbourhood locality. She suggested that this means the closer to conurbations a farmer operates, the more activities are undertaken. In this respect the local business environment, access to markets and support facilities appear to be important.

Gasson (1988) also suggests that 'better-educated farmers are known to make greater use of information, advice and training, to participate more in government schemes and be more proactive in adjusting to change and planning for the future of the business'. Higher levels of education seem to be linked to the characteristics of both farmers and farms, including larger farms and more pluriactive businesses.

2.3.4 Policy implications

The literature review defined policy implications as findings and conclusions that, as a consequence of the research undertaken, indicate:

- how regional or local governments could take action to improve or enhance entrepreneurial development;
- how management competency can be developed;
- how local economies and communities can be developed;
- how sustainable entrepreneurial organisations can be developed; or,
- how universities can develop entrepreneurial and enterprising graduates.

According to Gnyawali and Fogel (1994) the entrepreneurial environment can be grouped into five dimensions: 1) government policies and procedures, 2) socio-economic conditions, 3) entrepreneurial and business skills, 4) financial support to businesses, and 5) non-financial support to businesses.

MacFarlane (1996) explored the relationship and interaction between the farm and the farmer and examined the related decision making process under conditions of agricultural and rural policy change. The findings are modelled and the author argues strongly for the importance of the work for policy makers.

2.3.5 Segmentation framework

There has been relatively little research that attempts systematically to segment the farm industry. Following Atherton and Lyon (2001) a segmentation framework was devised which segments three aspects of the farm and farmer:

- The personal characteristics of the farmer
- The characteristics of the farm enterprise
- The activities and processes undertaken by the farm.

In Atherton and Lyons's original framework the 'personality' of the individual was designated as a key personal characteristic. In this iteration of the framework, this characteristic has been replaced with the concept of 'entrepreneurial alertness' derived from the theory of alertness (Kirzner, 1979).

The segments are depicted in the Annex.

The segmentation framework is not designed merely to determine business characteristics, activities and processes. It is intended to be used as an iterative device, which can in itself be used as a predictive tool.

This framework was designed for two reasons: firstly, because it offers a comprehensive mechanism for analysis of a particular sector and, secondly, because it enables the classification of farmers by the above mentioned aspects.

Furthermore, the framework identifies different types of entrepreneurial farmers. The resulting segmentation framework shows different types of entrepreneurial farmers and tends to reflect the strategic orientation of the farm.

Different strategic orientations in farming may require different skills. It is anticipated that the segmentation framework will seek to determine what these skills are. In this way a gap analysis is provided of the core skills which farmers possess and the skills and support they may need in order to become more entrepreneurially aware.

Its primary objective is to enable an overall picture to emerge of the farm sector. The questionnaire used in the main stage was designed using the segmentation framework.

2.4 Conclusions

This literature shows that the farming sector is a complex area.

Preliminary research indicates that farming is not a homogeneous sector; rather, it is one that operates in a complex and multi-faceted environment. To conceive of farmers as a homogeneous group is a mistake and hinders policy development. One of the significant questions posed is which should be the unit of analysis – the farmer or the farm? A further area for investigation is the concept of 'constrained entrepreneurship'. By this it is suggested that farmers operate in a tightly constrained and regulated environment, which acts as a significant barrier to entrepreneurial activity.

The review suggested that farm entrepreneurship is a special case in the entrepreneurship discipline. Many questions were generated, which were the subject of the larger research project. The questions raised included: the effects of the changes in the CAP; the debates surrounding specialisation versus diversification; the barriers and opportunities that face farmers, how those barriers may be ranked and how they determine how farmers use networks.

Questions relating to farmers' entrepreneurial skills form the core elements of this research project. The longer-term goal is to attempt to map the skills and competencies of farmers with a view to informing policy. The results of the search indicate that little research has been carried out in this area.

The segmentation framework was deemed useful for two reasons: firstly, because it offered a comprehensive mechanism for analysis of a particular sector and, secondly, because as a device it enabled the classification of farmers and farms by their entrepreneurial disposition and the processes and characteristics of the farm. Such a framework is unique in attempting to classify the farm sector.

2.5 Summary

To summarise, the literature review analysed the publication patterns and themes in farm entrepreneurship research. There are some limited emergent trends in the literature. In terms of emergent subject areas (within the farm entrepreneurial field) there are no or limited contributions on topics such as business strategies (and general business skills) for farmers, the role of women farm entrepreneurs, support for farmers, or clustering, to name but a few.

The outputs of the literature review suggest that this type of research provided a useful framework for understanding (a) trends in the literature, (b) a predictive function for entrepreneurial research and (c) policy implications.

It is clear that there are a number of key areas that are receiving higher levels of attention in farm entrepreneurship research. There are, however, topics and areas that have not been considered, and these should form the basis for potential areas of further research – suggestions which are included below. These include family business and franchising and women farmers, both of which have been the subject of multiple papers and special issues in mainstream entrepreneurship journals.

Many contributors appear to accept that farmers can develop their entrepreneurial capacity using techniques associated with other business sectors.

The support segmentation framework has been developed to classify farmers by their personal characteristics, the characteristics of the farm enterprise, activities and processes undertaken by the farmer and specific needs of the farm enterprise. Work package 2 outlined a segmentation framework, and criteria from this framework were chosen to identify different types of farmers. It was suggested that different strategic orientations in farming might require different skills. In this way, a gap analysis of the core skills of farmers and the skills and support they need in order to become more entrepreneurially successful would be provided. Clearly, if farmers are to be successful they need to have both strategic awareness and the capacity and capability to develop. A major challenge for the

farming sector, therefore, is to enable farmers to develop their entrepreneurial skills. This development will require economic support and a greater emphasis on education and training.

2.6 Research proposals for the pilot stage

- To examine leadership, managerial capability and personalities of farmers
- Can and should farmers be classified as business people? How should the businesses be categorised?
- Examine the concept of opportunity clusters for farmers and ‘collective entrepreneurship’
- Are those farmers who do not have an association with the farm enterprise and whose activities are outside the sector any longer farmers? In this instance, we may wish to consider the diversification as the new business.
- Further examination of the extent of and integration of external, ‘non-farm’ businesses located on farms. What relationships exist between them and the farmer? Are they examples of farm diversification?
- What is the unit of analysis for farm entrepreneurship – the farm or the farmer?
- To what extent are farmers constrained entrepreneurs?
- Examine the extent to which farmers engage in franchising
- What is the role of women entrepreneurs on farms?
- What are the policy implications and measures which exist to provide support to farmers?

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2.8 Deliverables and publications

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- 'Developing Entrepreneurial Skills of Farmers: A Literature Review of Entrepreneurship in Agriculture' European Community SSPE-CT-2005-006500 6th Framework (2006a) <http://www.esofarmers.org/>
- McElwee, G. (forthcoming 2008) In Search of Montsalvatch: Making sense of interviewing farmers *Tamara Journal of Critical Organization Inquiry*
- McElwee, G. (forthcoming 2008) A Taxonomy of Entrepreneurial Farmers *International Journal of Entrepreneurship and Small Business* 5(6) pp

3 Exploring the significance of entrepreneurial skills in agriculture (Work package 3)

Pieter de Wolf and Hermann Schoorlemmer

3.1 Introduction and methodology

Entrepreneurship in agriculture is an important issue in Europe. Policy makers, researchers, farmers' unions and advisory services are working on the development of entrepreneurship in agriculture. In this report, the question is answered why entrepreneurship is important in agriculture and what type of entrepreneurial skills farmers require. This chapter summarises the work of WP 3, the pilot stage of the ESoF project. For a detailed description, see de Wolf & Schoorlemmer (2007).

'Entrepreneurship' or 'entrepreneurial skills' are not very precisely defined concepts. Besides this, entrepreneurship research in connection with agriculture is relatively scarce. Therefore, a literature review was carried out at the start of the project (see Chapter 2) to define the concept of entrepreneurship and entrepreneurial skills in agriculture from a theoretical point of view. Entrepreneurship is considered as 'finding ways and means to create and develop a profitable farm in a changing business environment'. Skills are defined as 'the competences required to accomplish tasks and activities related to the farm business, which can be developed by learning and experience'. The hypothesis is that the development of entrepreneurial skills could be stimulated through changing the social and business environment and through direct influence of the farmer and his personality and capacities.

The pilot stage had the following objective: to explore the significance of entrepreneurship in agriculture in selected European countries. Because entrepreneurship is considered a major requirement for farmers successfully to survive in a changing business environment, the significance of entrepreneurship was therefore supposed to be determined largely by the trends and developments in the environment of the agricultural business. Therefore, the research focused on six research questions:

1. *What are the major trends and developments in the environment of the farm business?*
2. *Which skills are demanded from farmers by the trends and developments in the business environment?*
3. *Which skills can be seen as entrepreneurial, or how could entrepreneurial skills be defined?*
4. *Do farmers need different skills compared to other business people?*
5. *What is the importance of farm strategy, in respect of the required entrepreneurial skills or in respect of skills in general?*
6. *Could some conclusions be drawn from a comparison of country-specific results?*

These research questions were answered through analysis of data from interviews with stakeholders and experts. In these interviews two open questions were asked:

1. *Which important trends and developments do you see in the operational environment of farm businesses (market, society) in your country?*
2. *What are the most important skills that a farmer needs in order to succeed in the farming business?*

Approximately 20 experts and stakeholders from each participating country answered these two questions. The research methodology is empirical, so no scientific definitions are used in the interviews. Open questions are chosen to generate a wide range of responses. The interviewers were given a set of interview guidelines in an attempt to develop a common approach. The interview and analysis methodology is a qualitative interview technique, based on the methodology used by Buurma et al. (2003) and Stallen (2003). The interview notes were transcribed in the national language and analysed per country. The results from the interviews were clustered and finally grouped. The national results were discussed in national discussion groups, in which interviewees and other experts participated. Interviewees and discussion group participants were very interested in the results of the interviews and especially in the results from other countries. The national results are described in detail in de Wolf & Schoorlemmer (2007).

3.2 Results and discussion

The chosen research methodology worked out very well, resulting in a varied picture of trends and developments and a broad perspective on the significance of entrepreneurial skills in agriculture.

3.2.1 Trends

The trend question proved to be a good introduction to the skills-question, opening up the perspective of respondents. Respondents from six EU countries mentioned the following main trends, because of their expected impact on agricultural businesses:

- Globalisation of the market
- Changing EU and national policy (CAP reform 2003, access of new countries, legislation)
- Changing consumer demands
- Changing supply chain
- Changing environment
- Growing demand for functions and services
- Climate changes and
- Increasing energy prices.

At the same time, respondents mentioned some trends they identified in agriculture, such as cost reduction, scale increase, product diversification, packaging and processing of products and diversification.

Three main farm strategies can be recognised in these trends:

- Cost price reduction, related to economies of scale and bulk production
- Adding value to agricultural products, related to niche markets and
- Diversification, related to non-agricultural niche markets.

The response to the trend question shows that some respondents have difficulty recognising trends and developments in the external environment, because they mention trends that are visible on many farms in their country. Regarding the trends in the environment of farm businesses, it is striking that some respondents perceive mainly opportunities while others perceive mainly threats when talking about one and the same trend. A general conclusion from the trends is that the outside world is changing rapidly, which affects the way farmers do business and make decisions.

3.2.2 Skills

The answers to the skills question are highly interesting for three reasons. The first is the variety of skills mentioned; the second interesting element are the many skills-related remarks made by the respondents, such as traits and attitudes. The third is that the results in all countries are highly similar. The skills mentioned by respondents as a result of question two could be categorised in five groups, as shown in Table 3.

In all countries some attention is paid to professional skills, being a basic requirement for farmers to succeed in the farming business. Many respondents from all countries emphasise the importance of management skills for farmers: in their opinion, farmers have to become businessmen, because of the growing complexity of the farming business.

Besides professional and management skills, other skills are also mentioned frequently, such as opportunity skills, co-operation and networking skills and strategic skills. These skills are required to find ways and strategies to develop a profitable business, to realise business opportunities and to develop and improve the business continuously. Comparing these skills with the scientific literature, these skills could be regarded as part of the qualities of an entrepreneur (e.g. Stevenson and Jarillo, 1990; Man et al, 2002).

Table 3: Skills categories mentioned in the interviews in six European countries.

Category	Underlying skills
Professional skills	<ul style="list-style-type: none"> • Plant or animal production skills • Technical skills
Management skills	<ul style="list-style-type: none"> • Financial management and administration skills • Human Resource Management skills • Customer management skills • General planning skills
Opportunity skills	<ul style="list-style-type: none"> • Recognising business opportunities • Market and customer orientation • Awareness of threats • Innovation skills • Risk management skills
Strategic skills	<ul style="list-style-type: none"> • Skills to receive and make use of feedback • Reflection skills • Monitoring and evaluation skills • Conceptual skills • Strategic planning skills • Strategic decision making skills • Goal setting skills
Co-operation / networking skills	<ul style="list-style-type: none"> • Skills related to co-operating with other farmers and companies • Networking skills • Team working skills • Leadership skills

In addition, respondents made a large variety of skills-related remarks that are important for farmers to succeed in business, as shown in Table 4.

Table 4: Skills-related remarks, made by interviewees in six European countries

Personal characteristics	Attitudes	Other
Flexibility, dealing with uncertainties	Positive attitude	Education
Creativeness, innovativeness	Pro-active attitude	Experience
Ambition, motivation, commitment	Open minded	Age
Self-knowledge	Open to new things	Gender
Feeling responsible	Attitude to feedback	
Courage to do new things	Being interested in the job	
Carefulness	Risk-taking attitude	
Honesty		
Immunity to stress		
Communicativeness, politeness		
Humour		
Dynamism		

Many of these remarks are related to the key concept of entrepreneurship as used in this study, e.g. flexibility and the ability to deal with uncertainties, a risk-taking attitude and commitment. Many respondents suggest that these items are pre-conditional to skills: without these qualities entrepreneurial behaviour is constrained and the development of skills is hindered.

In many interviews, higher education was supposed to have a positive effect on the entrepreneurial qualities of farmers. However, some respondents perceived that agricultural education is mainly focused on professional and management skills. Italian interviewees question if the current educational and training establishments are sufficient to teach and develop entrepreneurial skills. They suggest that innovative educational and training concepts are necessary.

Age is a difficult element in relation to entrepreneurial qualities. Some respondents think younger farmers are better entrepreneurs, because they are ambitious, more flexible and more open to new things. Others think older farmers are able to act in a more entrepreneurial manner, because of the life cycle of their farm organisations and their experience in business. The definition of younger and older farmers depends very much on the average age of the population, which differs between European countries.

3.3 Conclusions

Research question 1: What are the major trends and developments in the environment of the farm business?

The business environment of European farmers in all participating countries is changing rapidly. The main trends and developments are the globalisation of the market, the enlargement of the EU, the CAP reform (and Swiss agricultural policy), changing consumer demands and changes in the supply chain. These trends are perceived by respondents partly as opportunities and partly as threats.

Research questions 2 and 3: Which skills are demanded from farmers by the trends and developments in the business environment? Which skills can be seen as entrepreneurial, or how could entrepreneurial skills be defined?

To succeed in business, a farmer needs professional and management skills, strategic, opportunity and co-operation/networking skills. In our understanding of the entrepreneur concept, the last three categories can be summarised as entrepreneurial skills.

These entrepreneurial skills were selected with the help of scientific literature, although literature on this topic shows wide variations. Generally, entrepreneurial skills are related to the identification of business opportunities, finding means and resources to realise business opportunities by networking and co-operation, developing a business strategy and managing and improving the business.

Entrepreneurial qualities are not limited to skills only. Interviewees mention various traits and attitudes that are assumed to be preconditional for entrepreneurial behaviour and the development of entrepreneurial skills. The role of age and education is not very clear in respect of entrepreneurship, although respondents often mentioned both factors.

Out of the discussion about research questions 2 and 3, some research proposals could be formulated:

Research proposal 1

How could farmers be supported in the process of finding, selecting and using relevant information to develop a farm strategy and to recognise and realise business opportunities?

Research proposal 2

How could entrepreneurial skills be developed by means of education and training?

Research proposal 3

Are entrepreneurial qualities and their possible development different between age groups, and how could age groups be defined in this respect?

Research question 4: Do farmers need different skills compared to other business people?

Some respondents suggest that farmers need the same skills as other business people, mainly when talking about management and entrepreneurial skills. The interview results show a great similarity with literature about entrepreneurship in small and medium enterprises (McElwee, 2005). It would be worth researching whether the production of food and public goods needs other entrepreneurial qualities:

Research proposal 4

Does the production of food and public services mean that specific (entrepreneurial) skills are more important compared to other businesses?

Research question 5: What is the importance of the farm strategy, in respect of the required entrepreneurial skills or in respect of skills in general?

Out of the results, three main strategies could be derived: cost reduction, adding value and diversification. Some of the interviewees think specific skills are required for some strategies, but the results provide insufficient information to draw any conclusions in this regard:

Research proposal 5

What is the importance of various farm strategies with regard to (entrepreneurial) skills? Are certain skills more important for specific strategies, e.g. diversification?

Research question 6: Could some conclusions be drawn from the comparison of country-specific results?

The results of the six participating countries show a high uniformity, suggesting that farmers in all countries need the same entrepreneurial qualities. Two countries are somewhat exceptional: Poland is a new member state of the EU and Switzerland is not a member of the EU. This gives rise to some different conditions compared with, say, the Netherlands or Italy.

Although the entrepreneurial qualities required are highly uniform throughout the EU, the current level of entrepreneurial skills shows that there is considerable variation between and also within countries. The results suggest that farmers who are fully responsible for their own business activities are more entrepreneurial than farmers who depend on price and income subsidies, market regulation measures and on the marketing and business qualities of large (co-operative) firms in the supply chain. Some interviewees suggest that some farmers will not be able to improve their quality if a higher level of entrepreneurial skills is required, causing a process of self-selection. This could also explain the differences in the level of entrepreneurial skills between and within countries.

3.4 Preview for the main stage

The pilot stage mapped the entrepreneurial skills a farmer needs in order to succeed in the farming business from the point of view of experts and stakeholders involved in the agricultural socio-technical network at national level. On the basis of these insights, Work package 4 examined whether farmers have certain entrepreneurial skills and which factors hinder or stimulate skill development.

When looking at the results, some useful recommendations can be given to the next stage (main stage) about the focus on certain skills and certain groups and hypotheses for research:

3.4.1 Skills

While professional and management skills are the basic requirements of all farmers, the main stage should focus on the 'real' entrepreneurial skills mentioned in the pilot stage interviews. These are:

1. Skills to recognise and realise business opportunities;
2. Skills to interact with other persons/groups (networking, co-operation);
3. Strategy skills.

3.4.2 Selection criteria

Based on the interview results, some suggestions can be given about the selection of the interview population. Relevant factors linked with the level of entrepreneurship are: age of the farmer, farm size and main production branch. It could be helpful to have various strategies represented by the respondents of the main stage interviews.

3.4.3 Hypotheses

The results give rise to some hypotheses about the level of entrepreneurial skills and about factors hindering and stimulating the development of entrepreneurial skills. Price and income subsidies and market regulation measures are often mentioned as factors hindering the development of entrepreneurial skills. In addition, some personal characteristics and attitudes as well as the age and education level of the farmer are supposed to be major factors that hinder or stimulate the development of entrepreneurial skills.

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4 Understanding entrepreneurial skills in the farm context (Work package 4)

Kari Mikko Vesala and Jarkko Pyysiäinen

4.1 Introduction

The general background for the ESoF project is the ongoing change in the environment of farm businesses. In the common agricultural policy of the EU (CAP) as well as in national policies, one response to these changes has been to call for more entrepreneurship on farms. On the one hand, political adjustments to these changes seem to lead increasingly to treating farms as firms like any other in the open market (Phillipson et al. 2004). On the other, the expectation of entrepreneurial behavior is very explicitly directed towards farmers. This means that farmers themselves are supposed to be involved in proactive, initiative-taking, innovative and dynamic business activities.

This emphasis on entrepreneurship is understandable. Entrepreneurship is considered a crucial dynamic force in the development of small businesses in general. The structural changes in the environment of farm businesses obviously suggest that such a dynamic force is especially relevant in the present farm context. The relevance of entrepreneurship can be associated with the aim of survival of farms. Entrepreneurship is relevant because the farmers need to find ways to adapt their businesses to the changing situation. Second, the relevance of entrepreneurship may be associated with the idea that the ongoing changes embody, open up or create new opportunities for farm businesses, rather than simply narrowing down or removing previous operational conditions (Bryant 1989). From this perspective, entrepreneurship is needed to recognise and exploit these opportunities.

However, it has also been argued that instead of entrepreneurship the most essential challenge for farmers is to abandon the productivistic, or Fordist, model of production. Michael Winter (1997), for example, suggests that there is a need for farmers to unlearn productivist ways of thinking and acting, and instead to learn new skills and knowledge concerning the environmentally friendly and sustainable management of farms. He considers entrepreneurship and innovations in farm businesses as well, but ends up rejecting these by claiming that the 'focus on the individual agent of change and on personal creativity is inadequate, not least because creativity and innovation are historically and socially contingent' (1997, 373)

The issue concerning the role of the individual agent associated with entrepreneurship is important, and we will come back to it at the end of this article. Nevertheless, if one thinks of the strong emphasis in the CAP on the competitiveness of EU agriculture and on the

efficiency and market orientation of farm businesses, or, for example, of the results of the expert interviews in the pilot stage of ESoF (de Wolf & Schoorlemmer 2007), it seems evident that entrepreneurship is widely assumed to be a highly appropriate requirement in the current farm context. For example, Swedish economist Rolf Olsson made a sound prediction in 1988 when he wrote that, 'Managerial and entrepreneurial skills of the farmers are going to play increasingly important role in future developments in agriculture both at the farm level and in the agricultural sector as a whole'.

Some reflections of the wider structural changes are already visible at the level of farm businesses: farms are decreasing in number, while many of the remaining farms are seeking cost-effectiveness through enlargement of the scale of production or through cost reduction. Further, strategic orientations on farms are becoming more diverse: in addition to those that focus on conventional primary production, many farms add value to agricultural products through processing, direct sales and niche products, or have diversified their activities on the farm into non-agricultural businesses.

Following Porter (1980), these responses may be attributed to the use of strategies which generate competitive advantage, either in terms of low costs or differentiation. In other words, farmers are applying competitive strategies, and to be successful in this is – at least to a certain degree - a matter of skills.

The purpose of the main stage of ESoF was to increase understanding about the nature and relevance of entrepreneurial skills in the farming business. More specifically, the objective was to approach the topic in terms of assessment and development of entrepreneurial skills, and to formulate conceptual tools and methods for doing this.

This chapter provides an overview of the study. It is reported more extensively in a volume edited by Vesala & Pyysiäinen (2008).

4.2 Entrepreneurship and entrepreneurial skills as key concepts of the study

Behind this study is the notion that farmers are expected to become more entrepreneurial in their business. However, there are several alternative ways to understand the concept of entrepreneurship. Therefore it is crucial to consider what is actually meant by the term 'entrepreneurial' in this connection.

The term entrepreneurship has different meanings. For example, in some contexts it is used to imply the centrality of economic profit in business, as distinct from such business activity in which profit is seen as subordinate to other goals (Carland et al. 1984). In this sense, entrepreneurship is associated primarily with the aim of profit maximisation and optimising economic efficiency or competitiveness in business, whereas running a business with the sole aim of securing a satisfactory standard of living for the family would not fulfil the criteria of entrepreneurship. In some other contexts, running a firm as such would be considered as entrepreneurship, regardless of the centrality of the economic aims.

According to the results of the expert interviews in the pilot stage of the ESoF project (de Wolf & Schoorlemmer 2007), it is a widely shared view among experts that the changing environment of farms at present necessitates that farmers must develop their farm business and business activities in economic terms, in order to survive and be successful. Worthy of note is the division into three strategic orientations (conventional, value adding and non-food diversification) which was suggested in the pilot stage to describe the ongoing responsive changes on farms, implying that it is not enough anymore simply to practise primary production on the farm in order to make a living for the family and contribute to the continuity of the work of preceding generations. Instead, some active measures need to be taken, especially measures that are strategically relevant from the perspective of economic goals in business.

By the notion of centrality of economic profit we do not mean to imply that other goals are denied or excluded. Instead, we refer to an understanding in which economic profit is viewed as a starting point for the definition of entrepreneurship. It is quite possible, for example, that this primary understanding is further reframed in terms of other goals or values.

When the centrality of economic goals in business is seen as one crucial criterion for entrepreneurship, all these strategic orientations and corresponding activities might be called entrepreneurial. However, entrepreneurship may be also defined in other ways. In the study of entrepreneurship it has been common to associate entrepreneurship especially with innovative and dynamic developments within the SME sector, and consequently to view entrepreneurship as the creation of new business enterprises. From such a perspective, it would be possible to state that in the farm context, value adding and non-food diversification in particular reflect an entrepreneurial orientation, assuming that this implies a change away from conventional production that reflects 'traditional' farming or an already existing form of business on farms.

Exactly what is considered a new or an old form of business is, of course, relative. The crucial issue here is that it would be possible, at least in principle, to interpret the recommendation for farmers to become more entrepreneurial to mean that, in general, they should be starting new business activities on their farm, instead of keeping on with the old ones, or even that they should orient themselves towards niche products and processing and direct sales of agricultural products, or towards other lines of business, instead of focusing on primary production.

However, it is quite feasible to argue as well that a farm business can be developed within primary production in ways that fulfill the criteria of entrepreneurship. For example, if one considers risk-taking and growth-orientation in business as crucial criteria for entrepreneurship, which is not uncommon in the study of entrepreneurship, it would be quite understandable to call business developments within conventional farming 'entrepreneurial' as well.

One of the basic assumptions in this study has been that the division into three strategic orientations reflects real world differences within the farm sector, as outlined also by a number of EU-wide studies, especially within the nature of the entire business that is practised on individual farms. At the same time, we have not been committed to the assumption that one or other of these orientations would be considered more entrepreneurial than any other by definition, although we have been aware that such an assumption could be argued for. Instead, it has been our aim to explore each of these three

orientations from the perspective of entrepreneurial skills, and compare them using an empirical, qualitative approach.

In this study we approach entrepreneurship on farms by using the concept of *entrepreneurial skill*. According to the theoretical approach utilised in this study (Vesala 2008), entrepreneurial skill is a relational concept which refers to the individual as well as to the activity. It describes, on the one hand, the individual who knows how to do something in business. On the other hand, it describes those tasks and activities that the individual needs to know how to do in the business context. It must be emphasised that while the concept of entrepreneurial skills tell us something about the individual, it does not tell us everything. Similarly, it tells us something about the business activity, but not the whole story. The concept stands for one possible way to approach entrepreneurship, not for the whole construct of entrepreneurship.

According to our theoretical elaboration, entrepreneurial skills are to be understood as higher level skills. They have to do with establishing, running and developing a business enterprise. In such business activities several types of lower level skills are needed, corresponding to the tasks of production, administration, marketing and so on. These may be referred to as technical, professional or managerial skills. However, entrepreneurial skills may be conceptually differentiated from all these as meta-level skills that touch the whole process of initiation, steering and developing a business (Vesala 2008).

The results from the expert interviews reported in the pilot stage indicated five categories of skills. As a synthesis from that study, de Wolf & Schoorlemmer (2007) state that while professional skills and managements skills are basic requirements for farmers, opportunity skills, strategic skills and co-operation/networking skills can be viewed as proper entrepreneurial skills. Thus, studying entrepreneurial skills does not imply that other skills are assumed to be irrelevant or not important. Nevertheless, our theoretical analysis based on the literature on entrepreneurship and small business research suggests that it is warranted to view entrepreneurial skills as a hierarchical construct, where the pursuit of opportunities may be viewed as a key entrepreneurial skill that covers the core tasks in entrepreneurship, and represents the 'top of the pyramid' of the hierarchy of entrepreneurial skills. The pursuit of opportunities has two aspects: recognition and realisation of opportunities. Further, in order to realise opportunities, the entrepreneur must have access to resources that are needed in that pursuit. One crucial measure in this comprises the utilisation of social contacts and networking, i.e. the second key entrepreneurial skill that has been selected for study in this project. Finally, in the pilot stage it was proposed that strategic skills would be taken into account among the entrepreneurial skills in the main stage. This was considered a worthy suggestion, especially because three subgroups of the farmers interviewed could be formed according to strategic orientation.

Thus, it was assumed that entrepreneurial skills among farmers may be approached as the skills of:

- Recognising and realising opportunities
- Networking and utilising contacts
- Creating and evaluating a business strategy

4.3 Approach and research questions

The core issues in the main stage concerned the assessment and development of entrepreneurial skills. In methodological terms these issues were approached by utilising rhetorical and relational social psychology (Billig 1996; Goffman 1959; Vesala & Rantanen 2007; for a more detailed description, see Vesala 2008)). This meant that entrepreneurial skills were viewed through the self-assessments displayed in farmers' self-presentations; the development of these skills was studied by analysing how farmers explain the presence or absence of these skills among farmers. Consequently, the research questions were formulated as follows.

1. How do the farmers present themselves in relation to entrepreneurial skills?
2. How do these skills manifest in their self-presentations?
3. Are there differences between self-presentations according to the farmers' engagement in conventional production, value adding activities or other diversified business activities?
4. How do the farmers explain the development of entrepreneurial skills among farmers?
5. In the farmers' opinion, what could be done to develop entrepreneurial skills among farmers?
6. Do the explanations presented by the farmers match the viewpoints of outside experts?
7. Country differences and similarities, concerning the results from questions 1-5.

Questions 1-3 deal with the assessment of farmers' entrepreneurial skills, questions 4-5 deal with the factors hindering and/or stimulating the development of entrepreneurial skills, and the last two deal with a wider comparative aspect.

4.4 Methods

In the main stage, three distinct methods were utilised in combination. The most prominent and crucial one was comprised of qualitative interviews.

Interviews were conducted in the UK, Finland, Italy, the Netherlands, Poland and Switzerland, on 25 farms in each country. In connection with the qualitative interviews, a structured questionnaire was also utilised to collect background information about the interviewees, their farms and business activities. The interviews occurred on the case farms, which were selected from chosen localities or regions. In each country, the selection of the case farms was such that a minimum of five female interviewees were included in the sample. Additionally, a maximum of five interviewees over the age of 55 were included to ensure that the cases would have future relevance, in a sense that one could assume most of the farms to be still active for several years. Further, the selection was constructed so that the case farms would include variations typical of the area or region in question in terms of line of production. (For a more detailed description of the case farms, see McElwee & Baker 2008.)

Most importantly, however, the selection in each country was such that representatives of three strategic orientations – *conventional production*, *value adding* and *non-food diversification* – were included. Consequently, the case farms were divided into three subgroups for the analysis. It was

assumed that these subgroups represent the elementary strategic alternatives in farm business nowadays, and that this would contribute to the theoretical relevance of the whole study and the research questions put forward in it.

In the design of the qualitative interviews, a particular methodological approach was utilised. Following the basic methodological outline proposed by Vesala (1996) and Vesala and Rantanen (2007) in their 'qualitative attitude approach', a design was constructed in which interview data was generated by encouraging talk within a semi-structured interview session; the talk was then analysed as social psychologically embedded argumentative rhetoric. In the concrete interview situations this was achieved by presenting the interview topics to the interviewees, both verbally and written on separate sheets of paper, and by asking the interviewees to comment on the topics in their own words. The topics were introduced to the interviewees in the form of questions and requests, some of which concerned the assessment of the interviewees' own skills, while the others concerned the development of entrepreneurial skills among farmers. The initial comments of the interviewee were followed by a short conversation, where the interviewer encouraged the interviewee to elaborate on their initial statement and to present justifications for their opinion. During the conversation the interviewers refrained from taking a stance on the issues under discussion. In order to achieve comparability between individual interviews across all countries, a relatively uniform way of conducting the interviews was pursued with the help of detailed interview instructions (see appendices in Vesala & Pyysiäinen 2008).

For the analysis, the interviews were transcribed verbatim. In the analysis, the concept of self-presentation figured as a crucial interpretive tool for studying the assessment of skills. Self-assessments were analytically approached through interpreting the interview talk as self-presentations in regard to these entrepreneurial skills. The interpretation focused, firstly on a gradation of how skilful the interviewees presented themselves to be, and on the credibility of the presentation, based on their quality. Secondly, the interpretation focused on the content of the presentation, on how the skills were manifested in it, i.e. what sort of activities and tasks are performed, and how they are performed when these skills are applied, according to the presentations.

The key assumption concerning the study of factors that effect the development of entrepreneurial skills was that this can be done by analysing how farmers explain the phenomenon. Thus, these factors, processes and their contribution to the development of entrepreneurial skills were identified by analysing to what kind of factors, actors or processes the farmers attributed the cause of or responsibility for skill development and its outcomes. These factors were categorised as internal or external to the individual farmer, and were viewed from the perspective of a positive-negative dimension (hindering or enhancing the development of skills).

The interviews were conducted in each country in the respective native language, and the analysis was done independently by the researchers in each partner country according to the instructions provided by the partner responsible for the main stage (for details, see Section 2.4. and appendices in Vesala & Pyysiäinen 2008).

Because of the qualitative nature of the study, including the case study design, it is obvious that the results concern immediately only these case farms, and generalisations of a statistical nature, for

example, will not be attempted. However, it may be assumed that theoretical generalisations are feasible, based on the notion that the results inform us about the possible state of affairs among farmers. Such theoretical conclusions, of course, call for consideration of specific features of the case farms and their selection. For example, in Poland the case farms were deliberately selected in such a way that the size of the farms was bigger than the Polish average; however, in this way a better comparability of the Polish sample with the other five European countries was achieved.

To supplement the qualitative interviews, additional survey data was generated in Finland in connection with another research project¹. In this nationwide postal questionnaire study a total of 751 responses were received from conventional farmers, farmers with business diversification and other rural small business owners. The questions concerned self-assessment of entrepreneurial skills and the perceived importance of such skills. The variables based on these questions were also analysed in relation to some other variables describing the farmer and the farm/firm. The primary purpose of including this additional data in the study was to explore the validity of the entrepreneurial skill concept in the farm context in statistical terms.

Finally, in order to assess the possible fit between the views of the interviewed farmers and those of various experts and stakeholders involved in farm related affairs, a series of workshops for experts was arranged in the partner countries. Relevant experts from the region or locality where the interviews were made were invited to the workshop in each country. The experts were introduced to the assumptions and results of the main stage and asked to comment on them from their own point of view. The comments were recorded and then analysed by the researchers in each country, in order to detect the fit between the views.

4.5 Results

One general observation in the main stage of ESoF was that the concept of entrepreneurial skills as it was used in this study appears relevant in the farm context. The importance of these skills was consistently accepted in qualitative interviews and also confirmed in the additional survey. Considering the distribution of the responses, both in the interviews and the survey questionnaire, the construct seems methodologically valid.

In this section we first sum up the overall results of the analysis of the self-presentations, related to research questions 1-3. Then we sum up the overall results of the analysis of the explanations for the development of the skills (questions 4-5), and finally comment on the results from a comparative perspective (questions 6-7).

Concerning the first research question, about how the farmers presented themselves in regard to entrepreneurial skills, a quite consistent pattern in the self-presentations was observed in all countries: in most cases the farmers presented themselves at least as a moderately skilful farmer. The farmers were typically able to connect these skills to their own farming activities and experiences in one way or

¹ We thank the Ministry of Agriculture and Forestry in Finland for funding the project, Rural Entrepreneurship in Change, within which this data was generated.

another. Cases where the farmers were not able to connect these skills to their own activities remained exceptions in all countries.

A related pattern was also detected in all countries: in each country, there existed variation in the degree of skilfulness that was presented in the comments. There were, on the one hand, farmers who showed no hesitation in assessing themselves as being good in using these skills, and on the other hand farmers who hesitated in whether they really would assess themselves as being good in these respects. Another, related characteristic was the observation that, on closer inspection, the convincingness of the farmers' presentations did not always coincide with their own skill assessments; some assessed themselves as being good but did not provide much convincing evidence to support their claims, whereas others assessed themselves as only moderately skilful but were nevertheless able to present rich and diverse examples of the manifestations of the skills in their business activities. Considerable differences in the convincingness of the skill presentations were observed. Hence, only a more detailed examination of the self-presentations allowed the researchers to detect the variation in the skill presentations appropriately.

This variation in self-assessments detected in the qualitative analysis corresponds roughly to the distribution of self-assessments observed in the additional quantitative study which was conducted in Finland. In the latter data, statistically significant but relatively small differences between conventional farmers and those with business diversification were observed, indicating better skills in the latter group.

On the basis of qualitative analysis, such a difference between subgroups can not be argued for. After examining the distribution of the variation in skilfulness across the three strategic orientations (conventional, value added and non-food diversification), we can also address the third research question in part by concluding that the variation in skilfulness does not coincide with the division into three subgroups of farmers, made according to the strategic orientation. In other words, in each subgroup one can find skilful as well as less skilful self-presentations.

However, with regard to the second research question, about how these skills manifest in the self-presentations of the farmers, we could observe that the three strategic orientations do make a difference. To put this consistent finding simply: in all countries there were clear differences between the subgroups in how the skills manifest. Also the group-specific patterns in the manifestations of the three skills were quite consistent in all countries, although there were exceptions and the division of strategic orientations into three subgroups was not always clear-cut. The manifestations typical to the groups can be summarised as follows:

In conventional production, the manifestations of the strategy skill included two basic alternatives, either scale enlargement or a cost reduction strategy. In some cases these could be presented as existing in the activities as a combination. The importance of long-term decisions was also typical to the manifestations of the strategy skill in this group. In the manifestations of networking and contact utilisation skills, the contacts within the farmer community were emphasised; contacts and networks beyond other farmers and conventional actors in the agri-food sector were scarce. The manifestations of the opportunity recognition and realisation skills were typically connected to the production arena; market arena activities were typically included only indirectly in the manifestations, if at all.

In the subgroup of value adding business, the manifestations of the strategy skill included the adding of value to products as a core idea. This typically implied that short-term adjustments in production, product structure and market and customer relationships were emphasised. Also product development was commonly included as an element in the manifestations of the strategy skill. In the manifestations of networking and contact utilisation skills, contacts and networks beyond the farmer community were typically included. Emphasis was on the potential opportunities which were generated through access to networks and utilisation of contacts. The manifestations of the opportunity recognition and realisation skills were typically connected and integrated to the market arena as well as to production. Generally, the very idea of a value adding strategy seems to be grounded to some extent in the realisation of opportunities by means of market arena activities (marketing, realising a niche-product, promoting sales etc.).

In the subgroup of non-food diversification, the basic element in the manifestations of the strategy skill was the combining of primary production with some other non-food business activity, often in order to search for synergy between the activities. Also short-term adjustments in the steering of the business and product development efforts manifested often in the strategy skill presentations, but not necessarily. Customer segmentation, in turn, was an essential feature in the manifestations of this group. On the one hand, it manifested in the demonstrations of strategy and opportunity skills, e.g. as an incentive to start providing a certain service or product for a certain customer segment, and on the other hand it manifested in the demonstrations of networking and contact utilisation skills, as a factor that often drove the farmers to engage in networking and contact utilisation beyond the farming community (e.g. other entrepreneurs, customers outside the farming community, advisors and service providers, experts and suppliers). The manifestations of the recognised and realised opportunities were typically connected or integrated with the market arena as well as with production; market arena activities were often – but not necessarily – involved and the recognised and realised opportunities often touched upon both primary production and non-food business activities (e.g. allocation of workforce between the activities, recognising multiple uses for farm resources and machinery).

The fourth research question in this work package was: How do the farmers explain the development of entrepreneurial skills among farmers? Concerning such attributions (explanations of cause) on a general level, the attributions of skill development resembled each other across countries in two respects.: First, in all countries, a variety of attributions of skill development were made. The diversity of attributions could be captured with the help of a categorisation in which the attributions are divided into three general categories: internal (e.g. experience, age), relational (e.g. interaction with colleagues) and external attributions (e.g. features of the farm, targeting of subsidies) of the development of skills. Second, in all countries the suggested explanations involved contradictory evaluations, i.e. one and the same factor (e.g. market liberalisation) could be presented as an enhancing factor by one interviewee and as a hindering factor by another. In this sense, in addition to common categories of attributed factors, no simple and overarching explanation pattern could be observed in any of the countries.

However, it was possible to identify a common denominator that characterises the variety of explanations in each country as well as the explanations across countries as a whole. This denominator concerns the nature of the process of skill development. If the variety of internal, relational and external attributions is viewed from the perspective of the nature of the implicated skill development

process, we recognise that the idea of learning is commonly rooted in the core of all types of accounts. When the interviewees presented justifications for their view that particular factors affect the development of skills, they did it by constructing the process as a learning event, regardless of the type of cause that was presented as crucial for the process to take place. This is an important observation, since the idea of skill development as a learning process was not suggested to the interviewees by the interview questions; instead, the interviewees themselves consistently chose to view the development of skills as something that takes place through learning.

The interpretation of skill development as a learning process revealed a further common denominator concerning the mechanism of skill development: across the various types of attributions (internal, relational, external), a learning event is constructed as a process in which the farmer is exposed to new perspectives. The importance of new perspectives came across in a variety of forms: the idea was implicated in explanations that emphasised the importance of a proactive attitude; diverse work experiences; work history outside farming; thorough farming know-how; education and training; diverse networks and contacts; stimulating farm context, culture and surroundings; motivating market visions and policy incentives. Virtually all explanations could be associated with the idea of being exposed to fresh perspectives, changes in habits of thinking or alternative ways of doing things. Facilitating factors functioned to introduce the farmer to novel perspectives and distance her from the habitual ones, whereas the hindering factors tended to prevent the farmer from reaching fresh distance to her activities and accessing novel perspectives. This concluding synthesis of the change of perspective as the common denominator and mediating mechanism in the learning of the entrepreneurial skills is depicted in Figure 1.

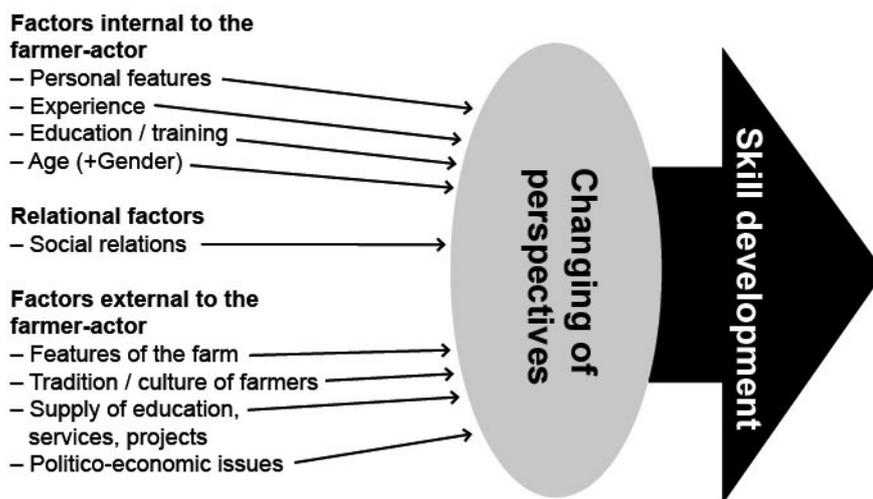


Figure 1: Change of perspective as a common denominator in the development of skills

A common feature to the factors in the above-mentioned internal, relational and external explanations was that they may all manifest as factors that either enhance or hinder the development of skills. Hindering, for example, could be conceived as the absence of some enhancing factor, and vice versa. As already mentioned, interviewees also presented alternative interpretations regarding the importance and effect of particular factors on the development of entrepreneurial skills.

The sixth research question concerned the relation between farmers' views on work package contents and those of outside experts or stakeholders. Experiences from the workshops with local experts, reported in the country reports (Vesala & Pyysiäinen 2008), seem not to bring out any serious doubts concerning the validity of our general conclusions as such. Many of the experts pointed out the nature of the data, of this being a qualitative case study, and cautioned against simple generalisations; however, the results as such were considered credible and understandable. Words such as training, education, advisory services, networking, exchange of ideas and so on are repeated in the recommendations provided by the workshops, underlining the crucial role of the learning process.

Some of the experts pointed out that there are also other skills involved in the farm business, in addition to the entrepreneurial skills studied here. For example, various managerial skills were mentioned. Related to this, one of the comments by the advisory board members is worth noting. This comment was about the minor role of management issues that are connected with the growth of the business and managing a larger enterprise unit, e.g. with several paid workers. Indeed, skills of realising opportunities and utilising contacts could also manifest in this area in the farm context, and do so increasingly in the future, but this aspect of entrepreneurial skills was not emphasised in the self-presentations and explanations provided by the farmers interviewed in this study. One could speculate on the reasons for this by referring to the nature of the sample, or even to the possibility that the interviewed farmers in general were not inclined to view labour force, personnel and organisation management tasks in terms of entrepreneurial skills.

The seventh research question concerned the similarities and differences of the results between the six countries. The nature of the study as a qualitative comparative case analysis implies that, understandably, there are differences and variations between country reports. As already stated, the conclusions presented in this chapter aim to capture patterns that are common to all reports and to link them together. Thus, country or case-specific features have not been the focus of comparison. This is not to say that such features may not exist or be relevant. In the country chapters the reader will find some discussions concerning them (see Vesala & Pyysiäinen 2008). However, some examples deserve comment here. In the Dutch report one of the special features is that the analysis of the self-presentations is organised so that the three strategic orientation groups have each been divided into subgroups according to further strategy-based divisions. Thus, among conventional farmers the Dutch researchers also distinguish farmers who are actively engaged in marketing and customer relationship management. On the one hand, this example shows that the dividing line between conventional farmers and value adding farmers is not so clear-cut. On the other hand, it seems to demonstrate that the manifestations of the skills are not by necessity confined to the production arena even among the conventional farmers, although such a pattern is dominant at the level of cross-nation comparison. One could further add that this exception (which by no means calls the pattern itself into question) is

understandable in the light of the Dutch national situation, in which entrepreneurship has been actively promoted on farms, and horticulture, for example, has been a forerunner in this area.

In the case of Italy, a special feature is that most of the case farms are active in associations and other collective bodies, and the role of networking is also emphasised more generally. While this feature conforms to the general conclusion suggested in this chapter, it may also be interpreted to have an association with the special nature of the Tuscany region, where active rural development projects have been extensively undertaken during the last few decades (see also Chapter 7).

4.6 Conclusions

A general conclusion on the basis of the results from this study is that while the farmers interviewed mostly agree that entrepreneurial skills are important and relevant for their own business activities, there are differences between individual farmers concerning how skilful they are in terms of these skills. These differences, together with the notion that entrepreneurial skills can be learned, imply that to develop and improve these skills among farmers is a feasible option and objective. This conclusion applies to farmers concentrating on conventional production as well as to those involved in value adding activities and non-food business diversification.

According to our qualitative analysis, the development of entrepreneurial skills may be viewed as a learning process. This process is influenced by many factors, some of which are internal to the individual farmer, some external, and some are most properly described as constituted by the relation between the individual and other actors.

This kind of perspective on the development of entrepreneurial skills bears special relevance to the issue of the role of the individual in entrepreneurship on farms, which we mentioned at the beginning of this chapter, as well as to the possible strategies for enhancing and promoting the development of entrepreneurial skills through the measures of development policies. Namely, this perspective makes it possible to identify two alternative interpretations concerning the role of the individual in the process of learning the skills.

The first alternative is to place the emphasis on the individual as a crucial factor (internal factor) that determines the learning process. On the basis of this emphasis, it would be feasible to enhance the development of entrepreneurial skills by trying to influence the individual, for example, to change her attitudes, motivation, intentions, abilities, values, and so on. While this alternative seems natural in the light of individualistic ideas stressing the individual's potential and responsibility, and appears to be common sense for many of the interviewed farmers and experts, it has its limitations as well. For example, it may be laborious to try to change the mind sets of individual farmers. This could be ethically problematic as well, as was implied by many of the interviewees who warned against coercive measures and stressed that the autonomy of farmers must be respected. Most importantly, in putting the emphasis on the individual factors there is a danger of overlooking the fact that learning does not occur in a vacuum. One needs a learning situation, a context for learning. Although the individual is in a central position in the learning, the learning is seldom determined solely by the individual factors as such. There is no reason to believe that this would be the case in the learning of entrepreneurial skills.

Thus, the second alternative is to place the emphasis on the factors that contribute to situations for learning, or that construct them. Relational factors, for example, may be viewed as crucial. In this way, the individual and her central role is taken into account, but not as a separate entity. Instead, the focus is on the context for learning, which is made up of interactions and relationships between the individual and other actors. On the basis of this emphasis, it would be feasible to enhance the development of entrepreneurial skills by trying to influence the learning context, for example to try to create situations and opportunities for learning, enhance and promote networks and contacts, and so on.

This latter interpretation of the role of the individual and the nature of promoting the development of entrepreneurial skills also appears to be common sense to many of the farmers and experts interviewed.

Although these alternative emphases are not necessarily exclusive, and both can be identified in our data, the overall picture of the results of the main stage of ESoF seems to be in favour of the latter one. To elaborate briefly on this claim we remind the reader that, according to our analysis, being exposed to new perspectives is central in the process of learning entrepreneurial skills. It is obvious that the principle of finding and digesting new perspectives is relevant, particularly in relation to the skills of recognising and realising opportunities. The skills of networking and utilising social contacts, as well as the skills of creating and evaluating strategies, may be conceived of more as means through which the opportunities are realised. However, networks and social contacts can also be seen as important means for generating new perspectives or as channels through which new perspectives are mediated. Thus, it can be reasoned that networks and social contacts are not only one of the crucial fields of entrepreneurial skills but also a very special and important factor contributing to the developments of these skills, and especially to the development of opportunity skills. Social contacts and networks enable exchange of experience, information and knowledge, feedback and social comparison, acquainting oneself with models and examples of best practice, and so on; in other words, they facilitate exposure to new perspectives, and contribute to the pursuit of opportunities.

In acknowledging the special importance of networks and social contacts in the learning of entrepreneurial skills, new light is shed on the observed differences in how the entrepreneurial skills manifest. Such differences were observed between strategic orientation subgroups. A prominent difference concerned the skills of networking and utilising social contacts, so that in the case of conventional farmers, concentrating on primary production, these skills were manifested in a narrower or more limited way than in the case of farmers engaged in value adding or other diversified business activities. The contacts and networks of the former subgroup seem to be confined more within the farmer community and within the production arena, while the latter subgroups also operate more widely beyond the farming community and in the market arena. This narrower focus in networks and social contacts apparently constitutes a constraint or a factor that may restrict or hinder the learning of entrepreneurial skills in the case of conventional farmers. Thus, on the basis of how the entrepreneurial skills manifest, it is justified to say that the task of learning entrepreneurial skills is a particularly demanding task in the situation conventional farmers are in. Promoting exposure to new perspectives and assessing them with the help of networks and wider social contacts appears to be one of the most important means for meeting this challenge.

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5 Developing strategies and tools to promote the development of entrepreneurial skills (Work package 5)

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5.1 Introduction

Work packages 2 to 4 contained the main empirical and analytical work of the project. Work package 5 was dedicated to synthesising the results into recommendations and tools at the two levels of actors within the political framework and socio-technical network of farmers on one hand and farmers themselves on the other. The objectives of work package 5 were:

- To devise country specific strategies to overcome barriers for the development of entrepreneurial skills
- To develop recommendations for policy makers and socio-technical network partners
- To develop a diagnostic tool for the self-assessment of farmers concerning entrepreneurship and entrepreneurial skills

To achieve the goals two steps were accomplished. The first step comprised stakeholder seminars in each of the participating countries and the second an international EU seminar. The aim of the seminars was to discuss the results of the project and to develop recommendations on how to foster the development of entrepreneurial skills. The approach, procedure and results of these seminars are described in the following sections 5.2 – 5.3.

As a second outcome, in addition to the recommendations, a self-assessment tool for farmers was elaborated. The concept of this tool is described in section 5.4.

This final report is also part of the synthesis stage, thus the discussion of the results of workshops takes place in the last chapter, Synthesis and Recommendations.

5.2 Methodology

The main aim of the seminars was to discuss the results of the project in such a way that participants of the national stakeholder seminars in particular understand the implications of these results for their own institution and are able to generate ideas about how to foster the development of farmers' entrepreneurial skills. Seminar participants comprised interviewees from the pilot stage, some of the farmers interviewed as part of the main stage, and the participants of the stakeholder workshop in the main stage. The seminar schedule was divided into two parts.

In the first part, the results of the main stage were commented on and discussed. For this purpose a short paper with the main results was prepared by the responsible persons of the main stage and the

coordinator. This paper was augmented by the country co-ordinators using interesting national results and sent to the participants some days before the seminar. It formed the basis for the discussion.

For the second part, small groups of similar actors were formed (e.g. a group of farmers, a group of participants in connection with farmers' associations, a group of policy makers, of researchers, etc.). Each group was given a set of questions to work on: first, they should discuss what implications the results have for their own organisation or business and, second, how the development of entrepreneurial skills of farmers could be fostered in tangible ways in their own organisation or business. The statements and ideas were collected and summarised. They are described in the following section.

The international EU seminar had aims similar to the national stakeholder workshops, only at an EU level rather than a national level. Around 40 participants attended the seminar. In addition to the project consortium, those present included stakeholders from the participating countries, almost all members of the Project Advisory Board, representatives from diverse institutions of the European Commission (DG Agri, DG Enterprise, DG Research, DG Region) and representatives of Copa-Cogeca and Ceja.

The first part of the programme consisted of an introduction to the project, a presentation of the results from each stage of the project along with a discussion of the results, and an additional presentation which compared three ongoing EU research projects with a similar focus (ESoF, COFAMI, IN-SIGHT). As a first synthesis of the work, a presentation was given about the ESoF project in the context of European Policy, especially CAP (see chapter 7).

The second part of the day was again dedicated to group work for groups of similar participants, working on the question of how to foster the development of entrepreneurial skills of farmers at EU level. These results are also described in the next section.

5.3 Results of the national and EU seminars

The ideas elaborated in the national stakeholder seminars in particular were very diverse and detailed. In the following they are clustered in accordance with the main results of the main stage. The last section of this subchapter is dedicated to recommendations aimed directly at specific actor groups in the socio-technical network of farmers.

The recommendations in this chapter are mainly a list of ideas regarding how the insights of the ESoF project can be applied directly. The synthesis chapter of this report (see chapter 8) is dedicated to placing these ideas within the context of the project as a whole.

5.3.1 Changing perspectives, or entrepreneurial learning principles

The first main result of the main stage was that, from the farmers' point of view, entrepreneurial skills are developed through learning. Learning happens through a change of perspective, and a change of perspective is initiated when farmers are confronted with new ideas or different ways of doing things.

This result prompted many remarks and ideas from the workshop participants, which can be summarised as principles of entrepreneurial learning:

Enhancing the farmer's own experience and the possibility of trial and error learning opportunities: this gives the farmer the opportunity to try out new ways of thinking and acting, but in a learning atmosphere where the risk of failure is not as great as in 'real' life

Exchange of experience and learning from examples of success and failure: hearing about what others are doing (especially farmers) enhances one's own view. It also brings the possibility of benefiting from others' experiences

In terms of entrepreneurial principles: farmers should be addressed in the same way as other entrepreneurs, i.e. farmers should be exposed to knowledge and experience from other (non-farming) industries

People working with farmers (e.g. advisors, teachers, ...) should seek to coach farmers by applying the above mentioned principles, in addition to giving specific advice concerning concrete tasks.

A number of ideas were mentioned in the workshops regarding how to apply these principles. Some of them are listed here:

- Organise mini-enterprises
- Peer group activities with entrepreneurs
- Special theme-based working groups
- Support of exchange programmes for farmers: opportunities for exchange can be organized with farmers in foreign countries or through work exchanges with industries other than farming.
- Support travel programmes for farmers

5.3.2 The role of networks and contacts as support factors to initiate a change of perspectives

The conclusions from the main stage contained the further finding that, through contacts within and beyond the farming community, it is very likely that farmers will be confronted with new ideas and with different ways of doing things. Therefore, encouraging farmers' networks and contacts is one good way to foster the development of entrepreneurial skills (see chapter 4).

The recommendations and ideas elaborated by workshop participants in the synthesis stage can be expressed in terms of the following principles with regard to encouraging networks and contacts:

Exchange of experience, as described above, is one positive way in which farmers can broaden their contacts

Encouraging contacts between farmers and members of the non-farming community. Mailfert (2007) states that start-up farmers with a non-farming background have larger and more heterogeneous networks (and also a higher percentage of 'weak ties'). The main stage revealed that diversified farmers are more likely to have contacts and networks in the non-farming community.

The important role of networks is confirmed by Mailfert (2007). She studied the importance of networks for start-up farmers and explicitly recommends: ‘Don’t just teach entrepreneurial skills – integrate networks into training programmes with accessible role models, make networking-friendly environments a priority’.

Further examples of how to encourage networks and contacts of farmers that were mentioned by workshop participants include the following:

- Facilitate the possibility of meeting customers (e.g. direct selling is a good opportunity)
- Extension opportunities and tools for groups. E.g. the self-assessment tool of ESoF has been designed in such a way that it can also be used in groups and not just for farmers on the internet. Another example is thematic peer groups or ‘academies’, as applied in CH or NL. Here, it is important that the leaders of the groups are trained in entrepreneurial learning principles.
- Support meetings between (young) farmers and strategic national and international partners
- Support co-operatives between farmers as one kind of network

5.3.3 Farmers playing an active role in learning entrepreneurial skills: how can they be motivated?

The main stage concluded that the farmer is the crucial, autonomous actor and that learning both depends on his activity and demands it. Thus, the question of how to motivate farmers to take action and actively seek to improve their skills was a major discussion point in the national workshops as well.

The recommendations and ideas of workshop participants can be summarised in terms of principles aimed at motivating farmers to use education and extension opportunities concerning entrepreneurial skills or other modes of learning:

Stimulate farmers’ interest in entrepreneurship issues in general. This could be done by demonstrating the advantages of having entrepreneurial skills, for example using stories of successful entrepreneurs. Another way of sensitising farmers is to introduce the subject of entrepreneurship by guiding discussions carefully from production issues to entrepreneurial issues.

Create an entrepreneurship-friendly regional and national (EU-wide) culture. In general, the point of view of entrepreneurship should be at the centre of policies and strategies for agriculture in order to encourage the development of farming businesses (growth, specialisation, diversification, etc.).

Create a system of subsidies/payments which is coupled with business management conditions (eg. support for farmers with a clear business strategy, etc.) and couple monetary incentives with requirements for (entrepreneurial) education.

Further examples mentioned by the workshop participants regarding how to motivate farmers include:

- focusing on practical problems of the farmers and introducing the new perspective of entrepreneurship, e.g. management training that makes the connection between daily work and further development of the farm as well as change processes in general

- promotional activities for entrepreneurship: TV show in which good entrepreneurial ideas are rewarded
- credit notes for special education offers
- financial support for young farmers or retiring farmers, or for farmers with a clear business strategy
- grant subsidies for investments only when a sound business plan exists.

5.4 E-learning and self-assessment tool – developing entrepreneurial skills

This section is about the tool developed within EsoF. This tool will be presented as a web-based e-learning tool for farmers, integrating self-assessments.

Presented in this section are the aims of the tool, the most important theoretical and didactic criteria, and the tool structure. The appendix contains some examples extracted from the tool.

5.4.1 Aims of the tool

Utilisation of the tool is intended to broaden farmers' competencies in entrepreneurial behaviour, independently from the general conditions in agriculture. As described in chapter 4, these competencies are related to entrepreneurial skills.

More precisely, the aims of this tool are:

- To offer farmers a learning environment in which they can improve their entrepreneurial skills and their knowledge about them.
- To support the development of farmers' capacity for self-reflection and to enable them to engage in a realistic yet encouraging self-assessment of their own entrepreneurial skills.
- To enable farmers to reflect on their behaviour and attitudes concerning entrepreneurial skills.
- To enable the farmer to understand which skills are needed for farm entrepreneurship
- To provide information about entrepreneurship and entrepreneurial skills in farming.

The main didactic method used in this tool is to question the user about how he or she does something. This is the main distinction compared with other e-learning tools. It is not the aim of the tool to judge whether a farmer is good or bad in something, or to characterise the farmer as an entrepreneur or as anything else, but to support the learning process, knowledge acquisition and self-reflective processes. As shown in chapter 4, the broadening of perspectives and experiential learning are the most important factors in enhancing the development of entrepreneurial skills. Other results from ESoF which influenced the development of the tool are presented in section 5.4.2.

5.4.2 Other ESoF results that influenced the development of the tool

Which results are important for the construction of the tool in order to achieve these goals?

First, the tool is based on the insight that entrepreneurial skills can be learned, and that the learning process can be supported by a broadening of perspectives. Thus, experiential learning is a good way to acquire entrepreneurial skills. Learning in groups, based on the exchange within the group, can also enhance these processes.

The second important aspect of the results are the differences and relationships between different skills, basic and entrepreneurial skills. This differentiation must be taken into account within the lessons.

The questionnaires used in the main stage and in the Finnish survey (see chapter 4) can be used for the assessment. This enables a comparison of the user with data from 775 other farmers (Finnish survey). To compare oneself with other people is always a motivating factor in assessments. According to the main stage (Vesala & Pyysiäinen 2008), the questions are empirically valid.

Another aspect is the methodological and scientific approach towards entrepreneurial skill development. The theoretical background of the ESoF project draws on constructivist ideas. Following this approach, some important criteria for the construction of the tool emerge. The constructivist approach and further didactic ideas are presented in the next section.

5.4.3 Learning theories – Approach to learning

To be able to design a consistent and effective tool it is necessary to reflect on learning theories and didactic concepts. The field of 'learning studies' is widespread and diversified; many different concepts on different levels provide more or less useful information for the conception of the tool. The assumptions presented here provide the important theoretical background for the special requirements of the ESoF tool.

In learning theory, three 'main' schools of thought exist (Meier 2006, 81-85):

- Behaviourism
- Cognitive studies
- Constructivism

The methodological approach in ESoF is influenced by constructivist ideas. Understanding learning as an active process that takes place in social situations could also be considered an assumption from this realm of ideas.

Constructivism requires somewhat further clarification. It is important to distinguish between different uses of the term constructivism (cf. Schnotz / Molz / Rinn 2004, 132f.). First, there is a philosophical-epistemic position which asks about the possibilities of (scientific) findings. Second, a cognitive-psychological position describes 'perception, understanding and thinking as processes of mental constructions of inner representations through the individual' (ibid, 132; translated by J.J.) and

is sometimes also called the constructivist position. The third position, social constructivism, assumes that learning is an active process of construction that is situated in social situations.

The perspective of social constructivism focuses on the situational aspect of learning processes:

‘Learning develops from action, action takes place in social situations, thinking and cognition are hence situational. Or with the strongly worded sentences from Maturana and Varela: ‘Every doing is cognition, and every cognition is doing’ (Schulmeister 1997, 75; translated by J.J.).

Following this position, it is important to situate learning processes within an authentic social situation; the problems contained within these learning situations should motivate learners intrinsically and enable them to solve similar problems by themselves in future (Schnotz / Molz / Rinn 2004, 133). This aspect seems to be appropriate for the aims of the tool: its intention is to motivate and enable farmers to reflect about their entrepreneurial skills, to learn new options for acting, and to be able to transfer the new ‘knowledge’ (knowledge also includes experiential knowledge) into practice.

What are the most important insights of the social constructivist perspective?

- ‘Learning is an active process: Learning is only possible through active involvement of the learners. This implies that the learner is motivated to learn and that he is interested in or develops interest in what he does and how he does it.
- Learning is a self-directed process: The learner assumes supervision and control processes in every learning action.
- Learning is a constructivist process: Learning is in every case constructive. Cognitive processes in principle do not proceed without individual operating experience, knowledge background and own interpretations.
- Learning is a situational process: Learning occurs always in specific contexts, so that every process of learning can be regarded as situational.
- Learning is a social process: Learning always includes social components.’

(Martens 2003, p.127)

So what are the consequences for the tool?

The constructivist perspective comes very close to our approach in ESoF on account of its emphasis on the situational and action-related aspects. The motivational aspects of the learners seem to be very important. The learning situation must reflect authentic social situations. And, last but not least, audio-visual elements are said to be supportive for motivation.

5.4.4 Didactic issues

There is also plenty of literature about didactics, especially in e-learning contexts. These are the criteria taken account of in the tool:

It is important that the learners become emotionally involved during the process of learning (Hoffmeister/Roloff 2003, 100; Meier 2006, 95). This aim can be achieved in different ways: similarities

to games, references to real life work, utilisation of clichés / cults or myths, connections to cultural traditions, and so on. Moreover, it can be helpful to offer different figures/tutors with which the learners can identify.

Another aspect is that something 'new' and relevant must be observable for the users: this can stimulate interest and curiosity (ibid, 101). The 'new' aspect need not concern the content but can also be contained in the background story or the overall design.

Multimedia arrangements can be helpful because the content of the programme can be demonstrated in such a way that the fictional actors' emotions can be followed empathically (Martens 2003, 123f.). This involves combining text, graphics, moving and still pictures. As a consequence, the outcome of decisions can also be experienced in an emotional way.

Martens (2003, 124; translated by J.J.) explains which basics are important in learning processes with the aim of changing attitudes and behaviour:

- 'Learning from own experiences is very effective for the adoption of new attitudes.
- Inner attitudes are often taken over from persons to whom one relates, for example parents, teachers or friends.
- It is important for the imparting of affective learning targets that the learner feels personally concerned.'

Furthermore he explains that it is helpful if learners can decide when and how long they want to learn, and that if they learn, it should be an active and intensive process.

The tool must possess a good structure which is visible at the beginning. Learners' success can increase by 30% through a structuring (or orientation as in Hypertext-Media) at the beginning (Meier 2006, 87). The content of the programme must seem to be important and the goals of the tool must be clarified at the beginning. The 'exercises' or 'questions' should not be too difficult and it should be possible to use the programme repeatedly in order to remember things better.

Moreover the learners' should be motivated to think about practical fields of application in their daily life (knowledge transfer).

Another interesting aspect in the context of problem solving is the importance of the capacity for self-reflection. Dörner (1982, 145f.) describes the effects of self-reflection in problem solving situations. Experiments by Reither (1979) showed that persons who are able to reflect on their problem-solving strategies achieve better results, learn faster to adjust to new situations and search for falsification of their hypotheses – in contrast to non-reflecting persons who are more conservative and search for supportive information for their hypotheses.

Last but not least, the tool should be usable by individual farmers at home as well as by groups, for example during agricultural education courses. Group utilisation offers the opportunity to launch group processes and exchange, which is also considered important for the development of skills. However, farmers who do not take further courses should also be able to benefit from the tool. This requirement was also considered in the construction.

Now, what does this all mean for the outcome of a tool?

5.4.5 Explanation of the tool / commentary on the tool

On the basis of the insights presented above, the e-learning tool contains three main parts: a self-assessment in entrepreneurial skills and the importance of these skills, a training session where the user is trained to think from the perspective of entrepreneurial skills, and a second assessment to reflect about the learning process (see Figure 2).

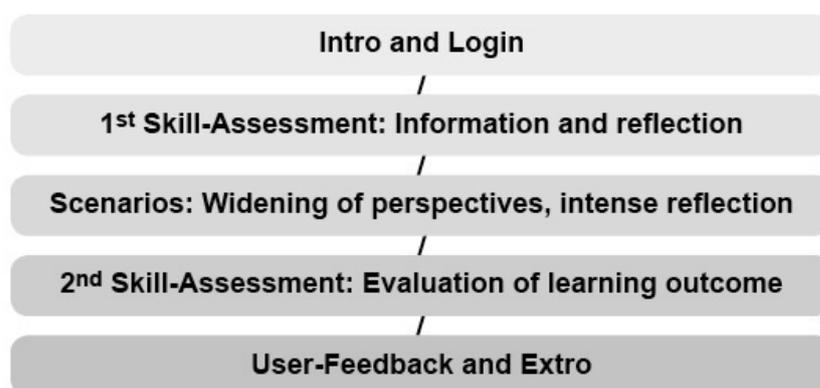


Figure 2: Structure of the e-learning tool

The user is guided by a tutor, a fox figure. The tutor leads the user through the tool, presents all the units and scenarios, and gives feedback. The fox is very clever and intelligent - traditionally it is the enemy of the farmer, but in this case it is helpful, wise and friendly. Moreover the fox is an animal, not a human, and is therefore a gender-neutral tutor.

The tool works with both basic and entrepreneurial skills in order to enable the users to understand the differences.

At the beginning of the tool each user is required to create a login profile and to give some data about himself and his farm. This data acquisition is based on the quantitative data sheet used in the main stage survey (see Vesala & Pyytiäinen 2008).

Then the first of three units begins. The user makes the first self-assessment and receives feedback, which includes a comparison with other European farmers. As mentioned above, this data comes from the Finnish survey. This first self-assessment is intended to support the users' reflective processes: how do they make their assessment? In addition, it is intended to awaken interest in the topic of the tool and, by means of comparison, to motivate the users to explore it in more detail.

After this assessment and a direct form of feedback, the main training session, Unit II, begins, comprising three farm scenarios which are presented to the user. The main task in this part is to think about the situations from the perspective of basic, or low-level, skills and entrepreneurial skills. The training is based on real farm situations and is intended to enable users to train and transfer their knowledge about entrepreneurial skills to their daily business.

After each scenario users can compare their own ideas and thoughts with ideas from other farmers and experts, as presented by the fox. Furthermore, users monitor their own progress in this part and receive feedback with questions which support both the further development of thinking from the skills perspective as well as reflective capacities. Moreover, the list of other farmers' ideas and the scenarios themselves support the process of broadening perspectives.

During the training session, the scenarios become progressively more complex or unusual. The first example gives the user an opportunity to become familiar with the concept of entrepreneurial skills, but after this, the user is required to solve situations which are much more complex.

Unit III is a second self-assessment. The questions are the same as for the first assessment, but the analysis and feedback compares the results of the first and second assessment. The aim of this part is to make changes visible for the user. The following questions are relevant in the feedback for the user:

- Have I changed my mind concerning the importance of the tool?
- Do I now give a different self-assessment?
- If yes, what has changed in making my self-assessment?
- Did I benefit from this tool?

For further research, this data can also be used to see how farmers change their opinion and self-assessments after using the tool and in which respects.

For further understanding of the tool, please utilise the tool on the project homepage (available from April 1st, 2008).

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6 Special situation of Eastern European Countries

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6.1 General introduction to land ownership during socialism

A few years after World War II, very unfavourable changes in the ownership structure of agricultural land took place in those European countries that found themselves in the area of influence of the former USSR. Following the Soviet model, state-owned farms and collective farms were established on land confiscated from its previous owners. The process of collectivisation brought about chaos and disorder as well as a very large reduction in the commercial production of food per unit area. This was due to the fact that, in the new situation regarding ownership, the quality of land cultivation worsened and the means of production were allocated centrally. The supply system was not always appropriate to the needs that arose from the nature of the production carried out, so that the means of production were often wasted.

Moreover, the large size of the newly established state-run farms, often covering more than 10 thousand hectares, created great difficulties in effective management, which was made worse by the lack of qualified managers and a generally low level of worker competence. The activities of sowing or planting on such farms were planned by a superior authority. The planning was often carried out without recognising at all the feasibility of growing crops in a given area in view of, for example, the unfavourable soil and climatic conditions existing there. Also, no consideration was given in the plans to the proper requirements regarding manpower and farm machinery. Moreover, when implementing proposals for growing a particular crop, harvest dates, transport requirements and storage facilities needed for the produce were very often not taken into consideration. More often than not, the state farms were simply unmanageable and were burdened with a large deficit. However, for purely ideological reasons, in contrast to privately-owned farms, e.g. in Poland, they were supported financially every year from the central budget.

It should be emphasised that in countries such as Bulgaria, Czechoslovakia, Hungary and Romania a vast majority of agricultural land came into the possession of state controlled farms because of strong political pressure from the top. The percentage of those farms in the latter stages of the changeover, which happened towards the end of the 1960s and 1970s, depending on the country, ranged from about 91% to 99% of the total arable land. In Ukraine, state ownership of the land was almost 100%. The same situation existed in Moldova and Belorussia. Poland was the only country in which this figure never exceeded 25.1%. In the former Yugoslavia it was 30%. However, in the latter two countries there were a large number of small farms (Table 5).

Table 5: State controlled agriculture in selected countries of Central Europe, 1950-1980

Country	Year	State owned farms		Collective farms		Percentage of arable land under state control (%)
		A	B	A	B	
Bulgaria	1950	90	0.77	2501	0.23	11.4
	1970	156	6.00	744	5.50	99.6
Czechoslovakia	1950*	182	0.49	3138	0.31	27.1
	1970	200	10.50	1722	2.50	92.7
Yugoslavia	1950	858	0.43	15605	0.13	31.6
	1970	270	1.32	1102	0.56	30.1
GDR**	1950*	559	0.32	1906	0.11	5.7
	1980	469	0.87	3946	1.28	94.5
Poland	1950	5679	0.25	635	0.30	10.4
	1980	2096	1.67	2286	0.37	25.1
Romania	1950	363	2.07	1027	0.28	23.6
	1980	407	5.00	4011	2.26	90.6
Hungary	1950*	454	1.48	2185	0.20	30.6
	1980	131	7.59	1338	3.48	no data

A – number of farms; B – average farm area (thousands of ha); * estimated;

Source: Turnock (ed.), 1998

** GDR - German Democratic Republic

In the majority of cases, collective farms and state farms were inefficient in the production of agricultural produce. Even those that seemed to carry out production at a higher, economically fully accountable level turned out to be unprofitable. Poor utilisation of the available resources resulted in a constant shortage of food products in the former Eastern Block countries. Even the regions of fertile soils, from which food had been exported before World War II, became importers of food as a consequence of the implementation of the principles of a planned socialist economy in agriculture.

6.2 Transition of agriculture to the free market economy

This state of affairs persisted until the beginning of the transformations that began in Eastern and Central Europe towards the end of the 1980s and at the beginning of the 1990s. The political changes that have altered the image of the European continent are associated with the collapse of the communist system and the introduction of the market economy. In the case of agriculture, the changes proved to be more difficult than in the other sectors of the economy.

Agricultural production carried out under the conditions of drastically reduced subsidies, the necessity to purchase the means of production at market prices, and the struggle to maintain a presence in a competitive market full of imported goods suddenly decreased in almost all of the affected countries. In extreme cases, the drop in agricultural production was more than 50% compared with the situation before the changes. A relatively small impact was noted in Slovenia, a small country in terms of arable land area. Agricultural production in Slovenia in the fifth year after the break-up of Yugoslavia was

already higher than it had been during the period when the region was part of the Federation. This may be due to the fact that almost 100% of arable land in Slovenia is currently privately owned (Table 6).

Table 6: Changes in the total agricultural production in the countries of Central and Eastern Europe in 1992-2002

Country	1992	1994	1996	1998	2000	2002
	1989 – 1991 = 100					
Belorussia	82.8	65.5	65.0	65.6	58.9	63.9
Bosnia and Herzegovina	69.8	51.4	44.2	72.3	60.0	63.0
Bulgaria	87.4	69.9	62.8	67.9	65.9	70.0
Croatia	64.6	58.3	60.5	70.6	70.2	66.9
Czechoslovakia	89.2	78.4	79.4	80.4	76.4	77.2
Estonia	72.6	55.6	46.6	40.6	39.8	41.4
Hungary	78.6	71.8	75.9	77.9	72.3	75.1
Latvia	96.6	59.4	46.6	46.0	40.6	45.1
Lithuania	93.4	63.7	67.0	65.2	63.6	66.2
Poland	85.2	77.9	87.9	90.8	84.2	83.7
Romania	79.5	98.4	97.2	89.3	78.6	84.9
Slovakia	89.2	79.7	76.7	78.3	60.8	68.1
Slovenia	77.0	97.3	102.7	102.7	99.3	101.5

Source: FAOSTAT, 2005

Privatisation and re-privatisation processes are well under way in most countries of the former Eastern Bloc, and the area of agricultural land that is not yet privately owned or leased is constantly shrinking. In 2007, state controlled arable land in Poland constituted less than 5%. It should be emphasised that in the initial stages of the changes in land ownership, particularly in 1989-1993, many difficulties were caused by the lack of experience in those kinds of operations.

In 1989-1991, the rational reasons (in the opinion of the Polish government) for restructuring and privatising state-run agriculture were responsible for spontaneous bankruptcies of state farms, colossal debts, a deterioration in economic performance, a complete production stop at times, an increase in the area of the land lying fallow, and many difficulties with an efficient, long-term development of agricultural real estate that for decades had been adapted to large area farming.

In most of the countries, many legislative, economic, organisational and social barriers emerged during the transformation, indicating total unpreparedness for the processes of restructuring and privatisation, which later had measurable negative economic, social and spatial consequences. Of these, the most important in Poland were: the capital barrier, resulting in a lack of demand for land, a still poorly developed credit system, no consideration for the regional variations in the supply of post-state-owned farmland in relation to existing demand, a lack of tradition and interest in running family-owned farms, no reprivatisation act, difficulties in changing ownership rights (no documentation of land or property rights), and long periods of time needed to develop restructuring programmes. Similar problems occurred in the other countries of the region.

Following the privatisation or leasing of large farms there has been - not only in Poland - a significant extensification of agricultural production. The share of labour and capital-intensive crop production, oriented towards growing grain crops, particularly wheat and, more recently, maize and rape as well, has increased. There has also been a decline in animal production, especially in breeding cattle, as well as in milk production. The successors of state farms, in trying more effectively to adapt their activities to market conditions, have been driven by the market-imposed need for production cost effectiveness and maximisation of profits. Grain monoculture and cultivation based on prolonged mineral fertilisation only can, however, contribute to a decrease in soil fertility and a deterioration in farming conditions in the future. Such activities are mainly due to a lack of capital for investments for both long-term and current production (W. Guzewicz *et al.*, 2002)

Apart from the problems with land previously managed as state-owned or collective farms, there have been great difficulties in the development of privately-owned farms. In most cases, privately-owned farms are too small in terms of the marketable yields they produce. The profits they are capable of generating are insufficient to allow people to live solely off the land, let alone create possibilities for investment. In 2005, as many as 69.4% of the farms in Poland were classified in the range of 0-2 ESU (European Size Units), and only 18.8% of the farms were above the level of 4 ESU. Taking into consideration only those farms which exceeded 1 ESU, the average economic size of a farm in Poland was 7.2 ESU. In the EU, the average for 2003 was 21.4 ESU, in Lithuania 3.8 ESU, 7.8 ESU in Greece, and up to 95.7 ESU in the Netherlands.

6.3 Comparison of the Polish results of the main stage with those from the other countries

While assessing the results relating to Polish farms, it must be strongly emphasised that they are exclusively representative of farmlands larger than the average farm in terms of the size of the arable land area. This is extremely vital because of the very large number of small farms which, on the basis of their economic size, are classified within the range of 0.1 to 0.5 ESU, and whose existence, it seems, can only be justified from the social point of view. For example, in 2005 there were 2,733 thousand farms in Poland of which 947 thousand were farms occupying less than 1 ha. Moreover, 60% of the farms consisted of less than 3 hectares of land per farm. They were, therefore, self-sustaining, social, or residential farms. It is likely that for economic reasons the existence of such farms in most cases cannot be justified, even in Eastern Europe. The exception are situations where the work on the land is supplemented with an income from hired labour or services rendered. Another example are farms which serve as a place to live, with the agricultural land being used more as a hobby than a source of income. Therefore, taking them into consideration in the research panel would distort the results, given that such farms often serve as mere places for survival for their owners, who never do anything to improve the conditions of their existence. Moreover, such farms are predominantly run by people who are well advanced in years, often far beyond the age of 60, whose reluctance to accept changes and face new challenges is mainly a result of the limitations imposed by their age rather than by their ability to come up with new ideas or their enterprising skills.

While taking into consideration the overall main stage results it is necessary to state that there is no significant difference between the results obtained in Poland and those from the other countries participating in the ESoF Project.

6.4 Conclusions

In the last dozen or so years there have been great changes in the agriculture of Central European countries. These changes occurred mainly as a result of the open policies of the EU oriented towards its expansion and also thanks to its huge technical and financial support. The involvement of the people in each of the countries aspiring to membership of the EU has also played a significant role. For that reason, in the 12 countries that are now new member states of the EU, the process of adjusting technical and economic conditions in agricultural production to those existing in the former EU has to quite a large extent already been completed.

This has been possible only through mutual cooperation between those trying to help as well as the beneficiaries themselves, mainly the more aware and better educated owners of good and very good farming properties. However, what is very significant here is that exceedingly positive changes have also occurred even on those farms which previously aroused great anxiety, e.g. dairy farms. For these, there were only two possibilities: either to adjust production (in this case with respect to milk quality in order to satisfy customer requirements) or to cease production. An analogous situation has also arisen among pig farmers, who either had to adjust their methods of fattening to meet the norms of meat and fat content and carcass weight, or who find it impossible to sell their products on the market. These are just two of very many examples of the changes that have taken place in recent years in the agriculture sector of the new EU member states.

In general, it would appear that, as is commonly thought, those farming businesses which had even the smallest chance of taking a leap into modernity have actually done so. The two basic prerequisites for achieving this were the possession of a sufficiently large production potential that would allow changes to be implemented, and knowledge, or at least being aware that knowledge needs to be acquired in order to achieve success.

As a result of globalisation, better access to information, faster information transfer and the possibility of using the Internet, the awareness of farmers in Poland has increased considerably in recent years. For that reason, as far as the recommendations for the development of entrepreneurial skills are concerned, there is no need to treat Polish farmers in any different way to farmers in Western European countries.

The only exception may arise if there is a desire to reach the owners of small farms whose level of awareness is expected to be far below the average. However, because of the peculiarities in the behaviour of such farmers and their very traditional attitude towards the reality surrounding them, it would be necessary to develop a set of completely different recommendations. And this would require carrying out new, detailed studies in this area on a suitably chosen population.

As far as the other Central European countries are concerned, possible recommendations on the development of entrepreneurial skills may also be the same as those for farmers in Western Europe. In

the case of countries like the Czech Republic, Hungary, Slovakia, Romania and Bulgaria, this could be done to an extent greater than in Poland, mainly because in those countries there is a greater number of large farms. On the other hand, the implementation process might not be so efficient in, for example, Lithuania, where the percentage of small farms is higher.

In any case, at present these recommendations can apply only to the 12 member states of the EU. In the current situation, the process of change that has taken place in Belorussia and Ukraine has not gone far enough. This concerns both the poorly advanced process of privatisation and the considerably lower awareness among farmers than that observed in the new EU member states.

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7 The ESoF project within its policy context: CAP reform, global change and the response of farmers

Selyf Morgan, Mara Miele and Terry Marsden

7.1 Introduction

As noted elsewhere the ESoF project was funded to identify and to analyse the economic, social and cultural factors that stimulate the development of entrepreneurial skills, and it aimed at developing strategies and tools to improve those skills. These objectives were related to the personal skills of farmers, but were also researched within political, social, economic and cultural frameworks relevant in participating countries and with reference to the wider European Union and beyond. This chapter discusses the policy context for the development of entrepreneurial skills for farmers, focusing in particular on agricultural and rural development policy at the European Union level whilst acknowledging some of the cultural and global issues that help shape and challenge policy.

Changes in the Common Agriculture Policy (CAP) since the MacSharry reforms from 1992 and the Cork Declaration of 1996 (EC, 1996)) have encouraged a reduction in farmers' dependence on public sector support and a reorientation toward the market. These changes have been pursued through a shift in policy instruments from price support and production based payments to the direct support of farmers, decoupling farmer support from production and developing the role of agriculture beyond narrow sectoral concerns. Hence, Multifunctional Agriculture as a policy concept has gained traction in parallel with policy objectives to open the agricultural sector to greater market influence (e.g. Moyer and Josling, 2002).

Whilst it has developed in a number of ways that reflects the perspectives and prejudices of different actors, one of the common perceptions of multifunctional agriculture is that of a sector in which actors have greater freedom to reorganise and to develop new market and business configurations than had been possible under a regime of state subsidy and policy-led production preferences. Along with greater freedom agri-food sector actors, including farmers, take greater responsibility for the development of the sector. For farmers, reform may be presented as encouragement to be less dependent on the state and to contribute to more general socio-economic objectives than simply ones of food supply.

Changing perceptions of agriculture have led to a repositioning of the farmer as an economic actor within a richer and more nuanced socio-economic environment than had been the case in the post-war productivist era. Within this shift in perspectives the farmer has become regarded as a potentially more autonomous agent, and the business skills of the farmer have, therefore, come under greater scrutiny. Ideas about the farmer as an entrepreneur and of what farmer entrepreneurship might entail have developed in lieu of this repositioning. However, increased interest has not resulted in consensus on these topics, in large part because of the heterogeneity of farmers, their experiences and motivations, and because of the heterogeneity of the agricultural sector (McElwee, 2005).

Whilst the main body of the project has examined farmer entrepreneurship from the point of view of individual farmers this chapter reviews the politico-economic context within which the concept and practice of farmer entrepreneurship may be considered. The chapter, therefore, considers the broad changes in agricultural policy within the EU and also, with reference to global changes in the agri-food sector, attempts to relate these to the concepts of entrepreneurship as developed in the ESoF project.

7.2 Harnessing multifunctionality to rural development

Concepts of Multifunctional Agriculture, have become important in the debate about agri-food in the EU over a number of years leading up to the end of the 1990's and beyond, and have been accompanied by the intrusion of wider sets of concerns into agri-food and trade policy. As a productivist agricultural paradigm has given ground to a post-productivist conceptualization, so too has the dominance of producer and trade interests retreated somewhat in favour of consumer and environmental actors. A multifunctional conceptualization places the agri-food system in a more dynamic and diverse policy environment, although it is itself subject to different definitions and understandings of what it encompasses and entails (Wilson, 2007).

Much of the debate about what Multifunctionality means and how it may be developed makes reference to the distinction drawn by the OECD (2001) between a positive and a normative approach: the first based on joint production of commodity and non-commodity outputs of agriculture whilst the latter sees multifunctionality as having value in itself and relates to social concerns with agriculture. This distinction creates different policy responses (Potter, 2006): the former approach achievable through policies aligned directly with farming activity, while the normative approach may allow for policies that are directed at non-farming activities and non-farmers. EU policy, as it emerges through the reform of CAP, may be seen to have allowed for a mix of approaches following from a set of measures that promote the normative approach as the focus of CAP reform is moved toward the increased importance of Rural Development.

As many commentators have observed² concepts of Multifunctional Agriculture can be seen to have contributed to the process of CAP reform through the 1990's to the Agenda 2000 reforms and the creation of the Rural Development Regulation (RDR) that constitutes the so-called Pillar II of the CAP. The RDR associates rural development more directly with agricultural policy by the creation of Rural Development Plans (RDPs), which are designed in part to encompass the multifunctional influences on, and contributions of agriculture to the rural economy (Dwyer et al, 2007).

The 2003 Mid-term review of the CAP reform process begun by Agenda 2000 brought further change to Pillar I measures in addition to enhancements of Pillar II. Agenda 2000 and the Mid-term reforms of 2003 aimed to consolidate measures and to simplify the administration of rural development policy with the intention of making it more efficient and coherent. The major changes to Pillar I saw the introduction of the Single Payment Schemes (SPS) that weakened the direct linkage of support payment to production. The SPS also have cross-compliance conditions attached to ensure that land is maintained in 'good agricultural order', and supports 'good agricultural practices', which include soil

² For a comprehensive review see Wilson, 2007

conservation and pollution reduction measures (EC, 2003a). The cross-compliance conditions for Pillar I support agricultural multifunctionality ('positive' in OECD terms), which may be contrasted to the rural development multifunctionality of Pillar II, provided through direct support of activities that relate to environmental and social impacts of agriculture, and also to support rural enterprises that may not be directly associated with farms and farming, and towards which the focus of CAP reforms has moved³ (EC, 2004).

The overall strategic basis of the RDR is to achieve a balance between policies that reflects the economic, social and environmental situation and needs in each country, and structured so as to support three main objectives of the regulation (see Community Strategic Guidelines in EC, 2006), namely

- Improvement to the competitiveness of agriculture and forestry through restructuring, development and innovation
- Protection of the environment and countryside by land management practices
- Safeguarding and improving the quality of life in rural areas and encouraging the diversification of economic activity

These three objectives are allocated to the first three of four so-called Axes along which Member States organise their Rural Development Plans; the fourth Axis being a partnership approach for Axes 1-3 based on the experience of LEADER projects. RDPs are designed to strengthen the partnership approach through close consultation of regional, local and other public authorities as well as NGO and other parts of civil society (EC 2004).

In a review of these aims the 'Health Check' consultation process launched in 2007 by the EC (EC, 2007a) examines the major reforms of the CAP to date including the SPS and its implementations; the effectiveness of the Cross-Compliance tests in Pillar I; the remaining partial coupling of subsidy to production and its gradual elimination; upper limits in direct payments; the abolition of Set-Aside; and the relaxation of dairy production quota limits with a view to final elimination (see Box 1). This reform pathway continues with prospective rounds of policy changes leading up to 2013 and the prospect of greater, or even of the final, decoupling of agricultural subsidies and production.

³ It may be worth noting that the vast majority of CAP funds are still allocated to Pillar I. The overall European funding available for the second pillar was about 46 billion Euro (1999 prices) equal to less than 5% of the EU overall budget and to about 10% of the EU expenditure for agriculture compared with about 275 billion Euro for the first pillar, amounting to 40% of the total EU expenditure (OECD, 2005)

Box 1: Major features of the Health Check Consultation

- **Single Payment Scheme** and its implementation. The Historic model and the Regional model of payments may both be adjusted to accommodate perceived weaknesses in each particularly the progressively distant and less relevant reference period for the Historic model c.f. the inflexibility seen in the Regional model. The consultation, therefore, looks to simplification of the SPS and towards a flatter rate of payments among farmers within regions of the EU
- **Cross-compliance** (in Pillar I) has contributed to increasing farmers' awareness of existing obligations, but adjustment may be possible to make it more effective
- **Remaining partial coupling** and its gradual elimination. Decoupling introduces greater flexibility for the farmer, where output is more adapted to the market
- **Regional variations in the impact of further decoupling** should be taken into account and addressed through Rural Development instruments, and some coupled payments may still be continued where there are few economic alternatives
- **Upper limits in direct payments** (capping of payments) to address imbalances such as 20% of beneficiaries receiving 80% of direct payments, with progressive capping and minimum area requirements and /or minimum annual payment also considered
- **Abolition of Set-aside:** to take advantage of higher world prices and reduce administrative burdens, but also need to maintain ways to preserve the environmental benefits of set-aside
- **Dairy Quota:** seen to hamper the sector from benefiting from stronger (world) demand and higher prices. Suggestions include gradual increase in quotas until phasing out becomes the best option

(Adapted from: EC, 2007a)

The direction of policy is toward the increasing influence of the market on farmers' decision making and toward a reduction in their dependence on state aid. As a corollary farmers who are still receiving coupled aid⁴ are seen to be less oriented to the markets. But with decoupling the farmer faces increased risks, becoming more sensitive to the variation of input and/or output prices and shifts in patterns of demand. These changes, however, are not experienced equally across the agricultural sector nor across the territory of the European Union as different agricultural sectors and different regions have always been subject to differing levels of subsidy support and are, therefore, differently equipped to deal with the new demands of policy and of the market. The central implication of the shift in policy is to encourage farmers to become more independent and to develop their business skills and, in order to be more capable of managing their businesses in a more uncertain and challenging market and regulatory environment, to develop a more entrepreneurial attitude to their businesses.

7.3 Farmer behaviour and the uneven distributions of farmers' entrepreneurial skills

The ESOE project responds to the perception that the trajectory of CAP reform, the increasing integration of agricultural and rural development policy, and the changing nature of the marketplace will require the farmer to be more independent of state support and guidance and to exercise greater

⁴ See EC, 2007b, which reports what the surviving levels of coupled payments in effect are in different EU countries.

relative autonomy than the CAP has hitherto demanded. Such expectations increase the importance of the farmers' business skills and increase the focus on the capability of the farmer to act in an entrepreneurial fashion. A programme of entrepreneurial skill development, informed by the understanding of these skills and the context in which they are expressed that emanates from the ESoF project, might be expected to increase the relative autonomy of farmers and help them to cope with changes in agricultural and rural development policies; to be less dependent on state support; and to be more capable of responding to the uncertain futures that awaits the agri-food sector.

Whilst entrepreneurship was recognised as a multi-faceted concept, and understood in a number of different ways (McElwee, 2005), an exploration from the perspective of entrepreneurial skills is based on an understanding that entrepreneurial skill and behaviour are things that may be learnt. From this perspective, entrepreneurial skills are not seen as limited to those who have what might be termed an inherent capacity, or who have advantageous environmental or physical conditions. According to the results of the ESoF project, any farmer may be shown to possess entrepreneurial skills regardless of their particular situation and the type of farming in which they are engaged, although the level of skills may vary and the skills may be manifested in different ways (Vesala and Pyysiäinen, 2008). And the project also finds that farmers were capable of recognising and relating the three skills identified by the research project to their own knowledge, experience and activities in each of the six regions. Variations in the degree of skilfulness could be ascertained among farmers in each country, together with different awareness of skill levels and accuracy in the farmers' self presentations.

In all the country and regional reports and for each of the three types, farmers accepted the relevance and importance of entrepreneurial skills to their own businesses, a response that may be interpreted as a favourable attitude toward these skills. However, many farmers also noted their own deficiencies, whether in possessing or in being able to deploy one or more of these skills. Explanations by the farmers for the uneven distribution of entrepreneurial skills were based on factors that were internal, external and relational as summarised in Table 7.

Table 7: Explanatory factors affecting uneven distribution of Entrepreneurial skills

Internal	Attitude; Personality; Age; Gender; Experience; Educational Attainment
External	Physical characteristics and Resources of the farm; Product line; Location; Social, Cultural and Institutional context
Relational	Social Relations; Interaction; Communication

Internal factors include personal features of the farmer such as attitude and personality, age, and gender as well as experiential characteristics (e.g. work history outside farming or away from the family farm), educational attainment and training. External factors on the other hand are related to the context in which the farmer works, including the physical characteristics and resources of the farm, the specific type of production undertaken (which may allow a greater or lesser degree of flexibility and opportunity for innovation), and the physical and geographical location of the farm. External factors include the social and cultural context of the farmer, the degree of their embeddedness in this milieu, and the institutional context, with attendant opportunity for support and development of farm and off-farm enterprises. With respect to the latter factor, farmers relate to the politico-economic

environment that the institutional environment produces in differing ways with similar specific processes or measures impacting farmers in different ways. Differences also arise between regions and countries because of different local institutional arrangements and their influence on the farmer, as illustrated by variety in Rural Development Plans and approaches, a feature that is discussed further below.

Relational factors affecting the farmers' ability to develop entrepreneurial skills refer to social interaction and communication, particularly relevant for 'Networking' skills and the skills of 'Recognising and Realising Opportunities', but also indicative of the ways by which the physical, social or institutional context of the farm and the farmers interact to create the environment for entrepreneurial activity. Relational factors, therefore, bridge Internal and External factors.

7.4 Developing entrepreneurial skills among farmers

Farmers' understanding of entrepreneurial skills, as conveyed through their interview responses, also include comment and implications related to the way that these skills are developed. What is strongly employed in discussion of Internal, External or Relational factors is the idea of entrepreneurial behaviour as a set of skills that may be learnt. Whilst structural features and conditions, such as personal characteristics or policy environments, are quoted as relevant and important preconditions that affect the opportunities that farmers have to engage in learning events, the learning processes themselves are recognised as important, and confirm the view that entrepreneurial behaviour is not dependent on inherent characteristics of either the individual or of the context.

This view of entrepreneurial behaviour as a set of skills that may be learnt has implications for the way that they may be developed and encouraged. A common finding from the project in this respect is that entrepreneurial-skill learning processes across all farmer types in all countries or regions are related to the effect of new or contrasting perspectives provided either by the farmer or by changes in market, institutional or social contexts. Hence, diverse work experiences, personal histories gained outside the farming sector, educational attainment, and diversity in contact type and in networks may contribute to providing new perspectives, as can change in social and cultural conditions and contexts, new visions of the marketplace and of marketing opportunities and, particularly relevant for the focus of this chapter, new farmer-related policy incentives. These influences encourage changes in mindset and habits of thought and, hence, encourage farmers to explore their capabilities and their business identities through an entrepreneurial approach that include awareness of strategy, the value of networking and use of contacts, and the confidence and motivation to realise business opportunities.

A major implication of the view of learning by change of perspectives is that the farmer should be considered as an active subject in the learning process. External actors create and offer opportunities and stimuli for learning, but clearly cannot guarantee nor enforce learning success. Development of entrepreneurial skills is dependent on the individual, a finding that matches with the widespread notion that associates entrepreneurship with individualism (McElwee, 2005), but is in association with entrepreneurial skills that embed the farmer within relationships with other actors. Individual learning and skill development is, therefore, contingent on particular sets of conditions, attributes and

motivations and may be recognised in the specific pathways individual farmers take that illustrate their entrepreneurial skills.

An interpretation of ESoF findings, and some of the implications related to entrepreneurial skill development from ESoF, is presented in Box 2. These features may form the basis for developing farmers' understanding of how to improve their own entrepreneurial skills in addition to offering an opportunity to integrate an entrepreneurial skill based perspective with agricultural and rural development reform.

Box 2: Features of Entrepreneurial Skills Development

- Entrepreneurial skill development seen as a learning process: learning events and episodes constructed as a process over variable times and spaces
- Combinations of Internal, Relational and External arenas
- Importance of new perspectives, creating the economic and social capability of detachment from prevailing conditions and offering new opportunities
- Developing skills sets and pathways that act as social (empowering) spaces within which the economic, social and the ecological are re-configured
- Offer the farmer ways of dealing with the policy frameworks that surround farming

7.5 Rural development plans: institutional contexts for entrepreneurial farmers

The Rural Development Plans that have been produced in each country, designed to respond to local economic, social and environmental conditions and needs, differ from each other in many respects (Dwyer et al, 2007), not least because the RDP are financed through joint funding arrangements between the EU and Member States⁵. Pillar II differs fundamentally from Pillar I in this regard: whereas direct agricultural (coupled) aid does not need to be co-financed by Member States, all RDR interventions must (Shucksmith et al, 2005).

The spending on, and effect of, RDP measures in each Member State is also dependent on the complementary national funding and implementation capacity at national, regional and local levels. In their analysis of RDPs produced for the 2000-2006 funding period Dwyer et al (2007) note the variation in the structures and implementation of RDPs in Member States. Sweden, Austria and France, for example, applied single national plans; regional programmes were applicable in Germany, the UK and Italy; whilst Spain ran a complex mix of national and regional programmes (see also EC 2003b). In addition the use of the RDR varied widely between Member States and Dwyer et al conclude that Member States continued under the RDR the kind of rural development policies that had been previously applied on a national basis and based on local priorities that precede the establishment of the RDR. As Lowe et al also note there have always been national and regional variations on the main CAP reform, e.g. France had its policy centred on an '*agrarian agenda*': promoting an

⁵ The compulsory modulation of funds from Pillar 1 to Pillar 2 is proposed to be increased from 5% in 2007 to 13% after 2013 (EC 2007a). The UK and Portugal currently are the only ones to apply a greater degree of modulation than the minimum levels proposed by the Commission.

‘...agricultural form of multifunctionality..’

whilst the UK pursued a *‘..countryside agenda..’* focussed on the

‘...provision of broader environmental public goods for a society that places particular value upon them’ (Lowe et al, 2002).

The relationship between how agriculture is perceived and its place within wider economic development affects the context within which farmer entrepreneurial skills may be developed, and the variation in the ways that Member States have developed and organise their RDP indicate these connections. As an illustration the Tuscan and English RDP are briefly compared in the following section, suggesting that the development of farmer’s entrepreneurial skills can be greatly affected by regional or national understanding of agriculture, rural development and the local institutional context.

The distribution of funds across the three substantive Axes sets up the institutional context against which farmers may develop their businesses. A comparison of summaries of RDPs that have been submitted for the funding period from 2007-2013 provides a similarly varied picture of the intentions and priorities of current Member States. Table 8 below illustrates how the distributions of funds across the four RDP Axes vary for the five EU territories included in the ESOF project. Table 9 to Table 11 indicate the main areas that each RDP highlight for inclusion under each Axis, areas that have been drawn from a common list of measures defined by the RDR. The percentage sums in Table 8 indicate the share of the Rural Development budget that is allocated to each of the four Axes from the total budget applicable in each country or region including both Member State and EU (EAFRD) contributions.

Whilst it might be argued that activities supported by funding from each of the Axes may have effects on more than one substantive area, and whilst the influence of the historical approach to rural development in each country or region (Dwyer et al, 2007) may limit the scope for policy innovation in response to the new RDR (with the possible exception of Poland whose priorities are more concentrated on enhancing the human capacities of the agricultural and forestry sectors), Table 8 graphically illustrates the differences in national and regional priorities for rural development. Both Finland and England appear to have similar priorities, each placing the overwhelming majority of their resources under Axis 2 (improvement of the environment and countryside) whilst much lower proportions are allocated to funds that support the ‘competitiveness of the agricultural and forestry sectors’ (Axis 1) and that ‘enhance the quality of life in the countryside and diversification of the rural economy’ (Axis 3).

Table 8: Share (%) of total public expenditure (including EU contribution) in each country/region devoted to each axis

Country/ Region	Axis 1	Axis 2	Axis 3	Axis 4 (LEADER approach)
Finland	7.6%	81.6%	6.5%	4 %
Poland	42%	32%	20%	4.6%
Netherlands	30%	30%	30%	10%
England	8.6%	81%	6.5%	4.2%
Tuscany	38.5%	40%	10.5%	10%

(Axis 4: LEADER approach for Axes 1-3)

Table 9: Axis 1: Enhancement of the competitiveness of the agriculture and forestry sectors

Country/ Region	Prominent features of RDP
Finland	Young Farmers; modernisation of holdings; Adding value
Poland	Human & vocational potential; Quality and efficiency; Supply and processing chain improvement; cross compliance; rural infrastructure
Netherlands	Entrepreneurship; Animal welfare; food quality; environmental impacts of agriculture, strengthen production chain
England	Vocational training, advisory service, modernisation, adding value, infrastructure for agricultural sector; market exploitation especially renewable energy, added value, entrepreneurial skills, knowledge transfer, skill enhancement
Tuscany	Support rural enterprises, markets links, innovative production, quality, opportunities for young people

Table 10: Axis 2: Improvement of the environment and countryside

Country/ Region	Prominent features of RDP
Finland	Natural handicap; Agri-environment
Poland	Biodiversity; soil and water; forest cover; Environmental protection
Netherlands	Natura 2000 sites and biodiversity; National Landscapes; Forest expansion; economically and ecologically sustainable water systems
England	Agri-environment schemes: Environmental Stewardship, Woodland Grant Scheme, Hill Farm Allowance; Energy Crops Scheme
Tuscany	Biodiversity, water, renewable energy, landscape protection

Table 11: Axis 3: Quality of life in the countryside and diversification of rural economy

Country/ Region	Prominent features of RDP
Finland	Diversification into non-agri activities; Micro-enterprises
Poland	Standards of living; rural infrastructure; entrepreneurship outside agriculture; rural services access
Netherlands	Diversification in agriculture; rural micro enterprises; rural tourism
England	Non-agri diversification and business development, micro-enterprises, tourism, conservation and rural heritage, skills acquisition
Tuscany	Improving attractiveness of rural areas for enterprise and residents

Source for Table 8 to Table 11: http://ec.europa.eu/agriculture/rurdev/countries/index_en.htm

The other three regions and countries have decided on much more equitable distributions, and devote a larger share of their rural and agricultural development resources to those activities and programmes that may be expected to have more direct impacts on the skill levels of farmers and their opportunities for developing either new agricultural activities (Axis 1), value added activity or diversified businesses (Axes 1 and 3).

Greater funding for Axis 3 also suggests a greater commitment to developing the rural economy that does not necessarily directly depend on agricultural production. The impression given by the raw data from Table 8 is supported by the indication in Table 9Table 11which provide the main priorities of RDPs as highlighted by each Member State. These tables show a greater degree of heterogeneity in the detail of Member State priorities than the division of Table 8 into two contrasting approaches seem to suggest, although a full and rigorous analysis of the differences in priorities between states and between regions would require an analysis of the actual programmes undertaken in the 2007-2013 funding period.

What might also be taken into account in a more detailed analysis and comparison between RDPs is the structure and scale of agriculture and forestry, and the structure and degree of rural development in each country and region. The need for support for activities and capacities that are included under the different Axes is likely to be different in each country and region, while the impact and effectiveness of the percentage allocation of the local RDP budget to specific spending areas will vary according to the local context and conditions. Whilst taking these general caveats into consideration, it may still be instructive to make a further, if brief, comparison of two of the areas covered in the ESoF project that appear to have strongly contrasting approaches to the distribution of state support for agricultural and rural development, namely England and Tuscany.

The RDP⁶ for England (RDPE) has a budget of €3.9 billion for the period 2007-2013, more than doubling that of the period from 2000-2006 (DEFRA, 2007). As indicated in Table 8 above 80% is spent on measures under Axis 2 of the RDPE, and for England⁷ this covers expenditure on environmental stewardship schemes, woodland grant systems, hill land or areas of natural handicap assistance and specific schemes that include non food production such as the energy crop scheme.

The emphasis of the English RDP on Axis 2 is justified by the UK's Department for Environment, Food, and Rural Affairs (DEFRA) on the basis of three main considerations (DEFRA, 2007). The first is that the agriculture and food sectors in the UK is considered to be performing well, and to the extent that state support is required that these needs are catered for by existing schemes. The sector as a whole is, therefore, believed to be less in need of support through Axis 1 or Axis 3 initiatives, suggesting that there may be a bias in the policy approach toward the larger (and) conventional producers (in ESoF terms) rather than toward those farmers who are consciously searching for ways of improving their income through value added or non-food diversification projects. Secondly DEFRA notes that the needs of the rural economy in England are sufficiently addressed by government initiatives that do not differentiate between rural and urban economies. The third consideration,

⁶ The RDP is referred to in England as a Rural Development Programme, rather than as a Plan.

⁷ Note that England is divided into nine implementation areas for RDP purposes, among which there may be some local variation in emphasis within the general approach taken by the English RDP.

therefore, is that the emphasis of the RDPE is put on those policy areas that may not be sufficiently supported by more general government assistance viz. good environmental land management, on which both the agriculture and forestry sectors and wider rural economies depend for their sustainability.

DEFRA, in response to criticism that Axis 2 payments may be skewed toward enhanced farm incomes, contend that the economic impact of these payments will have both direct and indirect employment benefits deriving from the expenditure on agri-environment and forestry schemes. However, the focus of the RDP and institutional support appears to be on addressing some multifunctional impacts of agriculture without making an explicit attempt to enhance the multifunctionality of agriculture in rural development terms. This view of the approach in England is noted also in findings from the EU's FP6 Multiagri project where Marsden and Sonnino question the commitment of DEFRA to the support of a multifunctional agriculture that is integrated to rural development (Marsden and Sonnino, 2005).

For Tuscany the RDP allocates €914m Euro with roughly equal division of resources between Axes 1 and 2 while Axis 3 receives a tenth of the total funding. For Axis 1 (€403m) the focus is on modernisation of agricultural businesses, whilst Axis 2 (€337m) focus is in conserving biodiversity, safeguarding water resources and reducing water contamination in order to promote energy conservation and development of renewable energy sources. Analysis of the expenditure distribution for the first RDP in Tuscany covering the period up to 2006 suggests that emphasis was on measures aimed at improving the environment and the rural territory, but also on measures such as the commercialisation of quality products that stress the particular link between products and the territory (OECD, 2005). This approach has been crystallised into the so-called 'Tuscan Model', which is the basis for the new RDP and which highlights an emphasis on small and medium sized farms, an emphasis on quality products, diversification in production and of the role of women in this activity, whilst regarding the physical landscape as an element to be integrated into a total agri-food offer by which food production and tourism may mutually benefit (see discussion on the Tuscan Model in, for example Morgan et al, 2006).

Emanating from the Tuscan example is the belief that supporting and developing farmer's entrepreneurial skills implies sympathetic local development policies, which should be informed by perceptions of how a region will position itself and develop. The research carried out by ESoF on the Tuscan region suggests that an agreement obtains between stakeholder opinion (pilot stage), the business development pathways that the farmers take (as illustrated in the main stage), and the policy framework that is indicated through the Tuscan RDP. This has been shown not to be manifest in the same way in other case study areas, and these differences reinforce the treatment of entrepreneurial skills as embedded in local cultural and institutional context and oriented by locally developed policy frameworks.

7.6 The global context: from overproduction to scarcity?

The CAP reform process is notable for its sluggish pace and the inertia associated with changes to a core policy area, with the most recent period traceable to at least the MacSharry reforms and the Cork Declaration in 1996: a period of twenty years or so, the ever-evolving nature of the CAP within the general development of the European project may be readily acknowledged. The development of the RDR and of multifunctional agriculture, however, respond to and take place within a global context that, in comparison to the rate of policy change within the EU, is changing at a rapid and unpredictable rate. Whilst the slow pace of WTO negotiations may match that of CAP reform⁸, the development of East Asian economies in particular, and the shifts in agricultural trade and food demand patterns, particularly as a consequence of changes in diet that accompany them pose immediate and far reaching challenges.

These challenges add to the accumulated impacts of an industrialized agri-food system on the physical environment. Over the last two decades concerns about the negative consequences of recent developments in agriculture and in the agri-food sector in Europe and worldwide have grown further viz. the debate about genetically modified products; cases of food contaminations; animal health concerns such as bird flu and the foot and mouth disease; issues of over-fishing; clear-felling of forests; loss of biodiversity; chemical pollution; climate change with its attendant effects on water resources and on the development of bio-fuels; and other environmental and health-related risks.

Many of these problems have been exacerbated by globalised agri-food systems by which trade in agricultural products has increased and increased prosperity, apparent in some of the more advanced developing countries, is manifested by increased demands on global food markets. With increased prosperity, the consumption of meat and dairy products, to take two notable examples, increases every year. Global meat production is projected to more than double from 229 million tonnes in 1999/2001 to 465 million tonnes in 2050, while milk output is set to climb from 580 to 1043 million tonnes (Steinfeld et al, 2006). The increase in production, whilst it challenges the assumptions and priorities of CAP reform also has a wider impact on the global context for the modern agri-food system. As the Steinfeld et al's FAO report notes livestock farming has increased substantially in the last couple of decades until it now utilises 30 percent of the earth's entire land surface. While most of the demand from livestock production is based on permanent pasture, 33 percent of global arable land is tied up in the production of feed for livestock. Additionally, in many instances new pastures are being created by clearing forest cover, making the industry into a major driver of deforestation, especially in Latin America where some 70 percent of the forest that has been cleared in the Amazon has been turned over to grazing (Steinfeld et al, 2006).

The livestock industry is implicated as a major contributor to the root causes of climate change particularly when gaseous emissions from land use by livestock industries and land use changes imposed by these industries are included. By the FAO's reckoning the livestock sector accounts for 9 percent of the carbon dioxide that derives from human-related activities, but also generates 65 percent of human-related nitrous oxide, which has 296 times the Global Warming Potential (GWork package)

⁸ See Potter and Burney (2002) for a discussion of CAP reform based on concepts of multifunctionality and its role in WTO trade discussions

of CO₂, mainly from manure; 37 percent of all human-induced methane (23 times as warming as CO₂), largely produced by the digestive system of ruminants; and 64 percent of ammonia, which contributes significantly to acid rain. Thus this particular impact of the agri-food system is increasingly being recognised as a global hazard impelling a leading FAO official to declare

'Livestock are one of the most significant contributors to today's most serious environmental problems. Urgent action is required to remedy the situation.'

Henning Steinfeld, Chief of FAO's Livestock Information and Policy Branch, (Steinfeld, 2006)

The consequences of climate change on agriculture contributes to further stresses in the global agri-food system, with consequences for populations in already vulnerable areas and increased problems of water management in areas that were hitherto able to support successful agricultural sectors. The UK government report on the economic impacts of climate change sets these out in stark terms that highlight the direct consequences for the agri-food system.

'Declining crop yields, especially in Africa, could leave hundreds of millions without the ability to produce or purchase sufficient food. At mid to high latitudes, crop yields may increase for moderate temperature rises (2 - 3°C), but then decline with greater amounts of warming. At 4°C and above, global food production is likely to be seriously affected

..... Developed countries in lower latitudes will be more vulnerable - for example, water availability and crop yields in southern Europe are expected to decline by 20% with a 2°C increase in global temperatures. Regions where water is already scarce will face serious difficulties and growing costs.' (Stern, 2006)

Policy makers in the EU have been dealing with the assumptions of agricultural policy in the latter period of the twentieth century that addressed the problems of overproduction. The new scenario for agriculture is one of increased unpredictability where food scarcity and vulnerabilities in agri-ecology contrasts with growing and new demands on agricultural production. As a response to these widespread concerns, and to a partial lack of public trust in existing policies and regulatory arrangements, politicians, state agencies, social movement organisations, business actors, and consumers are increasingly engaged in finding and developing new market-based and consumer-oriented instruments. Farmers are thus challenged both by the greater impact of a more open and unpredictable global market environment, and by the removal of the protective mediating systems of CAP support, enhancing their need to develop as more autonomous (and exposed) agents.

7.7 How farmers are framed: beliefs and perceptions

In the debates about the regulation of food the role of the individual farmer is an issue (as ESOE demonstrates) that has led to wide ranging questioning about the entrepreneurial skills and/or qualities and/or values that EU farmers should possess or develop in order to meet new societal demands in terms of safety and environmental sustainability in food production as well as in economic and rural development terms. Various discursive definitions of the farmer's role can be found in these debates, which offer parts of discursive repertoires (Potter, 1996) that societal actors can draw upon in their 'framing' (Goffman, 1974) of the agricultural *entrepreneur*. Examples are the farmer as rational

agent, the farmer as victim, and the farmer as a social movement actor, to name but a few (see e.g. Tovey, 1997; Lockie, 2006).

Reference to ‘the entrepreneurial skills of farmers’ often occupy a prominent place in discussions of today’s European political strategies on food. However, on the basis of the analysis presented here we suggest that the discussion on entrepreneurial *skills* should be linked to a broader discussion of the framing of the role of the farmer in different settings and the changing roles attributed to contemporary European agriculture production. The picture of the framing and positioning of the farmer that the ESOF project produces seems to suggest that there is a need to talk about a plurality of issues and interests, and a plurality of farmers’ roles in a changing European context.

The different discursive ‘framings’ of the farmer are elements in negotiations among social actors over responsibility for particular agricultural and rural development policies. During such negotiations farmers are constructed in ways that create discursive repertoires other actors can use to position themselves and their own responsibilities. Thus the various constructions of farmers influence other actors’ institutional and organisational practices, making some solutions to agricultural production and rural issues more appropriate than others. This makes it important to clarify which kinds of construction of the farmers are in play; to understand, that is, which constructions are being used strategically in public discussion of the distribution of responsibility for defining agricultural and rural development problems and solutions.

Here, as an illustration, the role played by the Tuscan region and its innovative agricultural model and rural development plan in ‘framing’ the new role (qualities, values, skills) of agricultural entrepreneurs who will be protagonist of such a model is useful to note. Consensus over the main discursive framing is evident: the role of the entrepreneur as ‘*the innovator within the Tuscan tradition*⁹’ appears to be largely agreed and almost ‘taken for granted’ in all of the interviews that were conducted for both the pilot and main phases of the project in Tuscany. Interestingly, the main discursive framing is very much linked to the priorities in the Regional Rural Development Plan, while the opinion that the new entrepreneurs should be increasingly independent from the financial support of the CAP and should be able to create or find their own niche markets emerge in many interviews.

This analysis indicates that there is a distinctive relationship between discursive constructions and organisational institutionalisations in the food sector. We have tried to describe the way in which this specific framing of the farmer/entrepreneur is related to the main political milieu and institutional setting, and, the shifting balances of discourses related to public and private responsibility for food issues.

7.8 Summary

This chapter has attempted to relate the entrepreneurial skills of farmers to their policy and market context that extends from the Local and Regional to the European and Global environments. A complex set of influences impinge on the farmer and affect the farmer’s entrepreneurial skills and their

⁹ A phrase used repeatedly by contributors to the WP3 focus groups of stakeholders and policy makers in Tuscany

development. Figure 1 illustrates some of the multiple levels and processes that are relevant to the farmer, and expresses the emphasis made in this chapter and throughout much of the ESOF project on how the entrepreneurial skills of farmers are realised within relational arenas. Inherent in these arenas are various framings of farmers and a major conclusion, therefore, is that farmers' entrepreneurial skills can be both enhanced and be more effectively optimised if there are conducive framings of the farmer, and that these are supported by an effective regional institutional structure.

The study of farmers' entrepreneurial skills has become significant following CAP reforms that may be traced to the early 1990's, and which were given coherent form in Agenda 2000 and subsequent reform phases. The implication of these changes in policy has been that farmers become more autonomous as economic agents and should, therefore, develop new skills to enable them to manage and develop their businesses. Agriculture is being repositioned by CAP reforms, and the development of Pillar II provisions through the Rural Development Regulation has provided the opportunity for farmers to broaden their own business visions and to develop their entrepreneurial skills.

The ESOF project has examined the behaviour of farmers in six regions and countries across Europe, and whilst the full range of entrepreneurial skills have been found in each area, uneven development may be related to the social, cultural and institutional context within which farmers operate. Whilst entrepreneurial skills are learned as new perspectives are gained following the reforms of the policy frameworks that surround agriculture and rural development, these are mediated by local approaches to agriculture and rural development that is illustrated by the variety of Rural Development Plans and Programmes.

This variety suggests that more local approaches to agriculture and rural development are emerging while the overarching framework of the CAP (in the form of Pillar I) continues to be subject to change.

Agricultural and rural development policy in Europe is, however, evolving at a time when the global economic and physical environments are generating substantial and unpredictable new challenges. New and growing demand for food and non-food agricultural products will, on the one hand provide welcome new markets for farmers, while climate change (acting in part as a driver for new markets), to take one factor, will place increased stress on European farmers. The potential for increased volatility at both European and Global levels puts greater emphasis on the regional dimension, which may be seen to provide a protective (if porous) buffer that allows farmers the space and the opportunities to develop as entrepreneurial actors.

In the context of the ESOF project the questions that arise from this kind of discussion are related to the relevance of a Multifunctional and an integrated Rural Development approach within the kinds of futures suggested above. Are they to be overtaken by a new form of productivism that is to be less influenced by state policy and less related to other rural economic sectors? In more specific terms what will be the consequence for entrepreneurial skill development that is predicated on diversified businesses given global uncertainties and insecurities, how can the demands of multifunctionality co-exist with the demands for land from biofuels, new markets and climate change, and how do regional institutional structures in different parts of Europe respond in ways that may sustain a local and diverse agriculture?

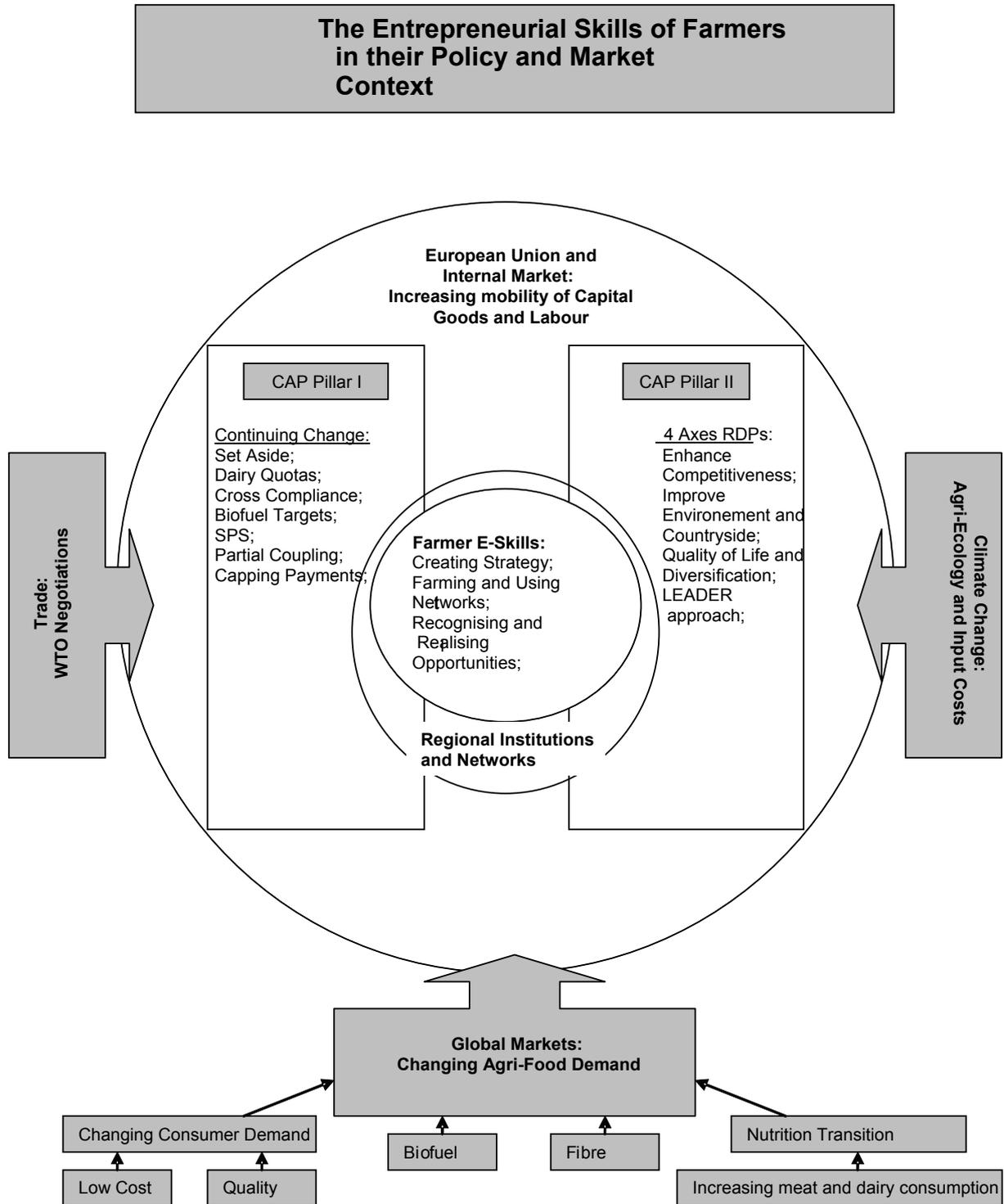


Figure 3: The Entrepreneurial Skills of Farmers in their Policy and Market Context

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8 Synthesis and recommendations

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8.1 Introduction

As stated previously, the aim of the ESoF study was to analyse the economic, political and cultural factors which hinder or foster the development of entrepreneurial skills and to develop strategies and tools that help to overcome barriers and support the development of entrepreneurial skills.

As the last chapter of this final report, this chapter interprets and synthesises all the work done in ESoF. Chapter 7 focused in a first synthesis on the connection between the empirical findings of the pilot and the main stage and the policy context. This chapter summarises first the findings concerning the concept of entrepreneurial skills of farmers and continues by exploring the importance of this concept in a broader context, taking into account chapter 6 about Eastern European countries and chapter 7 about the policy context. The last section of the chapter describes recommendations regarding how to foster the development of entrepreneurial skills among farmers.

The research questions described in chapter 1 are considered in this chapter as presented in

Table 12:

Table 12: Research questions and according sub-chapters

Research questions	According sub-chapters
1. What is the relevance of the concept of entrepreneurship in agriculture?	Subchapter 8.2 and 8.4
2. How could a concept of entrepreneurial skills for the farming business be described?	
3. Which skills can be called 'entrepreneurial' and why?	
4. How and why do farmers develop entrepreneurial skills?	
5. From the point of view of farmers: which economic, political, social and cultural factors influence the development of entrepreneurial skills of farmers in a positive or negative way?	Subchapter 8.3
6. How can the development of entrepreneurial skills of farmers be promoted at the level of the overall (political, economic and institutional) framework and at the level of the individual farmer?	Subchapter 8.5

8.2 A key concept of entrepreneurial skills for the farming business

In each of the chapters of this report, the ongoing political and economic changes in CAP and on the world markets have been emphasised as a crucial context for the ESoF project. This has been the background and starting point for all the project's tasks.

In this respect, entrepreneurship is considered to be a means of meeting this challenge. In other words, entrepreneurship is seen in our study as a means of coping with the changes in the environment and thus contributing to the survival and success of farming businesses in the present as well as in the future.

In the entrepreneurship debate, perceptions of the concept of entrepreneurship as 'establishing new businesses' on the one hand or else seeing it from the point of view of growth orientation and cost reduction on the other are dominant. Interestingly, Porter (1980) equates both possibilities with competitive strategies, if the first is seen as a strategy of differentiation (see chapter 4). In fact, both strategies can also be found in the expert interviews in the pilot stage (see chapter 3). When asked explicitly about changes in the environment, experts in the pilot stage interviews listed them, but also emphasised what developments are consequently happening on the farms. They mentioned three strategies that are pursued by farms in order to cope with the new challenges in the environment:

- cost reduction and enlargement
- adding value to agricultural products
- non-food diversification.

In other words, the two competitive strategies outlined by Porter (1980) – low cost and differentiation – are also applied by farmers. Consequently, for the main stage interviews we chose farms that represent all three strategies and found that, in every case, farmers mentioned having entrepreneurial skills. Our conclusion was that all three strategies can represent entrepreneurial strategies (see chapter 4). However, in all three strategies, some farmers also presented themselves as being less skilled. This means that the strategy division per se is not the most important aspect, so that our initial hypothesis – that entrepreneurial skills might be determined by the strategic orientation of the farm business on farm (cf. chapter 1) – must be rejected. The more important point is that a strategy is pursued (consciously) at all. Pursuing a strategy consciously can already be seen as a way of coping with competition and thus as an expression of entrepreneurial behaviour (cf. chapter 4 and 7).

If entrepreneurial behaviour is required of farmers, the question arises as to how such behaviour is initiated. In the literature, two common perspectives exist which discuss how entrepreneurial behaviour is determined. One emphasises the personality of the entrepreneur and aims at understanding which personality traits determine entrepreneurial behaviour and success. Concepts such as need for achievement or locus of control form the focus here (Schiebel, 2002). From the personality traits angle, the person is seen as a separate, independent entity.

The other perspective considers the 'activity' side of the individual, which can be introduced, e.g., with the skill concept. Skills can be described as the best or proper way of carrying out tasks related to the farming business (see chapter 4). As such, skills emerge through the interaction of the individual (and

his knowledge about the tasks) with the environment (application of knowledge in a certain context). Thus, the skill concept is a relational concept, connecting the individual with a certain context. The procedural nature of skills also implies convertibility and thus potential for development. This approach therefore constitutes a huge advantage in contrast to the personality traits approach, because personality traits are seen as stable dispositions (Gatewood et al., 1995).

The advantage of focusing on this aspect for the farming business is evident: given that it is becoming more complex to succeed in farming in the changing environment (see especially chapter 7), there is consequently a greater need for skills which support the actor in coping with the increased complexity. Fostering entrepreneurial skills can therefore be seen as one way of supporting farmers to succeed, since they constitute the activity-related aspects of entrepreneurship and, as such, are capable of being influenced.

The two ways of interpreting the individual are demonstrated in Figure 4.

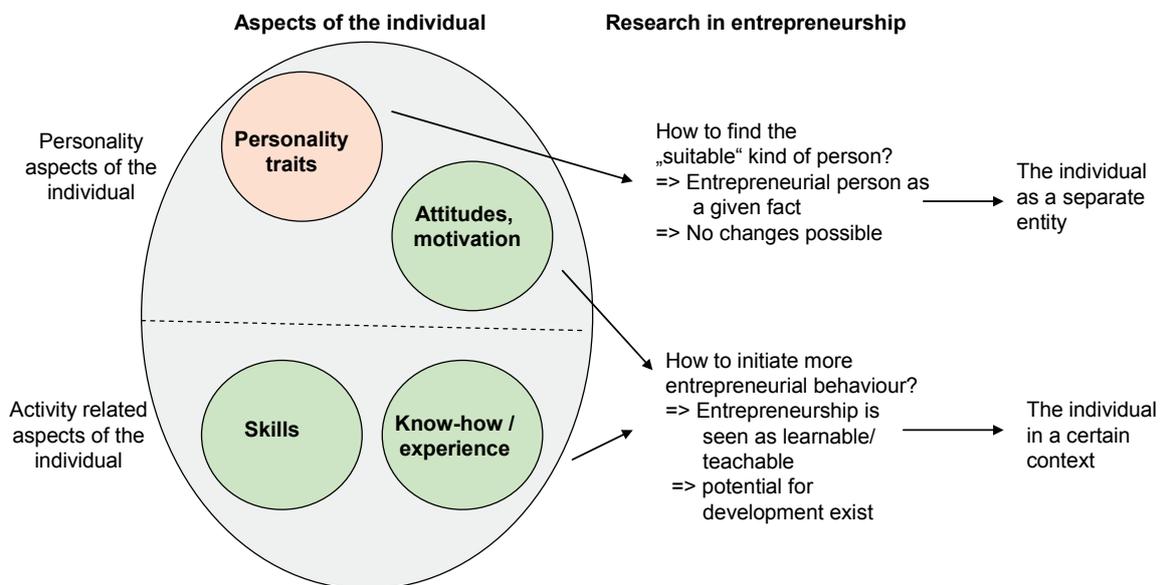


Figure 4: The individual in entrepreneurship research

These two points of view emerged both in the scientific literature and in the interviews throughout the project. Although we asked experts in the pilot stage which *skills* a farmer needs today in order to succeed in business, they also emphasised the role of inherent aspects such as personality traits and attitudes. The farmers interviewed in the main stage stressed in particular the relationship between inherent aspects and skills and confirmed the experts' view that inherent aspects are important. However, when asked how they had developed their own skills and what could be done to foster the development of entrepreneurial skills among farmers, their arguments switched to the activity-related aspects. Finally, experts in the synthesis stage elaborated recommendations that pointed clearly to the activity-related aspects as well. Although they confirmed the importance of inherent aspects, the possibility of improving skills was also emphasised clearly within their recommendations.

To foster the development of entrepreneurial skills it is important to understand which skills can be called entrepreneurial and why. When we asked experts in the pilot stage which skills a farmer needs today to succeed in business, they mentioned a long list, which was categorised by de Wolf & Schoorlemmer (see chapter 3) into 5 categories:

- Professional skills
- Management skills
- Opportunity skills
- Strategic skills
- Co-operation / networking skills

De Wolf & Schoorlemmer conclude that the last three categories can be called proper entrepreneurial skills, because they have to do with creating and developing a profitable business. Vesala (2008) develops this concept further by arguing that these three skills can be seen as meta-level skills, being more complex than professional (e.g. production skills) or management skills. According to Vesala, such complex higher level skills are called entrepreneurial not because they exclude something, but, on the contrary, because they necessarily encompass other skills. Therefore, entrepreneurial skills are actually skill sets. The category of networking skills, for example, contains communication skills, team-working skills and cooperation skills (de Wolf & Schoorlemmer, 2007). In addition, networking and strategy skills serve the purpose of recognising and realising business opportunities. Thus, entrepreneurial skills are intertwined with and depend on each other.

The relationship between basic and entrepreneurial skills is shown in Figure 5.

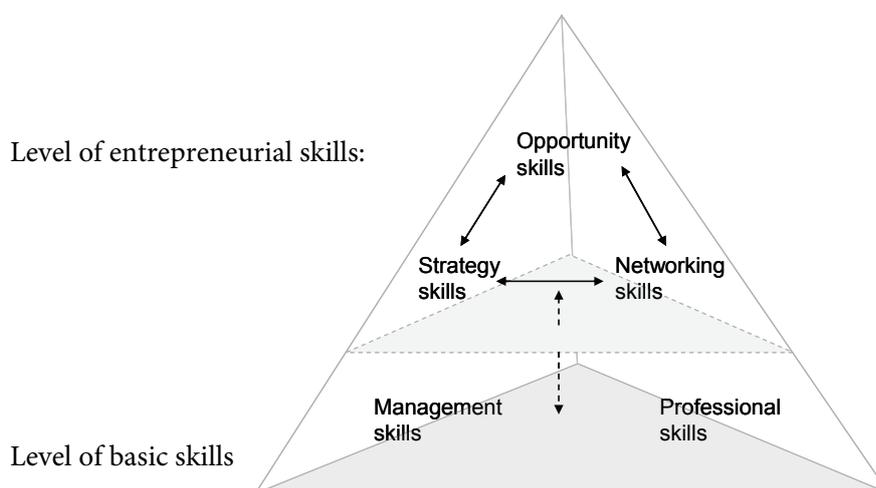


Figure 5: Pyramid of skills

Not only did the experts interviewed in the pilot stage list these skills, their importance was also made explicit by the farmers interviewed in the main stage. Furthermore, farmers were able to connect entrepreneurial skills with their daily experience; they recognise the skills as relevant to their business.

In other words, they work with these skills and most of them demonstrated having the skills, at least to a certain extent. However, there were also clear statements that there is still potential for improvement and that this would be useful, although some statements suggested that nothing should be done to foster actively the development of entrepreneurial skills.

One important conclusion concerning the development of these skills is that it is a learning process, as stated above. Furthermore, learning was associated in particular with experiential learning, with learning by doing and trial-and-error, not so much with the learning through formal education. A common perception in farmers' statements was that learning entrepreneurial skills happens through a change of perspectives. This means that learning happens when farmers are confronted with new ideas or different ways of doing things, which broadens their own perspectives.

There are many different factors which support or hinder the change of perspectives: internal factors relating to the farmers (personality traits) and external factors such as new policy incentives, new market requirements or education, and – a third category linking the internal and external factors – networks and contacts. Networks and contacts (especially beyond the farming community) are crucial for finding necessary information and being confronted with different perspectives.

It was also emphasised that farmers themselves play an active role and take responsibility for their own learning. If we also take into consideration the fact that entrepreneurial skills are complex higher level skills, it follows that the acquisition of entrepreneurial skills can not be taught in the same way as professional skills or management skills. The only way to initiate the learning of entrepreneurial skills among farmers is to strengthen the motivation of farmers themselves (enhance the learning process) and to optimise the learning environment by creating suitable opportunities to learn. This is confirmed by recommendations elaborated in the experts workshops and EU seminar of the synthesis stage, which contained suggestions for creating an optimal learning environment as well as incentives for farmers to take advantage of this environment, such as an exchange of experiences between farmers, discussions with customers outside the farming community, or travelling abroad.

8.3 Putting the farmer into context – factors influencing the learning of entrepreneurial skills

In the main stage interviews with farmers, internal, relational and external factors were mentioned which influence learning in a positive or negative way (for more details see Vesala & Pyysiäinen, 2008). A further very significant conclusion of the main stage was that most factors can be experienced as both hindering and stimulating. Often, it is the context that determines whether a factor is experienced as hindering or stimulating. Various aspects of that context are discussed in this section.

Influence of cultural / social context

The cultural / social context is especially important here. The local / regional culture has a considerable influence on farmers' attitudes and behaviour. Regional and national culture can have an influence on how CAP is interpreted (see chapter 7) and is also important in relation to discourses on entrepreneurship and the framing of farmers' roles. Morgan and colleagues explained in the previous chapter that the cultural framing of farmers' roles might be a reason for the differences between

Tuscan and English regional institutional settings. The same could be said about different discourses of entrepreneurship¹⁰. As described earlier in this chapter, there are several possibilities regarding how the concept of entrepreneurship can be understood. It might be that farmers' discourses about entrepreneurship differ from policy makers' or extensionists' views of entrepreneurship. The article by Burton et al (2008) analyses how the cultural context can influence such discourses. They use Bourdieu's theory of capital as a framework, focusing specifically on 'embodied cultural capital' in order to explain why farmers' attitudes towards voluntary agri-environmental schemes have not changed essentially in the last two decades. Cultural capital as defined in this article *involves the labour of assimilation (self-improvement) on the part of the investor and cannot be transmitted instantaneously, as can property or money*. In this sense, it forms a kind of symbolic capital within a specific group. They argue that 'for farmers, embodied cultural capital is constructed through the performance of everyday activities and is manifest primarily in the level of farming skill possessed by the farmer. Becoming a 'good farmer' is a project of self-improvement involving practice (...) to improve the mechanical, motoric and managerial skills required to effectively manage farmland.' The context in which these skills are seen as proper way of farming is generated by the farming community, which shares the same symbolic capital. If this symbolic capital is different in the farming community from, say, government groups, they argue, real changes in attitudes do not occur. Burton et al suggest in their conclusions that this might actually be the case in agri-environmental schemes.

To return to different discourses about entrepreneurship: the importance of non-economic values and goals in farming has been studied in recent years (Renting et al., 2005), which in some cases presents a contrast to some entrepreneurial concepts. Introducing further the issue of identity, we found that in the Swiss interviews of the main stage, farmers' identity in connection with entrepreneurial skills plays an important role in determining which skills are developed and why. It was noticeable that most farmers had a vision which influenced the decision about what they wanted to achieve on their farms and, in consequence, the strategic orientation of their farming business (see Jäckel & Rudmann, 2008; Rudmann, 2007). Identity as a determinant of motivation and thus behaviour (Kaufmann, 2004) is therefore also important in relation to entrepreneurial skills, as well as in relation to the framing of farmers' roles (Oostindie & Renting, 2007).

Thus, it can be argued that it is important to understand farmers' views (or identity) in connection with discourses about entrepreneurship. This is addressed further in the recommendations section below.

History and policy

It is evident that the state and economic history also play a role in determining the situation of farmers' skill levels. Poland and other Eastern European countries are the best example. As described in chapter 6, Eastern European countries have suffered from less favourable circumstances than other European countries. However, elsewhere as well agricultural policy since the second World War has not been in favour of entrepreneurship (stimulated production orientation of farmers). However, there are also indications to suggest that differences in skill levels are influenced not so much by the national settings

¹⁰ This actually applies also for other important expressions or concepts like „farming“ in line or contrast with “agriculture” or the multifunctionality concept.

but that region or production branch are more important factors within the cultural, historical, political and physical context. A common example is the Dutch horticultural sector. This sector has been operating in a free market for much longer than other sectors. This has created a very different, more entrepreneurial culture in horticulture. In addition, one could argue that horticulture is more industrialised, given that it excludes most external (climatic) conditions from the production process inside greenhouses. A third difference that could affect entrepreneurship in horticulture is the higher risk level: large investments and quick write-offs, combined with greater market uncertainties compared with other sectors.

The role of CAP is immanent in these aspects. CAP can guide the direction of farmers' development to a certain extent; from chapter 7 it is also evident that CAP can be interpreted in various ways by regional and national administrative bodies.

This is perhaps also an appropriate point at which to note that, from the point of view of entrepreneurship (defined as finding new ways to do business in order to succeed), multifunctionality concepts (as used in chapter 7) and conventional farming, or cost reduction / differentiation strategies respectively can equally be seen as entrepreneurial. It is the context that includes farmers' values and strengths which determines which strategy or concept is more suitable. Some regions, for example, might lean more towards differentiation strategies because there is a broader territorial potential. Other regions, by contrast, might be more suited to large, cost extensive farms focusing on a cost reduction strategy.

From the point of view of aspects of the debate other than entrepreneurial skills, multifunctionality (as discussed in chapter 7) might be seen as more important or preferable to support; however, these have not been considered in our study nor in this report.

To summarise: the regional context is important in two ways. In a physical way, it sets the boundaries to the opportunities available for farmers' activities. On the other hand, the regional culture can be decisive for the way in which these opportunities are recognised and realised, as demonstrated in chapter 7.

Education and extension

The third external factor mentioned as having an important influence on the development of entrepreneurial skills is the provision of education and extension opportunities for farmers. One overall conclusion from the project as a whole is that not only the existence of such opportunities is important but also mainly the quality in terms of including the entrepreneurial learning principles as summarised in chapter 5. It is noticeable, for example, that extension was not mentioned often by farmers as a possibility for learning entrepreneurial skills. The results of the project do not enable us to say why this is so, but one speculation could be that existing extension programmes do not meet the requirements of entrepreneurial learning. At the same time, experts in workshops of the synthesis stage mentioned existing programmes which include these principles. A second guess would be that extension programmes are not seen by farmers as an opportunity to learn or enhance their own skills. These speculative comments demonstrate that it would be important to give the role of extension further consideration.

A further point which was addressed only rarely by farmers and experts is the role and contribution of research. As research and extension are also part of the knowledge system as a whole, apart from education, it will be included here as well – more from the point of view of our own interpretation of project results than in the form of direct expressions of interviewees or workshop participants.

The importance of education in the narrower sense for the development of entrepreneurial skills, however, is clearly visible and was also expressed by workshop participants in the synthesis stage. Most of their ideas actually pointed in the direction of designing appropriate education programmes. These ideas are also taken into consideration in the recommendations section in the context of the education system.

To summarise this section, we argue that the entire knowledge system, including education, extension and research, has to be addressed in order to optimise the learning environment for farmers' entrepreneurial skills. This will be done in detail in the recommendations section (see section 8.5).

8.4 Relevance of entrepreneurial skills for rural and regional development

So far we have described the diverse and even controversial ways in which concept of entrepreneurship is addressed and applied in the scientific community. We have also argued that the concept of entrepreneurial skills has advantages compared to the personality traits concept. At this point we would like to emphasise once again the advantages of using the concept of entrepreneurial *skills*. On the one hand, it is a very straightforward concept which has clear definitional bounds (as defined in our study). On the other hand, it is so broad that the above mentioned diversity of entrepreneurship concepts can be accommodated within it. Regardless of the framing of entrepreneurship, be it the neoliberal point of view or the point of view of eco or social entrepreneurship, the concept of entrepreneurial skills can be used. The skills which have been defined in our study are necessary for all these kinds of entrepreneurship.

In conclusion, if the skill concept is emphasised rather than diverse concepts of entrepreneurship, certain debates will be easier to navigate and different framings no longer pose a major problem.

At the level of applicability for policy aims as well, we argue that the skill concept is valuable because it contributes to rural as well as to regional development by stimulating business development in the farming sector. This business development will have several features, varying from large-scale production farms to multifunctionality, as well as innovation and emerging new markets. This all contributes to rural and regional development by strengthening the rural economy. These aspects are discussed especially here, because they demonstrate the link between the entrepreneurial skills concept and other ongoing EU-funded projects.

Innovation:

Innovation can be defined as a driving force for economic development and growth. Equally, innovation can be seen as a way of doing something, as Vesala describes it (Vesala, 2008). Either way, however, to be able to act innovatively or generate innovation, certain skills are needed. This also emerges as one outcome of the EU-funded research project IN-SIGHT. This project examines the

dynamics of innovation processes in rural areas. One outcome is the description of transition processes from the stage of innovation through to a niche product and further to the established product. However, the starting point for their work is the already existing innovation; what has not been studied is how the idea for the innovation emerges and how this first idea is put into practice in order to actually create an innovation (Brunori et al. 2007) Here, the contribution of the skill concept becomes obvious, as business opportunities and innovations are overlapping issues. Of course, not all business opportunities are innovations and not all innovations are business opportunities, but the connection is evident. Therefore, having the skill of finding and realising business opportunities (as well as the other entrepreneurial skills) can be seen as a strong stimulus for innovation.

Emerging new markets in rural areas:

Due to the differentiation process in rural areas connected with multifunctionality, new consumer demands and changing market conditions, new chain-partnerships, collaborative projects and marketing opportunities are emerging. According to the EU-funded research project COFAMI (personal notification of H. Renting), new relations with these new markets are increasingly important. The capacity to construct relevant networks and build social capital seems to be crucial in these circumstances. It seems logical, therefore, that entrepreneurial skills, especially the skill of networking and utilising contacts, but also others, can operate as a stimulus for building new relationships, for better handling these relationships and also for recognising the importance of these new market opportunities for one's own success and development. We should also remember that entrepreneurial skills as defined in this study are complex skills, incorporating other, lower level skills. Networking skills, for example, also include teamworking or communication skills, strategy skills encompass skills to do with reflecting, and so forth – all of which are necessary and useful for building the required social capital in new markets.

In this section, the relevance of the concept of entrepreneurial skills for rural and regional development was demonstrated by highlighting the contribution of entrepreneurial skills for innovation and emerging new markets. This is shown in Figure 6.

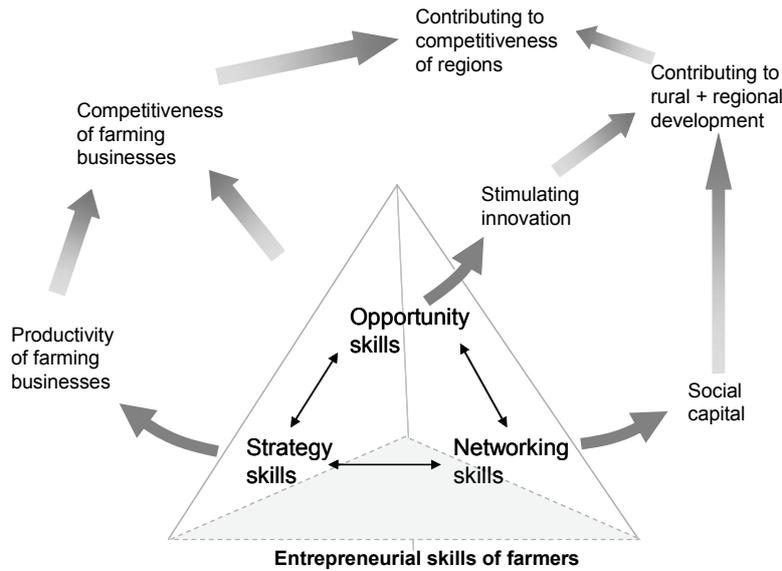


Figure 6: Hypothesised contributions of farmers’ entrepreneurial skills to rural and regional development

8.5 Recommendations

In the previous sections we discussed the concept of entrepreneurial skills, the factors influencing the development of farmers’ entrepreneurial skills, and the context in which the issue of entrepreneurship is embedded. In the following section, recommendations are formulated with regard to how these findings can be applied in order to foster the development of entrepreneurial skills among farmers.

Influencing factors have been described in relation to the various levels at which they exist (national, regional, farmers, and so on) and the different forms they take (direct / indirect). In addition, different actor groups are involved, which were addressed by the recommendations. For an overview, these relations are pictured in Figure 7:

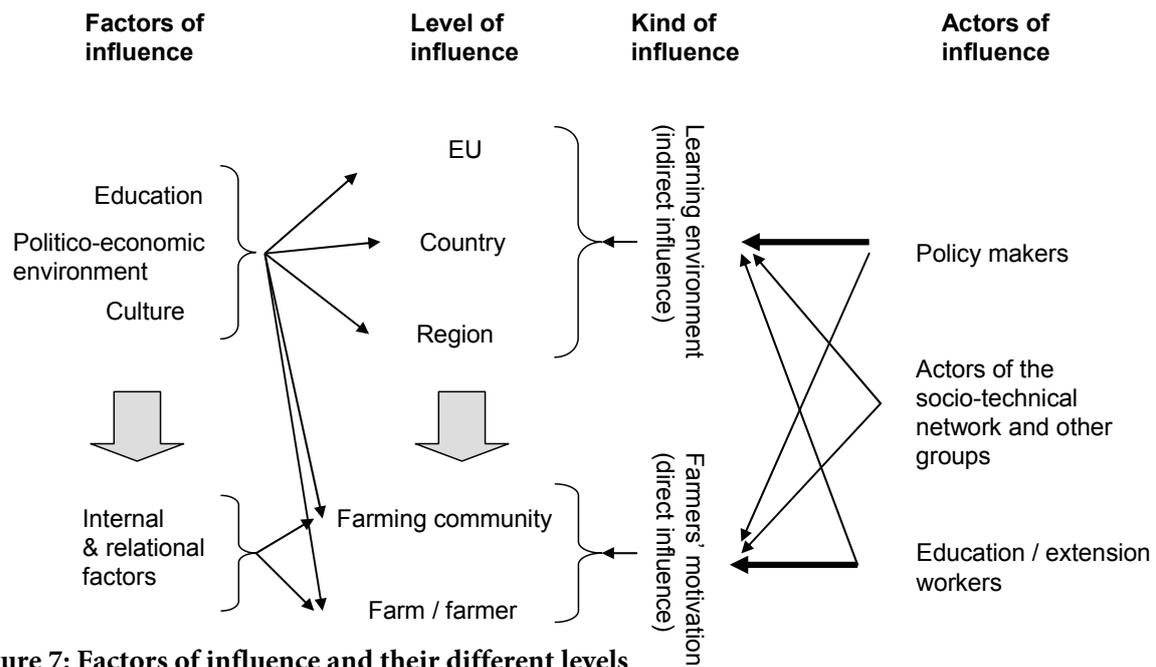


Figure 7: Factors of influence and their different levels

8.5.1 Motivation of farmers (cultural/social influences)

As we have argued, farmers’ acceptance or the expectation directed at them to become more entrepreneurial and engage actively in the development of their own entrepreneurial skills is influenced by the cultural and social context. A second point which has not been mentioned so far but was addressed by workshop participants in the synthesis stage is about how to reach farmers, especially those who are not yet aware of the importance of entrepreneurial skills or of the possibilities of changing their own situation.

Different discourses about entrepreneurship

The issue of the different discourses around entrepreneurship was only rarely mentioned explicitly as a separate point to be addressed in the workshops of the synthesis stage, and then only in terms of emphasising the importance of cross-cultural linkages to enhance farmers’ views. Thus, the recommendations formulated in this section are elaborated purely on the basis of the project team’s point of view.

As mentioned in section 8.3, an awareness of the existence of different discourses is important; it could be interesting to conduct research into which discourses are dominant in which social groups (farmers, policy makers, extension, and so on) and how the dynamic of different discourses impacts on the entrepreneurial behaviour of farmers.

In their article, Burton et al. (2008) not only provide a possible explanation for why farmers’ attitudes have not changed but also elaborate possible solutions. The first point is to establish a common understanding about a certain issue, e.g. entrepreneurship: ‘Transmitting embodied cultural capital thus becomes a matter of developing ‘identical categories of perception and appreciation’ with other farmers, such that the embodied skills can be recognised by others and rewarded with other forms of capital’. Burton et al focus on professional and management skills. Thus, if and to what extent

entrepreneurial skills are seen as 'good farming practice' in farmers' eyes is not studied. Therefore, it could be argued that it is important to discover what farmers' and other actors' 'categories of perception and appreciation' are in connection with entrepreneurship. Burton et al. also state the importance of social comparison as a means of recognising and appreciating skills. This corresponds with our findings and could be an explanation for why the importance of experience and exchange of experience is emphasised.

Even if the subject is accepted as being important, little evidence is available in connection with entrepreneurship in the farming sector (see chapter 2). The article by Pyysiäinen et al. (2006) is one of the few examples of where the issue has been studied recently. Thus, further research is needed to better understand these connections and their underlying dynamic.

Recommendation No. 1: Taking different discourses into consideration within the policy context:

- *Consider different points of view in policy development / preparation by including stakeholders and farmers via Democratic Deliberation as suggested e.g. by Rosenberg (2004) or in the EU-SASSPO project.*

Recommendations concerning further research:

- *Encourage research projects which address questions of identity, cultural capital and/or farmers' life-world and connect them with the subject of entrepreneurship and entrepreneurial skills.*
- *Encourage research projects which study the framing of farmers' roles from different points of view, such as the point of view of government/public bodies, the 'expert system' of extension, research and education, stakeholder groups, consumers/general public, farmers and farmers' associations, etc.*

How to increase farmers' awareness about the importance of entrepreneurial skills

One question which was discussed at the EU seminar as part of the synthesis stage was how to persuade farmers to use existing opportunities to develop their skills and how to 'make them aware' of the importance of these skills. This question was also discussed during the national stakeholder seminars of the synthesis stage and ideas were elaborated as to how farmers can be addressed directly (see chapter 5). Some suggestions pointed towards intensifying contacts to farmers and trying to persuade them of the importance of skill development in personal conversations, or reaching them via TV programmes about successful entrepreneurs, or conducting 'conventional' discussions about production issues and subtly linking them to issues connected with entrepreneurship. A further suggestion here could be to discuss the current situation, i.e. the changing environment, and how to cope with it – this is a subject that interests farmers; the view could be introduced that each farmer really can do something about the situation by developing their own entrepreneurial skills.

The role of non-farming actors who deal with farmers, such as extension, education and professional services (accountants, bank), was also emphasised, as these actors are closest to the farmers and may

have the best chance of influencing them. Hence, support for the ‘education’ of such actors might be a further alternative.

A further issue addressed by the workshop participants in the synthesis stage is the question of how to motivate farmers directly to take advantage of existing offers. Again, direct contact to the people who have regular contact with farmers was mentioned. However, it seems that further research is required here about what determines farmers’ motivation to use existing education and extension offers.

As direct incentives for farmers to make use of existing education and extension offers, experts mentioned possibilities such as credit notes for education, or financial support for a sabbatical year which has to be used for education, training, work outside agriculture or visiting farmers in foreign countries (see chapter 5). The pilot project ‘ERASMUS for young entrepreneurs’ is such an incentive. Similar programmes should be established for established entrepreneurs, such as financial support for farmers for a sabbatical year or a Leonardo programme for farmers, and suchlike.

Recommendation No. 2: Facilitating the use of existing education and extension offers

- *Establish a farmhand support system to relieve time constraints for farmers. This recommendation is addressed mainly to advisory services and farmers’ associations.*
- *Introduce direct incentives in order to encourage farmers to take advantage of existing education and extension offers, such as the pilot project ‘ERASMUS for young entrepreneurs’ or the Leonardo programme for farmers, etc.*

Recommendations concerning further research:

- *Further research projects on the factors determining farmers’ motivation to use existing education and extension offers in connection with entrepreneurship and entrepreneurial skills. However, the scope should not be limited to conventional agricultural education and extension; rather, it should be enhanced to include actors that promote the regional economy and industries (cluster formation, see also Recommendation No. 8).*

8.5.2 Creating an optimal learning environment

In addition to farmers’ motivation, the learning environment is the second issue to address in order to enhance the entrepreneurial skills of farmers.

In the EC’s communication paper ‘Putting knowledge into practice: A broad-based innovation strategy for the EU’ (European Commission, 2006b), recommendations are formulated with regard to how the EU could be made more innovation-friendly. Some of the aspects mentioned in this paper are also important in relation to creating an optimal learning environment for farmers’ entrepreneurial skills. The importance of the knowledge system and the regulatory environment were mentioned in particular in the workshops of the synthesis stage.

The aim of this section is to link the ideas elaborated by workshop participants in the synthesis stage with other results from the project and to use them as a starting point for elaborating recommendations for the European Commission and certain actor groups. In other words, some of

these recommendations were expressed explicitly by workshop participants while others are conclusions from the project team.

In addition, we compare the conclusions of the project with the Rural Development Regulation (EC No. 1698/2005) which is the most important EC regulation regarding entrepreneurship in farming and a central attribute of the CAP reform. Thus, the analysis is focused especially on modulation from Pillar I to Pillar II and the different Axes in Pillar II. At the same time, education and research programmes are also important. Since the knowledge system (education, extension, research) offers a broader range of opportunities for action concerning fostering the development of entrepreneurial skills, this is addressed first in more detail, followed by recommendations concerning the Rural Development Regulation.

8.5.3 Recommendations concerning the knowledge system (education, extension, research)

In terms of creating an optimal learning environment, ideas related to the knowledge system were mentioned most often by participants of the synthesis stage workshops.

Education:

'First and foremost, without education as a core policy, innovation will remain unsupported.' This sentence, taken from the communication paper mentioned above (European Commission, 2006b), applies equally to entrepreneurial skills. As already pointed out, the learning of entrepreneurial skills essentially means being confronted with new ideas and different perspectives. Following Vesala & Pyysiäinen (2008), this can be achieved by experience, and by the exchange of experience in general and in a cross-sectoral context. These principles of entrepreneurial learning are also addressed in the EC's communication paper 'Fostering entrepreneurial mindset through education and learning' (European Commission, 2006a). The importance of learning by doing and experiencing entrepreneurship in practice is addressed by describing actual examples of member states' initiatives and promoting these as good examples. Furthermore, the authors of the paper emphasise the importance of communicating entrepreneurial principles at all levels of education, beginning in primary school and secondary school and vocational training, up to university level.

Some of the main findings of our project are therefore already addressed in EC policy strategies. Moreover, the view that skills have to be addressed in addition to knowledge, personality and attitudes is also clearly apparent. However, what is lacking is a clear list of specific skills and their importance for innovation and entrepreneurship. Entrepreneurship education so far has focused on '... an individual's ability to turn ideas into action' (EC 2006a:4). Clearly, this programme is not aimed at the farming community, but our project can contribute nevertheless. The literature analyses of the main stage (Vesala 2008) also provide an important insight into entrepreneurship and entrepreneurial skills in general, not only for the farming sector. Thus, using the definition of our study it is possible to focus entrepreneurial education programmes on the most important tasks a (farming) entrepreneur should be able to do and the skills which are necessary for these tasks in order to succeed in business. Recalling the results from the pilot stage, this means the skills of finding and realising business opportunities, networking and utilising contacts, and developing and evaluating a business strategy.

However, as we have also said, these skills are complex higher level skills, which are intertwined with and based on lower level skills. Our suggestion would therefore be to work on two aspects simultaneously.

First, especially for the lower education stages, it would be useful to include lower level skills, which are part of the higher level entrepreneurial skills, into relevant curricula. This means, for example, 'soft' aspects such as communication training, team work, reflection skills (critical thinking), how to find necessary information, strategy planning etc. In more advanced stages, the skill training can encompass more complex tasks, such as establishing and running fictitious farms or even other non-farming businesses or mini enterprises (as suggested by participants of the synthesis stage workshops). The important point here is that farmers have the opportunity to learn by trial and error learning.

So far, 'normal' agricultural education is not included in the financing schemes of the Rural Development Programme (Council Regulation (EC) No. 1698/2005). However, in our view, the project work just mentioned on establishing and running fictitious firms/farms should be considered as well. We therefore suggest amending Art. 21 concerning agricultural education in Axis 1 to include this aspect. Furthermore, if such work includes co-operation between the education systems in the different sectors (agriculture, industry, services), Art. 58 concerning education in Axis 3 should also be amended.

A second principle which should become a focus in education is the change of perspectives. One of the most oft-mentioned ideas from the experts' workshops of the synthesis stage was the cross-sectoral exchange of experience and cross-country exchange. This could include, for example, work with sectors other than farming and exchanges with foreign countries at the early stages of vocational training. The possibility of trainee farmers working for a certain time in other industries during their apprenticeship could also be included. The main stage results revealed that the skill of networking and utilising contacts is especially important for being confronted with new perspectives. Thus, an important focus of education (and extension) is to foster contacts between farmers and between farmers and non-farming actors.

At EU level this could mean creating exchange programmes specifically for farmers (a Leonardo programme aimed at farmers or the pilot project ERASMUS for young entrepreneurs). However, farmers could also be included more effectively in existing programmes, or new programmes could be established which aim at cross-sectoral cooperation; also, more incentives could be created, such as entrepreneur competitions, and so forth.

Specific educational programmes are organised at national or even regional level. The above mentioned principles should be included in curricula for farmers' vocational training as well as in higher education.

At regional level, specific extension programmes would be useful which aim at encouraging the exchange of experience among farmers with similar interests - this might include establishing thematic working groups which combine different kinds of farming business. Also cooperation among farmers and between farmers and other regional actor groups could be organised at the regional level. Vertical collaboration within the supply chain and cooperation and collaboration between farmers and the

non-farming population is important. Initiatives such as rural-urban initiatives, consumer-producer organisations or public-private partnerships are also of value.

Recommendation No. 3: Amending the agricultural education system

- *Lower educational stages: introduce the teaching of 'soft' aspects of entrepreneurial skills such as communication training, how to find necessary information, co-operation skills, etc.*
- *Higher educational stages: practising more complex tasks. Here the skills of establishing, running and developing a business can be introduced by projects like fictitious farms or mini-enterprises. To facilitate this, include the possibility of financing such project work in Art. 21 and 58 of Council Regulation (EC) No. 1698/2005.*
- *Focus on change of perspective at all levels of education as a means to develop entrepreneurial skills. A systemic approach is needed which connects the farming community with the non-farming community, in both vertical and horizontal dimensions.*
- *A regional focus instead of a farm-based focus would be appropriate: development of regional knowledge systems instead of an agricultural knowledge system. Art. 58 of Council Regulation (EC) No. 1698/2005 constructs the basis for financial support for such a system as long as the normal education system is not affected. As stated above, however, specific features of the normal education system should also be included here. It is also important that mentoring for such projects is catered for.*

Extension:

The role of extension was not mentioned much in the main stage interviews. Explanations for this cannot be given on the basis of our project. One possible speculation could be that extension programmes on offer do not meet the requirements of entrepreneurial learning, although experts in workshops of the synthesis stage mentioned existing offers which actually do include these principles. A second possible explanation could be that extension is not seen as a learning opportunity. Again, the question would be 'why?'. In this context we return to Recommendation No. 2, where we suggest studying in more detail the role of extension in connection with entrepreneurship and entrepreneurial skills. In general, it could be said, that entrepreneurship issues should be taken more into account also in extension.

The farmer's role is important not only in connection with entrepreneurship (see section 8.3.) or as described in chapter 7, but also with regard to roles on the farm. Entrepreneurial skills are complex and are important for the development of the farming business in a changing environment. But in addition to the necessity of possessing entrepreneurial skills, farmers also work on the land and in the stable. The question is whether it is not asking too much of farmers (and other small business owners) to be 'worker', 'manager' and 'entrepreneur' in one person (cf. also Faltin, 2001). In this regard, we return to the question asked in chapter 2 about the level of analysis: the farmer or the farm. Based on the theoretical elaboration regarding skills (chapter 4 and section 8.2), we could argue that the focus on skills instead of personality will inevitably lead to the farm level. Thinking from the perspective of

business tasks, the question arises as to who carries them out. In many cases, more than one person is available on the farm (partner, employees¹¹, etc.). Thus, we recommend that, rather than addressing farmers as single persons when speaking of the development of entrepreneurial skills, it is appropriate to switch to talking about farm skills. Indeed, going beyond the farm, the question of the role of extension (and other groups such as farmers' associations) arises again from a different point of view: extension can provide farmers with the opportunity to 'buy' skills instead of 'developing' them on their own.

The role of the women on farms is also important. In the national stakeholder workshop of the synthesis stage in Switzerland, for example, it was emphasised that some of the diversification businesses which have a close connection to consumers (e.g. direct selling, agro-tourism) are mostly run by women. Other results from the main stage also point to the contribution of women to farm entrepreneurship (see especially Pinducciu et al., 2008).

Recommendation No. 4: Adapting the agricultural extension system

- *Take entrepreneurship issues more into account in farm extension in general.*
- *The level of analysis and consideration in political and practical issues concerning entrepreneurship should be the farm instead of the farmer.*
- *Develop a mentoring system for young farmers. This recommendation is mainly addressed to advisory services and farmers' associations in the member states.*
- *Foster education and training for disseminators.*

Recommendations concerning further research:

- *Further research about the role of extension as provider of entrepreneurial skills for farmers*

Research:

A new perspective on the use of the knowledge system should be considered, namely, working alongside farmers rather than 'teaching' them. Cooperation, relationships and synergies between education, research and extension should be encouraged and strengthened. The potential of such cooperation could include the emergence of mutual understanding, a chance to influence the agenda and approaches of institutions, and a change in underlying conceptions of knowledge (Fry, 2007), which may also contribute towards building common symbolic capital (Burton et al., 2008). Fry has studied how scientists, extension services and practitioners can be brought together in a fruitful way. She identified the following factors that enable mutual learning:

- An atmosphere in which the views and knowledge of farmers, experts and scientists are taken seriously, with special emphasis on collaboration, care and trust

¹¹ The role of employees and apprentices in the change of perspectives was especially apparent in the WP4 interviews (Vesala & Pyysiäinen, 2008).

- Forms of collaboration which enable communication and interaction based on the life-worlds of the actors, beyond the knowledge system to which they belong
- An underlying constructivist conception of knowledge on the part of the actors

These principles are applied in the Swiss project *From Farmer to Farmer* (Fry, 2007). This is about establishing successful farmer knowledge on new soil conservation techniques. Farmers who have implemented soil protection measures on their farm are interviewed for a film. These interviews are the core element of the film, allowing farmers to talk about their experiences and letting them demonstrate their knowledge. This film is shown to groups of other farmers. This project takes advantage of the fact that farmers respond better to arguments coming from successful colleagues.

Another example is an ongoing project from the Netherlands about 'The farm as connecting point in the agricultural knowledge chain' (in Dutch: Het Bedrijf als Schakelplaats in de Groene Kennis Keten) (Schoorlemmer, 2008) It is about new methods of agricultural education and takes into consideration the use of the farm as a learning environment for competence development on the one hand and close cooperation between research, education/extension and farmers on the other. Two educational institutions, a research institute, 40 farmers and almost 80 students participate in developing and testing this concept.

Both projects have close affinities with the notion of Action Research. This research methodology aims at involving researchers and practitioners in designing the research and elaborating results and thereby initiating organisational learning (Whyte, 1991). Up to now, it has been especially popular in Third World countries but not in Western industrialised countries (Winter, 1997). In the light of the ESoF results and the project examples just mentioned, it would be advisable to incorporate this methodology more frequently in EU-wide programmes as well as in national research programmes.

A further recommendation concerning research could be to include farmers more effectively in SME research programmes. Indeed, independently of the kind of programme, farmers should generally be included more often as full partners.

Schoorlemmer and Fry's projects are good examples within the farming community. However, taking into consideration the importance of cross-sectoral linkages, projects would be of value which extend beyond the farming community. Again, the LEADER programme deserves to be mentioned as being beneficial.

A further point, also mentioned by experts in the workshops of the synthesis stage, is the education of disseminators, i.e. teachers and trainers. This education is also crucial if the development of entrepreneurial skills is to be fostered.

Last but not least, the learning tool developed in the course of this project (see chapter 5.4) is also one way of further enhancing the awareness and skills of farmers. This is an interactive type of training that repeatedly takes the farmer through new scenarios and, thus, confronts him/her constantly with new perspectives. Three scenarios are integrated into the learning tool, which become progressively more complex and demonstrate very different business opportunities.

Recommendation No. 5: Adapting research programmes and methods in the field of agriculture and rural development

- *Include more action research-based research programmes*
- *Farmers should be included in SME research programmes as partners instead of ‘research objects’*
- *The cross-sectoral approach could be reinforced in research programmes, for example, by strengthening the Capacities Programme (e.g. Regions of Knowledge) and introducing specific cross-sectoral skills.*

Conventional knowledge chain ↔ systemic knowledge approach

From what has been stated so far, it becomes clear that the agricultural knowledge system should be changed from the conventional linear chain of ‘research – education/extension – farmers’ (the ‘diffusion of scientific knowledge’, Council Regulation (EC) No. 1698/2005, Art. 20 (a)(i)) to a systemic approach which includes the elaboration of scientific and practical knowledge in cooperation of all relevant actor groups. The principles of such a systemic approach would be:

- Focus on change of perspectives as the core of the whole. This has to be applied at all levels of the education chain as well as in extension work.
- Learning incorporates farmers as active participants.
- The target should switch from the farmer to the farming business. Taking into consideration the importance of cross-sectoral experiences and perspectives, we could even argue that the region or the rural area should be the target unit rather than the farming business (greater importance of Pillar II over Pillar I in CAP).
- Networks and contacts are important means for making the link between the farmer and his/her environment.
- Vertical linkages between all actors in the knowledge system. Knowledge transfer should also take place between the farmer and extension, education and research – not only the other way around (see Schoorlemmer, 2008).
- All actor groups live in a specific life-world. In order to be able to establish a systemic approach such as the one suggested here, it is essential that all actor groups understand the life-world of the others. This can be achieved only by cooperation (see Fry 2007).
- Horizontal linkages beyond the agricultural knowledge chain and beyond the farming business (LEADER approaches).

8.5.4 Recommendations concerning the regulatory environment / policy

Apart from suggestions developed in workshops of the synthesis stage focusing on the knowledge system, a number of points were also mentioned which are related to the regulatory environment. One

example was the expression of a desire for the government to play a more facilitating role rather than a directive role.

Currently, a shift is taking place not only in the EU but in many OECD countries away from a sector-specific agricultural policy towards a cross-sectoral rural policy (OECD 2006). In the European CAP this is manifested mainly in the modulation from Pillar 1 to Pillar 2.

In order to meet future challenges and to enhance innovation and competitiveness in rural areas (OECD 2006), policy strategies are aimed at strengthening

- regions rather than sectors or nations (locations instead of sectors)
- cross-sector cooperation of actors and cluster formation
- the identification and exploitation of the diverse development potential of rural areas (investments instead of subsidies).

Given this background, the findings of our study are of particular relevance. We have found that the second Pillar, while important, can be applied differently, according to regions and nations. Equally, the outcomes of the workshops in the main and synthesis stage emphasise the importance of relationships in general and of relationships which go beyond the farming community. In terms of skills development, this is completely in line with the ongoing policy trends mentioned above: strengthening regions and cross-sectoral linkages will be beneficial for the development of entrepreneurial skills. Placing these conclusions in relation to CAP reform, it seems clear that a further strengthening of Pillar II in contrast to Pillar I would be advantageous. Within Pillar II, Axes 3 and 4 in particular already include the regional and cross-sectoral approach. Upon closer inspection, we can also conclude that the relevant Rural Development Regulation (Council Regulation (EC) No. 1698/2005) contains all the necessary elements to promote the development of entrepreneurial skills among farmers. However, as regulations can be interpreted and applied in different ways, the recommendations in this report should be seen as principles to consider when applying the Rural Development Regulation at EU, national and regional level.

Axis 1: Improving the competitiveness of the agricultural and forestry sector

Axis 1 focuses on education, innovation and quality within the agricultural/forestry sector in order to improve its competitiveness. Two ESoF findings are closely related to Axis 1: cross-sectoral contacts on the one hand and a systemic knowledge approach on the other. Even if Axis 1 is focused on education within the agricultural sector, connections to other industries are seen as important for the development of agriculture. Thus, we suggest that cross-sectoral project work be included in agricultural education, based on Art. 20(a)(i), as described in section 8.5.3 . Furthermore, a systemic knowledge approach as described in section 8.5.3 entails close cooperation between research, education/extension and farmers. However, the formulation of the articles concerning Axis 1 are not in favour of such systemic cooperation, as Art. 20 (a)(i), (iv) and (iv) in particular seem to build on the traditional knowledge chain. In recommendations concerning application vis-à-vis member states and/or different actor groups of the socio-technical network of agriculture, emphasis should be placed on cooperation and the possibilities of joint work (as formulated in Recommendation No. 5).

Axis 2: Improving the environment and the countryside

The measures foreseen in this Axis seem to have the least effect on the development of entrepreneurial skills of farmers. Of course, new business opportunities for farmers emerge out of societies' environmental concerns, but to initiate a real change of perspective among farmers towards such opportunities, other measures might be needed additionally (see Winter 1997) – measures as suggested in Axes 1, 3 and 4.

Axis 3: The quality of life in rural areas and diversification of the rural economy

From the point of view of developing the entrepreneurial skills of farmers, the measures contained in Axis 3 could be seen as the most important ones, because they give the most consideration to entrepreneurial learning principles, such as enhancing networks and contacts within and beyond the farming community, and cross-sectoral cooperation. In this way, fostering entrepreneurial skills, the measures of Axis 3 also contribute to the aims of Axis 1 – improving the competitiveness of agriculture and forestry (compare also section 8.4). Thus, we suggest that a redistribution of funds in favour of Axis 3 should be considered, especially for member states that dedicate a very small proportion to it so far.

Axis 4: LEADER

As stated above, LEADER approaches are seen as very valuable for the development of farmers' entrepreneurial skills. Including people from different sectors in the committees of the European Network for Rural Development (Commission Decision No. 2008/168/EC) would increase opportunities for discussing different perspectives.

With regard to entrepreneurial skills, the following recommendations can be formulated:

Recommendation No. 6: Strengthening CAP Pillar II in contrast to Pillar I:

- *A further modulation of Pillar I to Pillar II should be continued.*
- *Overall, Axis 3 and Axis 4 should be further strengthened, as the measures proposed therein take the best account of entrepreneurial learning principles.*
- *In applications of Axis 1, the cross-sectoral aspect of promoting knowledge and improving human potential should also be considered, as explained in Recommendation No. 3, and a systemic approach to knowledge should be promoted, as explained in Recommendation No. 5*
- *In applications of Axis 4, people from different sectors should be included in the Coordination committee and the LEADER subcommittee of the European Network for Rural Development.*

Pillar I

If it really is the case that skills are important for competitiveness, then skills could be included as a prerequisite for receiving subsidies. Skills are independent of strategy, they can be learned and can be variously focussed depending on the natural, economic and cultural potential of the region; it seems obvious, then, to suggest that skills should be linked to subsidies. This view is also shared by some workshop participants of the synthesis stage who recommended that investment payments be

distributed only to farmers with a clear business strategy, for example. Another suggestion was to connect education and prerequisites for subsidies.

One way of putting this suggestion into practice could be to introduce a completed course of vocational education (within or outside farming) as a minimum standard requirement for general subsidies, as has recently been introduced in Switzerland for start-up farmers (SR 910.13: *Direktzahlungsverordnung*, Art. 2). However, the question is whether system would make sense in Eastern Europe or even in Southern European countries, where the knowledge system is not (yet) very well developed. Moreover, taking into consideration the demand of a more facilitating role rather than a directive role of the government, this idea has to also to be critically discussed. A more incentive-like possibility would be to introduce further or advanced training if a farmer wants to do something new, e.g. direct sales on a larger scale, or seeks payments for agri-environmental schemes. This further training would be free of charge, however. Thus, education is a prerequisite but should not prevent farmers from realising their ideas.

Recommendation No. 7:

- *Further examination of the implications and feasibility of education being introduced as a prerequisite for subsidies. Main focus on incentive-like opportunities.*

Networks and clusters

The importance of cooperation among stakeholders has also been mentioned in previous sections of this report, yet was mentioned only rarely in the workshops of the synthesis stage. Nevertheless it is an important issue, as it is the practical application of networking between the farming community and other actor groups. Stakeholders can be seen as part of the socio-technical network of farmers, but others beyond the farming community, such as consumers, inhabitants of a certain area and other sector workers, are also part of this wider network.

Recommendation No. 8: Foster networking and clustering

- *Foster networks between stakeholder groups at all levels, regional, national and European.*
- *Cooperation between various DGs is also recommended, especially DG Enterprise, DG Agri, DG Research and DG Regio.*

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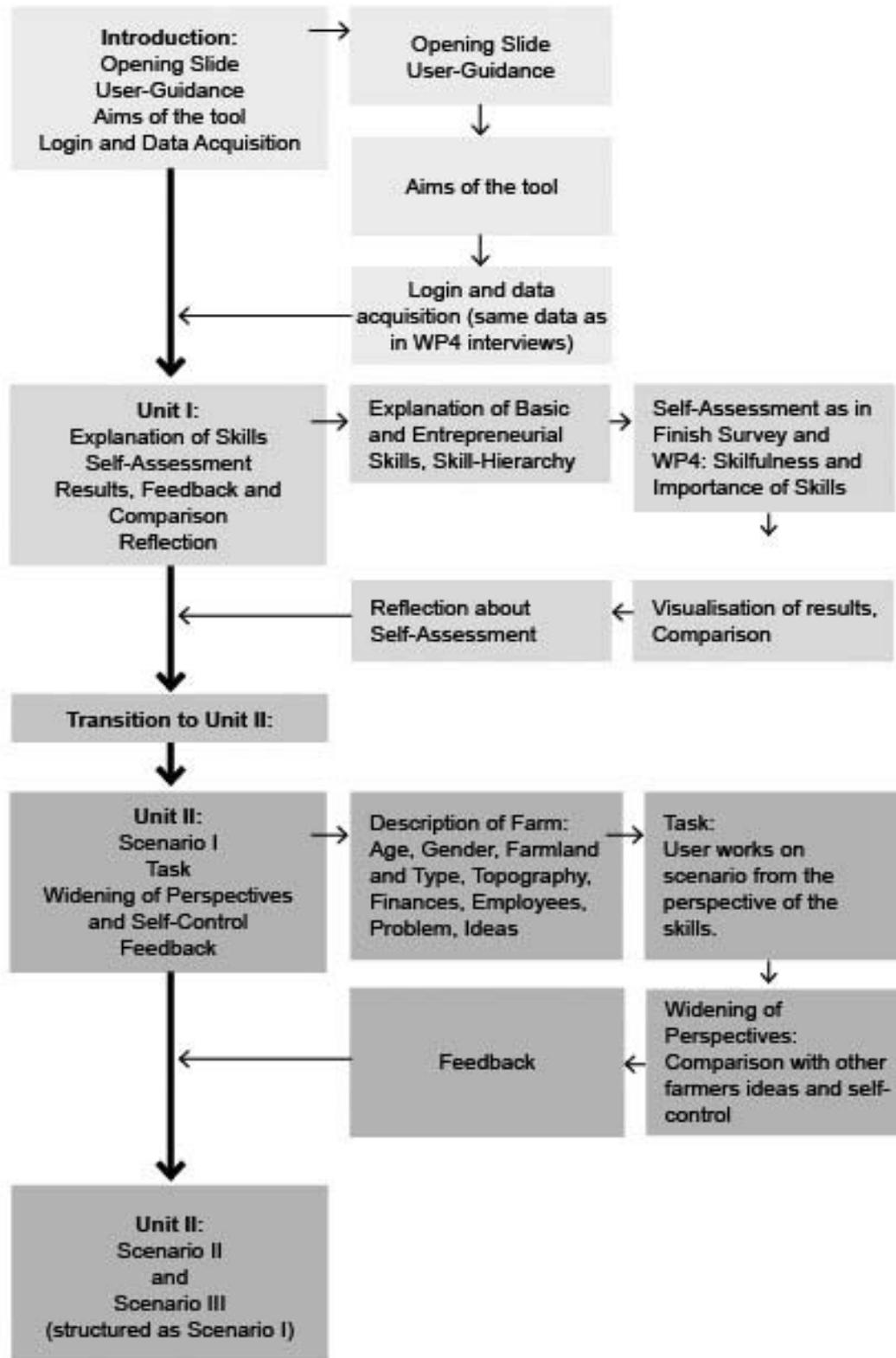
Internet source 1: EU-SASSPO: <http://www.mtt.fi/sasspo/>

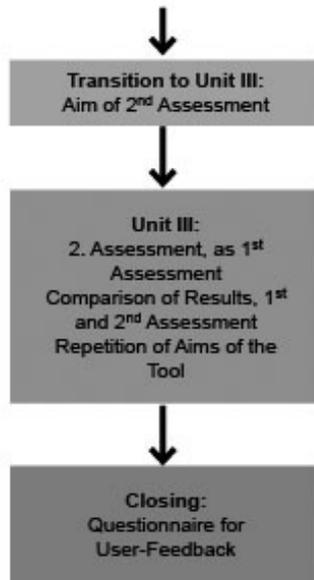
Internet source 2: ERASMUS for young entrepreneurs:

http://ec.europa.eu/enterprise/entrepreneurship/support_measures/erasmus/stakeholdersmeeting/index.htm

9. Appendix

Overview of tool structure





Further information included in the tool:
Imprint
EU-Claim
Background Information
Link to ESOF-Homepage

Picture 1: 1st Assessment

1 2 3 4 5

Entrepreneurial skills

The skill of creating and evaluating a business strategy

7. How skilled are you creating and evaluating a business strategy? *

1= not at all skilled, 2= somewhat skilled, 3= moderately skilled, 4= fairly skilled, 5= very skilled

1 2 3 4 5

8. How important do you consider this skill? *

1= not at all important, 2= somewhat important, 3= moderately important, 4= fairly important, 5= very important

1 2 3 4 5

The skill of networking and utilising contacts

9. How skilled are you in networking and utilising contacts? *

1= not at all skilled, 2= somewhat skilled, 3= moderately skilled, 4= fairly skilled, 5= very skilled

1 2 3 4 5

10. How important do you consider this skill? *

1= not at all important, 2= somewhat important, 3= moderately important, 4= fairly important, 5= very important

1 2 3 4 5

The skill of recognising and realising opportunities

11. How skilled are you in recognising and realising opportunities? *

1= not at all skilled, 2= somewhat skilled, 3= moderately skilled, 4= fairly skilled, 5= very skilled

1 2 3 4 5

12. How important do you consider this skill? *

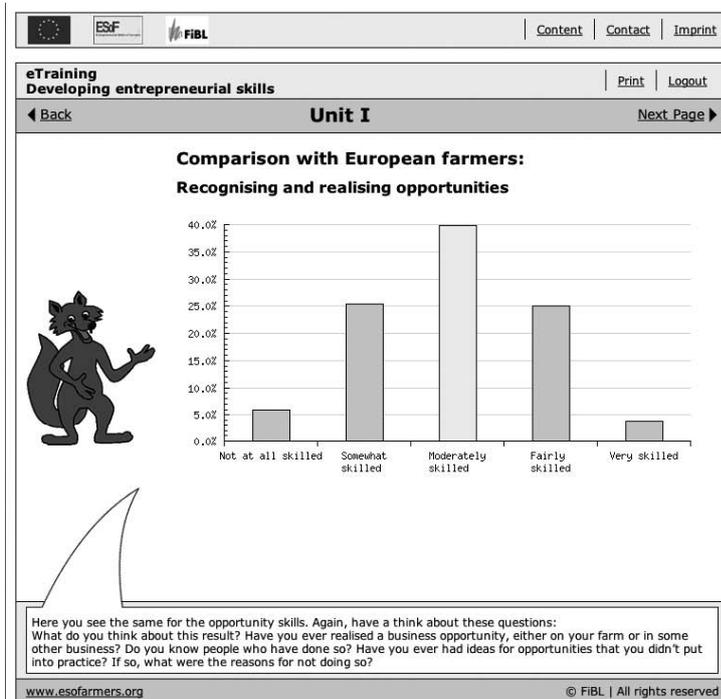
1= not at all important, 2= somewhat important, 3= moderately important, 4= fairly important, 5= very important

1 2 3 4 5

Submit

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Picture 2: Extract from the visualised analysis of self-assessment

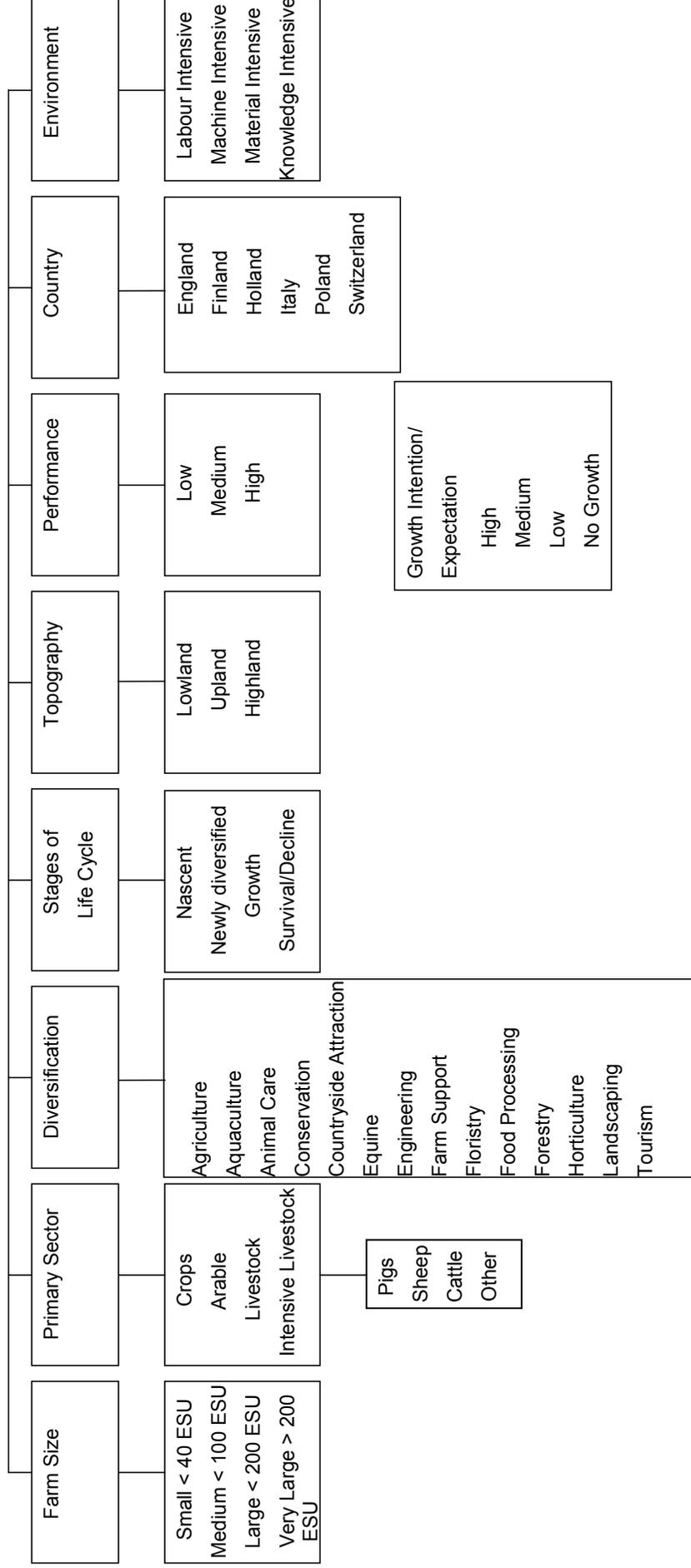


Picture 3: Introduction of the 2nd Scenario

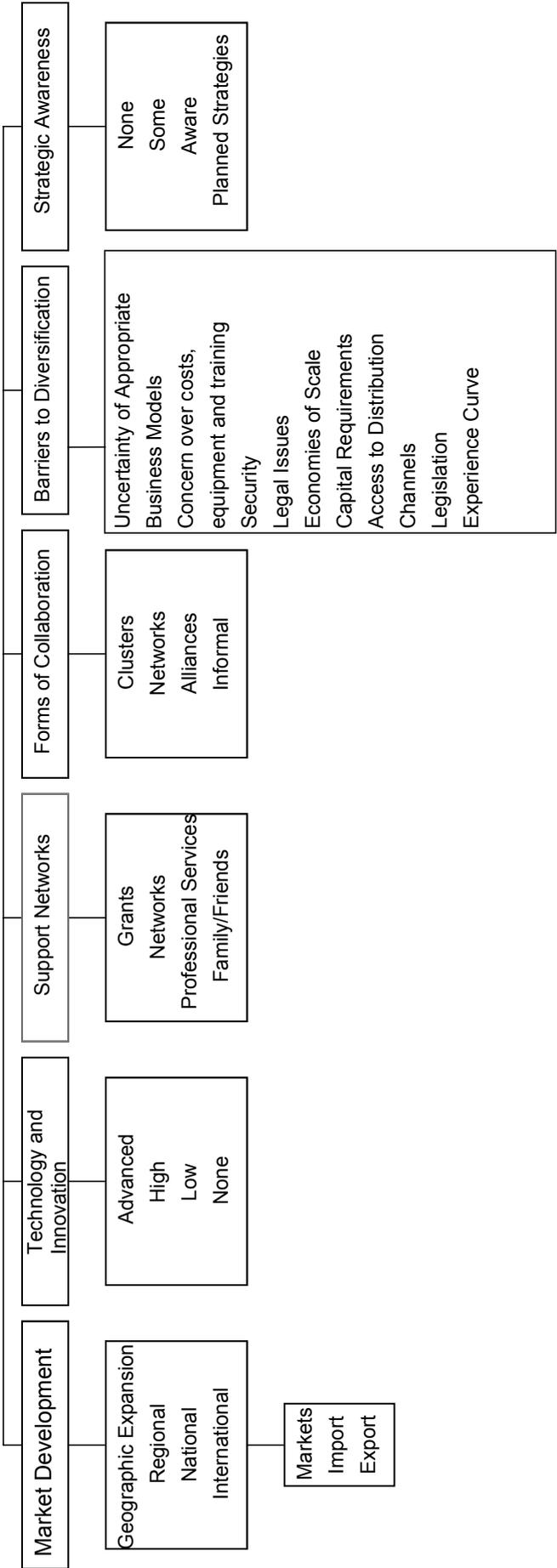
 		Content Contact Imprint
eTraining Developing entrepreneurial skills		Print Logout
← Back		Unit II
Next Page →		
	<p>Hello Fox,</p> <p>I need to take some decisions on the development of my farm and I would like to discuss the situation with you. I hope you remember me: my farm is located on a plain in beautiful Tuscany. I run the farm together with my brother.</p> <p>At the moment, we have sheep and we sell our sheep's milk to a local, semi-industrial dairy. We also slaughter and sell our lambs on the local market. Our problem is that we don't have any financial reserves and we urgently need to increase our living standard. Our idea is to improve our milk by increasing the Omega 3 fat content. But the local dairy won't pay any extra fee for this higher quality milk.</p> <p>We are thinking about building an on-farm dairy for milk and cheese production. Then we would produce a niche product.</p> <p>Our second problem is the situation with the wolves: they're killing our sheep.</p> <p>Whatever solution we choose, we only want to use the family labour force.</p> <p>Oh, and there's one more thing: I also have the problem that, as a female farmer, I am not taken seriously!</p> <p>I would be really happy if you could help me, because I know that you have been working on farm development for a long time.</p> <p>Yours, Antonella</p>	
<p>The second farm I want to introduce to you is located in Tuscany, Italy. I know this farmer from the summer holidays I spent there ten years ago. Antonella is aged 39 now. As I remember, the farm covers 75 hectares and is located in a beautiful landscape.</p>		
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Segmentation framework

Business Characteristics



Business Activities and Processes



Market Development

Geographic Expansion
Regional
National
International

Markets
Import
Export

Technology and Innovation

Advanced
High
Low
None

Support Networks

Grants
Networks
Professional Services
Family/Friends

Forms of Collaboration

Clusters
Networks
Alliances
Informal

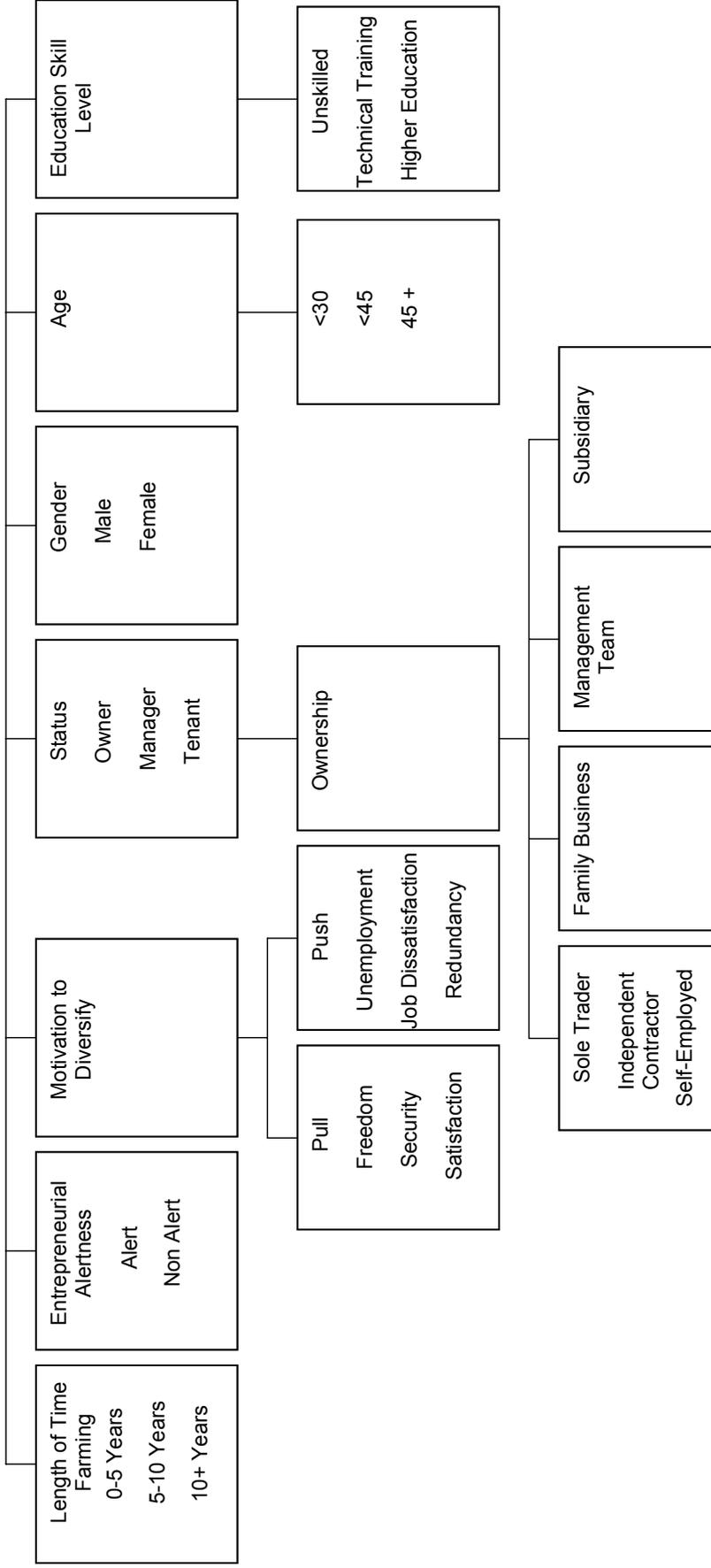
Barriers to Diversification

Uncertainty of Appropriate Business Models
Concern over costs, equipment and training
Security
Legal Issues
Economies of Scale
Capital Requirements
Access to Distribution Channels
Legislation
Experience Curve

Strategic Awareness

None
Some
Aware
Planned Strategies

Personal Characteristics of Farmers



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Entrepreneurship is considered a crucial dynamic force in the development of small businesses in general. In agriculture, entrepreneurship is particularly relevant because farmers need to find ways to adapt their businesses to the changing structural environment.

This book describes entrepreneurship in terms of its learnable and teachable aspects, and elaborates the concept of entrepreneurial skill in farming. It constitutes the final report of the EU-funded research project *Developing Entrepreneurial Skills of Farmers*, summarising and synthesising the results.

In addition to elaborating a consistent concept of entrepreneurial skills in farming, the project analysed the factors influencing the learning of such skills and produced recommendations on how to adapt the political, institutional and educational framework in order to foster their development. Furthermore, an e-learning tool for farmers, which includes a self-assessment of entrepreneurial skills, was developed in the project and is described in the book.