Developing Indicators for Sustainable Entrepreneurship in Flemish Agriculture
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Abstract: Current Flemish (and European) policy makers encourage the sustainable development of farming, in which a balance between People, Planet and Profit is required. As craftsmanship alone will no longer be enough to integrate these divergent aspects, farmers need to develop entrepreneurial and managerial skills. For this reason, complementary to the economic, ecological and social aspects, sustainable entrepreneurship and management is seen as an extra pillar in the indicator based Monitoring Tool for Integrated Farm Sustainability (MOTIFS) and needs to be addressed profoundly. However, the concepts of sustainable entrepreneurship and management are multidimensional and therefore difficult to grasp. In the current paper following research question is addressed “Which themes can be identified for assessing and/or stimulating sustainable entrepreneurship/management of Flemish farmers?” First, viewpoints on entrepreneurship, management and sustainable development were explored with a literature review and expert consultation, resulting in a preliminary framework of themes. Although in most cases indicators for sustainable development are developed by experts, the participation of stakeholders is essential if the indicators need to be locally relevant, practicable and accepted. Accordingly, a “multistakeholder” approach was used involving 24 local stakeholders related to Flemish agriculture. They generated several aspects of sustainable entrepreneurship and management during a brainstorm session. These aspects were then clustered by means of an interactive group process, making use of the preliminary framework of themes determined in the first stage of the research. After evaluation and adaptation of the preliminary framework by the stakeholder group the definitive themes were determined. At last, a prioritization process was performed by asking each stakeholder to assign weights to the several themes. As a result top priority was assigned to the following themes (i) Vision/strategy and (ii) Planning/organization/control/evaluation, followed by the topics (iii) Networking/cooperation, (iv) Risk management, (v) Opportunity recognition and realization/pro-activeness, (vi) Searching and learning behaviour, (vii) Innovation and Craftsmanship (viii). The results indicate that the participating stakeholders attach a higher importance to management aspects (vision/strategy, management processes, risk management) than to entrepreneurial aspects (opportunity recognition and realization/pro-activeness, innovation and risk taking) and craftsmanship in order to stimulate sustainability in Flemish agriculture. During further research, indicators for each of the themes will be developed and applied at farm level, allowing to increase the understanding of their influence on the economic, ecological and social performance at farm level.

Keywords: entrepreneurship, management, craftsmanship, integrated sustainability, indicators, agriculture

1. Introduction

Today’s farmers are faced with several external and internal developments. Important external developments include the price fluctuations of inputs and outputs, changes in the Common Agricultural Policy (CAP) with reduced subsidies, changing governmental regulations, the increasing focus on environmentally and socially responsible production, animal welfare, etc. Internal developments include the increasing scale of farms, the growing importance of diversification (processing, direct marketing, etc.), the need for increased efficiency, cooperation, etc. The recent reforms of European agricultural policy (CAP) represented a major change. The new CAP intends to promote a sustainable market-oriented agriculture, which is in conformance with the wishes of society. According to the last Eurobarometer (Directorate-General for Agriculture and Rural Development, 2010), the main priority for the CAP should be ensuring agricultural products that are of good quality, healthy and safe. Ensuring reasonable food prices, protecting the environment and ensuring a fair standard of living for farmers are also given a high position on the public agenda.

Sustainable agricultural development requires sustainable entrepreneurship/management. Important questions are: “When is a farm sustainable?” and “When is entrepreneurship/management sustainable?” According to the Brundtland definition “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their
own needs” (WCED, 1987). Although this definition has gained its place in the vision, mission and strategy of many companies, organizations and governments, putting this theoretical concept in practice often proves to be very difficult – also in agriculture. To many, sustainable development seeks to place social and environmental objectives on equal footing with economic objectives (the so-called ‘triple bottom line’, Elkington, 1998).

Frequently, indicator-based monitoring tools are applied for sustainability assessments, also in agriculture. However, many indicators focus on a rather restricted number of sustainability aspects such as economy or ecology. In order to stimulate sustainable development in Flemish agriculture currently an indicator-based monitoring tool for integrated sustainability (MOTIFS) is developed (Meul et al., 2008). MOTIFS is based on the equality of economic, ecological and social sustainability dimensions, and this equality is inherently built into the system.

As craftsmanship alone will no longer be enough to integrate these divergent aspects, farmers need to develop entrepreneurial and managerial skills (see figure 1). In the role of craftsman the farmer controls the biological processes and the production on the farm. The farmer as a manager is responsible for planning, organizing, directing and controlling the business processes of the farm. As entrepreneur the farmer creates the conditions within which the craftsman and the manager operate. In this function, opportunity recognition and exploitation is important. In short, entrepreneurship is “doing the right things”, whereas management is “doing the things right” (Verstegen and Lans, 2006).

**Figure 1:** The farmer as craftsman, manager and entrepreneur

Entrepreneurship is increasingly being recognized as a significant conduit for bringing about a transformation to sustainable products and processes, with numerous high-profile thinkers advocating entrepreneurship as a panacea for many social and environmental concerns (Coman, 2008; Hall et al., 2010). As illustrated in figure 2, sustainable entrepreneurship is a key driver for economic, ecological and social sustainability.
For this reason, complementary to the economic, ecological and social aspects, sustainable entrepreneurship and management is seen as an extra pillar in MOTIFS and needs to be addressed profoundly. However, the concepts of sustainable entrepreneurship and management are multidimensional and therefore difficult to grasp.

In the current paper following research question is addressed “Which themes can be identified for assessing and/or stimulating sustainable entrepreneurship/management of Flemish farmers?”

![Diagram showing sustainable entrepreneurship as a driver of economic, ecological and social sustainability]

**Figure 2:** Sustainable entrepreneurship as a driver of economic, ecological and social sustainability

### 2. Methodology

First, viewpoints on entrepreneurship, management and sustainable development were explored with a literature review and expert consultation, resulting in a preliminary framework of themes. Although in most cases indicators for sustainable development are developed by experts, the participation of stakeholders is essential if the indicators need to be locally relevant, practicable and accepted. Accordingly, in April 2009, a focus group was organized involving 24 local stakeholders related to Flemish agriculture. These stakeholders were private and governmental advisors (both technical and economic), bank consultants, representatives of agricultural organizations, training agents, public authorities, researchers, as well as farmers themselves.

The term focus group is applied to a situation in which the researcher/interviewer asks very specific questions about a topic after having already completed considerable research (Merton, 1987). A focus group is a group interview, which is essentially a qualitative gathering technique that relies upon the systematic questioning of several individuals simultaneously (Denzin and Lincoln, 2000). Focus groups, or group interviews are “a way of listening to people and learning from them”. They have some advantages over individual interviews: They are relatively inexpensive to conduct and often produce rich data that are cumulative and elaborative; they can be stimulating for respondents, aiding recall; and the format is flexible. Compared with individual interviews, the clear advantage of focus groups is
that they make it possible for researchers to observe the interactive processes occurring among participants.

During the focus group the Metaplan technique, developed by Wolfgang and Eberhard Schnelle, was used as a facilitation method. This technique is a proven methodology for results-oriented work with groups (Noordik and Blijsie, 2008). Following steps were followed:

- Program introduction: Presentation of the rationale, objectives, agenda and research question: “Which aspects/themes can be identified for assessing and/or stimulating sustainable entrepreneurship/management of Flemish farmers?”.

- Brainstorm session: The 24 stakeholders were divided into 4 subgroups of 6 persons. By breaking larger groups into smaller ones, the involvement of all participants is maximized. In each group a facilitator ensured that good communication, cooperation and high levels of understanding were achieved. A co-facilitator was responsible for data recording and was also asked to make a table diagram and write down the ideas that came out of the group.

In each subgroup the brainstorm session started with a short introduction of the stakeholders and communication of the rules by the facilitator. The stakeholders were asked to brainstorm on the research question. The brainstorm method is a semi-structured creative group activity in order to generate as many ideas as possible on a certain subject. The idea behind brainstorming is, that a group of people can achieve a higher level of creativity than the sum of the participants separately.

During the brainstorm session participants were encouraged to come up with as much ideas as possible. First they were asked to visualize the different aspects of sustainable entrepreneurship/management on post-its through self-made drawings. Visualization is a strong method because it claims other skills compared to the traditional methods, and images can tell more than thousand words (Noordik and Blijsie, 2008). The drawings of the stakeholders were used as input for a group discussion and further idea generation. After the idea generation in each of the 4 subgroups, each subgroup assigned one person to stay behind as reporter of the results, while the rest of the group rotated to other subgroups. In the new subgroup they had the chance to review and comment the ideas generated during the previous brainstorm session, and to add new ideas.

- Literature injection and interactive clustering process: The preliminary framework of themes, resulting from literature exploration and expert consultation, was written on a flow chart and presented to the stakeholders. During the following interactive clustering process, this preliminary framework was used as a basis for clustering the ideas coming out of the brainstorm session. This process allowed to evaluate and adapt the preliminary framework, and to define the definitive themes.

- Prioritization of the themes: Each stakeholder was given 5 self-adhesive dots, and asked to stick dots on themes they considered to be the most important. They were allowed to stick more than one dot on a single theme. The priorities of the themes were determined by counting the number of dots or votes assigned to each theme, and calculating the corresponding percentage or weight.

3. Results

As a result of the literature review and the focus group discussions priority was assigned to following themes (between brackets the weights assigned by the stakeholders):

**Vision/strategy (weight: 23%)**

In strategy research, the importance of strategic management concepts are recognized to hold the potential to lead to business success. Although many definitions of the basic concepts exist in scientific literature, the scheme of Zuckerman (2000) gives some clarification (see figure 3).

The vision statement is the cornerstone of the strategic plan and it provides the reference point for strategy development (how to achieve the vision) and for goals, objectives, and actions, that are components of the future vision. Vision is the desired future position of a company (Raynor, 1998).

Both mission and vision statements address the future, but there are key differences between the two. The mission statement is timeless, whereas the vision statement is time bound, referring to a particular point in the future. Mission is the organization's most fundamental reason for existence (Collins and
Porras, 1996) The mission statement states the organization's broad purpose – why it exists – whereas the vision statement refers to key organization characteristics that will be accentuated by that purpose.

Figure 3: Definitions of strategic management concepts (Zuckerman, 2000)

Planning/implementation/control (weight: 23%)

Planning, implementation and control are considered to be the three basic functions of management (Kay et al., 2007; Boehlje and Eidman, 1994). The other functions can be easily included as sub-functions under one of these three. Figure 4 is a flow chart which summarizes the management process utilizing these three functions.

Planning: The planning function contains a number of steps, including the identification and definition of the problem, acquiring the initial information, and identifying alternative solutions. There are both short-run (operational and tactical) and long-term (strategic) plans and planning procedures. Planning may be taken place for a number of problems at the same time (Boehlje and Eidman, 1994). Planning is a continual process as new problems and opportunities arise and as new information becomes available from outside or within the system. New information obtained from the control function and feed back into the planning stage is an important feature of the complete system.

Implementation: Once the planning process is completed, the best alternative must be selected and action taken, to place the plan into operation. There may be resources to purchase, lease, or reorganize, details to be worked out, and work schedules to be organized.

Control: The control function consists of two related tasks: (i) recording information and (ii) analyzing this information to identify problems and to take corrective action. The dashed line in figure 4 represents the continual flow of information from the control function back to planning. Without some feedback procedure, the information obtained by the control system is of no use in making corrections to the existing plan or improving future plans. A good control system requires an accurate record-keeping system and the ability to use it.
Networking/cooperation (weight: 11 %)

In recent years the network construct has been used widely in entrepreneurship research, as a means by which researchers can study the entrepreneur in his/her environmental context. A number of studies confirm the important and varied role that networks play in influencing the entrepreneurial processes and outcomes (e.g., Aldrich and Zimmer, 1986; Birley, 1985; Diederen et al., 2000; Donckels and Lambrecht, 1997; Granovetter, 1983; Hitt et al., 2001, 2002; Hoang and Antoncic, 2003; O’Donnel et al., 2001; Street and Cameron, 2007). According to Hoang and Antoncic (2003) following three components emerge as key elements in models that seek to explain the impact of networks on entrepreneurial outcomes: the content of the relationships, the governance of these relationships and the structure or pattern that emerges from the crosscutting ties.

Entrepreneurial networks are generally categorized as either inter-organisational networks or personal networks (Ostgaard and Birley, 1996; Szarka, 1990). With regard to network content, interpersonal and interorganizational relationships are viewed as the media through which actors gain access to information, resources, markets, technologies, etc. (Gulati et al., 2000). Trust between partners is often cited as a critical element of network exchange that in turn enhances the quality of the resource flows (Lorenzoni and Lipparini, 1999). Network structure is defined as the pattern of direct and indirect ties between actors. A general proposition is that actors’ differential positioning within a network structure has an important impact on resource flows, and hence, on entrepreneurial outcomes. Network size and centrality measure the amount of resources an actor can access. Granovetter’s (1983) notion of weak ties, in particular, describes the extent to which actors can gain access to new information and ideas through ties that lie outside of their immediate cluster of contacts.
Risk management (weight: 11%)

Originally the theme “Risk” was written on the flow chart, but this was changed to “Risk management” following the group discussion with the stakeholders. “Taking risks” is one of the dimensions of the concept “Entrepreneurial Orientation” (Covin and Slevin, 1991). However, the literature is not consistent with respect to opinions on risk attitude of entrepreneurs; both positive and negative relations are reported. Entrepreneurs are often characterized as risk-takers, and more likely to be involved in riskier events. However, it is hard to show that entrepreneurs differ in their risk-taking attitude from the general public (Brockhaus, 1982). A possible explanation for an involvement in riskier events could be that entrepreneurs evaluate business opportunities in a more positive/optimistic way compared to others (Palich and Bagby, 1995). Jonassen and Grabowski (1993) found the preference to risk-taking to be related to locus of control. People with internal locus of control believe that they can control events that affect them and, as a consequence, correlate to risk-takers. So the fact that entrepreneurs are involved in riskier events might be determined by the risk perception of the entrepreneurs rather than their risk-taking attitude.

Opportunity recognition and realization/pro-activeness (weight: 9 %)

Entrepreneurship is an activity that involves the discovery, creation and exploitation of opportunities aimed at the introduction of new goods and services, new ways of organizing, or new processes (Shane and Venkataraman, 2000). An opportunity is defined as the chance to meet a market need through a creative combination of resources to deliver superior value (Schumpeter, 1934). Miles and Snow (1978) identify firms as “prospectors” when they continually look for opportunities and lead in responses towards changing contexts. Covin and Slevin (1991) and Lumpkin and Dess (1996) draw on Miles and Snow (1978) to define pro-activity as part of the concept of “Entrepreneurial Orientation”, highlighting the need to take initiatives or introduce new practices or products ahead of competitors. Pro-activeness may yield both advantages, as well as considerable hurdles. On the one hand, engaging in the active and anticipatory search for new opportunities may yield first mover advantages. First movers may be more able to capitalize on the market opportunities identified: “by exploiting asymmetries in the marketplace, the first mover can capture unusually high profits and can get a head start in establishing brand reputation” (Lumpkin and Dess, 1996). On the other hand, pro-active firms may also bear the risks and costs of uncertain and experimental endeavors that imitating firms may subsequently copy without having had to bear these risks and costs.

Innovation (weight: 9 %)

Innovativeness is a characteristic that is often mentioned as being the distinguishing factor between entrepreneurs and non-entrepreneurs (Van Dijk and Thurik, 1995). Innovation is an important source for creating competitive advantage (Grant, 1998). According to Rogers (1995) an innovation is an idea, practice or object that is perceived as new by an individual or other unit of adoption. Innovators are venturesome, obsessed with trying out new ideas, search for information outside the social system, are cosmopolitan, understand complex technical knowledge, and must cope with a high degree of uncertainty about the innovation at the time of adoption. Important is that the innovator must be willing to accept an occasional setback when a new idea proves unsuccessful, as inevitably happens. Control of substantial financial resources is helpful in absorbing the possible losses from an unprofitable innovation. Although an innovator may not be respected by other members of a local system, the innovator plays a gate-keeping role in the flow of new ideas into a system.

According to Gartner (1990) innovation is not a sufficient condition for entrepreneurship; the outcomes of entrepreneurship must also taken into account. These are characterized by the realization of profit and added value. Also Drucker (1985) defines entrepreneurship as “an act of innovation that involves adding a new wealth-producing capacity to existing resources”.

Searching and learning behaviour (weight: 9 %)

Learning and the possibility to learn are at the heart of entrepreneurial processes. Learning influences the opportunity recognition processes (Baron and Ensley, 2006) and the development of competence, systems and cultures necessary to sustain innovative practices (Spicer and Sadler-Smith, 2006). The
importance of entrepreneurial learning is clearly reflected in the increase in studies on the topic (Cope, 2005). According to Simons and Ruijters (2001) work-related learning involves “elaboration” (elaborating on work competences by learning from and in practice), “expansion” (expanding on theoretical knowledge and insight by learning explicitly from and in research) and “externalization” (building on practical and theoretical insights, and contributing to the development of the organization and the profession).

**Craftsmanship (weight: 9 %)**

Although “Craftsmanship” was not written as a separate theme on the flow chart, some stakeholders insisted that “Craftsmanship” is still important in agriculture, and should not be omitted. Craftsmanship is the concrete capacity to optimize production results per object of labour (per cow, per unit of land, per fruit tree, etc.) both in the short term and in the long term (Bolhuis and Van der Ploeg, 1985/1988). Productivity and product quality are top priority. According to de Wolf et al. (2004) the craftsman makes efficient use of inputs, and is focused on optimal crop growth, preventing problems with pests, weeds, diseases and water surplus or drought.

4. **Discussion and conclusion**

The integration of a literature review and expert consultation with a focus group of stakeholders proves to be a suitable method to develop locally relevant and practicable indicators for sustainable entrepreneurship/management in Flemish agriculture.

The results indicate that the participating stakeholders attach a higher importance to management aspects than to entrepreneurial aspects and craftsmanship in order to stimulate sustainability in Flemish agriculture. Top priority is assigned to “Vision/strategy” and “Planning/evaluation/control”, which are mainly management themes, recognized to hold the potential to lead to business success. “Networking/cooperation” is also an important theme. Network content and network government as well as structure of the network relations play an important role in influencing the entrepreneurial processes and outcomes. Although “Risk taking” is one of the dimensions of the concept “Entrepreneurial Orientation” often referred to in literature (Covin and Slevin, 1991), the participating stakeholders prefer to put emphasis on “Risk management” instead of “Risk taking”. It is a fact that the literature is not consistent with respect to opinions on risk attitude of entrepreneurs; both positive and negative relations with business performance are reported. Whether risk-taking is favourable or not is determined by the industry in which the entrepreneur is involved. In an industry where cost control is the key to survival, which is the case in many agricultural industries, experimentation and risk-taking may create a counter-productive income stream because this search incurs immediate costs while payoffs are uncertain and long term in nature. Taking risks under these conditions may harm the enterprise’s performance in the short term and could ultimately threaten the survival of the enterprise (Chatterjee et al., 2003).

According to the participating stakeholders the themes “Opportunity recognition and realization/pro-activeness”, “Innovation” and “Searching and learning behaviour”, are less important than the above mentioned themes. Engaging in active search for new opportunities may yield first mover advantages, but pro-active firms may also bear the risks and costs of uncertain and experimental endeavors that imitating firms may subsequently copy without having had to bear these risks and costs. This is also the case for innovating firms, who must be willing to accept an occasional setback when a new idea proves unsuccessful.

The same low weight is assigned to the theme “Craftsmanship”. However, according to some of the participating stakeholders this theme should not be omitted.

During further research, indicators for each of the themes will be developed and applied at farm level, allowing to increase the understanding of their influence on the economic, ecological and social performance at farm level.

**References**


