Farmers as Innovators

Innovation Dynamics in the Agri- and Food Business

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Background and Context

Many companies and individuals have ambitions to increase their competitiveness through innovation. In the current debate there is a discussion concerning the possibilities to promote innovations in various ways. In several countries around the world, governments invest in functional, national or regional development programmes in order to enhance the innovation capability and the competitiveness in various industries. But can the ability to innovate be enhanced through training programmes and coaching? This paper reports observations and conclusions from an experiment made in the Scania region in the South of Sweden. The experiment was made within the framework of a long term innovation project named “Food Innovation at Interfaces”. The project is jointly funded by the Swedish innovation agency – Vinnova and regional actors from business, Universities and the regional government. This context for innovation is common in Scandinavia. The regions in the Scandinavian countries have regional and local municipalities with considerable political as well as financial strength. This creates good conditions for development programmes in cooperation between national agencies and local actors.¹ In Scania (Skåne) there is also a regional parliament, and a regional government organisation that further enhances the possibilities for regional business development.

In this experiment, entrepreneurial individuals in agriculturally based companies entered individual innovation processes. During this process they attended four workshops as a group. In the workshops, the participants learned about key features of the innovation process, shared experience with other participants and met with guest speakers. A large proportion of the guest speakers were other entrepreneurs from the Agricultural and Food sectors. They are people who had already succeeded as innovators, people who had created new products, services, concepts and companies.

Another part of the development process consisted of individual coaching and finding relevant and well fitting development partners in the regional innovation cluster. This whole process was directed by the two programme directors, one being the author who is university professor with the research base in innovation processes, strategy and marketing. The other

¹ Maskell el al (1998)
programme director was Ann-Marie Camper, vice president of the innovation think tank, research based consultancy and network organisation Ideon Agro Food.

**The Research Question**

We are eager to understand if the ability to innovate can be enhanced through training programmes and coaching. In order to answer the question we will analyse some important characteristics of the development process. We will report how innovators in the Agri- and Food business think and act as they create innovations. We will make comparisons between the thoughts and actions of innovators in this industry and the thoughts and actions of innovators in other industries based on literature.

The purpose of our study is to analyse key characteristics of the innovation process among innovators in the Agri- and Food business.

**Methodological Considerations**

We invited farmers with ambitions to innovate to participate in a development programme consisting of an introduction combined with a scenario workshop. For those who completed the programme, four innovation workshops followed. The development programme was organised and managed by Ideon Agro Food, an innovation cluster organisation specialised in the Agri- and Food sector. The programme was initiated as part of the “Food Innovation at Interfaces” programme. It was organised in co-operation with LRF, (Lantbrukarnas Riks förbund translated as the farmers’ co-operative organisation) and the Swedish Agricultural University. The introduction was located at the Agricultural University – Alnarp, with several prestigious speakers, academics, the deputy regional governor and successful innovators. This gave credibility to the programme.

We wanted to provide the participants with an efficient development programme. At the same time we wanted to make an interesting experiment based on real actions and serious efforts among participants. Our main approach was to recruit a highly skillful elite group of potential innovators. In the programme we wanted to use our own scientific knowledge as well as our experience from earlier innovation processes in order to create an action based development programme adapted to the individuals in the programme. We have all made notes and reflections throughout the process. Those reflections were based on the thoughts of and actions in the programme and we have had several feedback sessions with the
participants. Two months after the last seminar we gathered the participants again to discuss the progress in their innovation projects. On that occasion we made a joint journey and visited some of the participants, their spouses and their businesses.

Our first task was to recruit highly motivated potential innovators. We wanted participants with the Aristotole-based qualities *logos, ethos* and *pathos*. *Logos* to us ment that we wanted resourceful actors with a good understanding of their business. We also wanted people with a supporting *ethos* – values that would be supportive for the innovation process, values such as positive attitude to change, ability to respect and understand others and a constructive curiousness. Last bus not least we wanted people with *pathos* – a drive to challenge and change. We had 29 qualified applicants to choose from. In order to single out the most promising participants, we used a scenario workshop. We used scenario techniques to help the participants to project their change ambitions and their visions. We also challenged their ideas and visions and tested if the participant really had urgent ambitions to innovate and if they had the resources available. Thus we managed to separate the resourceful and highly motivated actors from other participants.

We designed the innovation supporting workshops in such a way that we mixed action, reflection and inspiration in a special blend where feed-back and reflection sessions played an important role together with inspirational sessions with successful innovators from the agri-food sector. Since we also had the ambition to find and use new and unique resources adapted to the individual projects, we had to activate the complete innovation competence cluster and keep it in an alert mode. Thus we mobilised a strong resource base for the process. This was an absolute must in order to be flexible and to have a participant adapted workshop design process.

**Theoretical Model of the Innovation Process.**

What kind of knowledge did we consider to be the most important for the participants? In principle we based our theoretical contributions on resource based theory, chaos theory and the innovation research of Utterback.

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2 See e. g. Hägg, G: (1998)
The resource-based view portrays the firm as a bundle of resources and capabilities and focuses on what the firm has. Resources include ‘anything which can be thought of as a strength or weakness in a given firm’\(^3\). The resource-based view places more emphasis on the internal resources and areas of competence of the firm and less emphasis on the firm's performance in the market and working environment. A firm can gain a sustainable competitive advantage if its resources are (1) **valuable**, it must be possible to use the resources to create value for the firm; (2) **rare**, the supply of the resource must be limited; (3) it should **not be easy to imitate** them; (4) it should **not be easy to find substitutes** for the resources employed; and (5) the resources should also be well organized\(^4\). The resource-based view portrays the firm as a bundle of resources and capabilities and focuses on what the firm has. Shona L. Brown and Kathleen M. Eisenhardt have published a contribution to research in strategy in which they address the increasing dynamics in the business environment\(^5\). It is also a theory that should have key advantages in its ability to help the organization to bring about change and continual reinvention.

Brown-Eisenhardt’s book has a theoretical base in complexity theory, dealing with systems that are only partially related. The key to effective change is to remain poised on the edge of chaos. Complexity theory focuses on the interrelationship between different parts of an organization and the trade-off of less control for greater adaptation. As a consequence the book presents several balances that must be managed in order to create a strategic direction while keeping the structure open enough for continuous innovation.

In our development programme, we also made a clear distinction between the demands put upon the innovator and the process managers of the three phases in the innovation process, the fluid, the transitional and the specific phases. In the fluid phase of the innovation process, several product ideas, several actors and several technical solutions form a dynamic competitive landscape. In the second phase, the transitional phase of the process, the major product solutions have competed and a dominant product design has won the battle. Some competitors have left the arena. In this transitional phase process development takes off, and there is a close linkage between product and process innovation. In the last phase, the specific phase of the process, products become targets for specific users or segments, and the process

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\(^3\) Wernfelt, B. (1984)

\(^4\) Barney, J. B. (1991), 99–120.

is focused on maximizing value and cost efficiency for users in the segments. Strategic behaviour in the fluid phase, the transitional phase and the specific phase are very different.\textsuperscript{67}

We also devoted time to communication of theory regarding constructive use of clusters and networks\textsuperscript{8} as well as the need to accept and integrate the knowledge of others\textsuperscript{9}

**Results**

*Key Drivers for Innovation*

We found an interesting feature of the motivational profile of the innovators in the programme. This became clear when an experienced executive from a Venture Capital company made a presentation of the possibilities that the Venture Capitalist could offer the innovators. The dominating and underlying logic of the risk venture capitalist is that they enter the business, take part in the development and make an exit after 5-7 years. For the innovator, this exit provides an opportunity to sell his/her shares in the company. This opportunity to sell the company or parts of the company and earn a substantial amount of money represent a key driver for innovation in many cases – but not for our innovators.

To our surprise, we discovered that our group of innovators reacted strongly against the thought of selling the business to somebody else. They wanted to create innovations, make new products, services and concepts, but they did not want to sell them. Instead they wanted to keep the company, control it and earn money from running the business for a long time. The interest for the work content and the location of the business was paramount for the innovation process. This is probably related to the interest for the cultivated land and is a very different attitude compared to the one we find among technical entrepreneurs and market oriented business concept creators.

A consequence of this is that for agriculturally based entrepreneurs, Venture Capital is not a viable option. Financing for Agri-food based innovations through Venture Capital is not an easy alternative, since the basic thinking and values of the innovators are radically different.

\textsuperscript{6} Utterback, J. (1994)  
\textsuperscript{7} Johannesson, B: (2002) a)  
\textsuperscript{8} Enright, M. (2000)  
from those of the Venture Capitalists. How can a capital-intense innovation process or a fast growth situation be financed in the Agri-food sector? We will return to this problem later in the conclusions and discussions.

**Choice of Business Partners**

A closely related aspect of the innovators wish to run his own company and control it is the problem to find a suitable form for involvement of new business partners. Creation of a new company for joint action is looked upon with great suspicion. In four of the projects the choice of partners with complementary competence was an important issue in the process. We saw lots of attention and energy devoted to the evaluation of possible partners. One of the innovators in the programme realised that he had need for a new business partner with competence in the design and logistics area. His problem was that he did not have any such person within his personal network. So he spent a lot of time thinking about how he could check the trustworthiness and the personal qualities of a new partner if he found someone with the right professional qualities. He was also very reluctant to let a new partner join the family business. The newcomer should be kept in a separate new company so that he did not threaten the family business. Then he wanted somebody with new ideas and some real knowledge that he could contribute with, but he did not want a partner that would boss him around and tell him what to do. In another case the trust issue was resolved in a nice way since the innovator, her husband, the new partner and her husband were friends since many years. Thus the innovator knew the qualities of the person that she invited to work with her in the creation of the new innovative business. She also know from the earlier work of the good friend that she could contribute with unique knowledge and experience. Even if the choice of partners was difficult, successful choices of new business partners were made when the innovators felt convinced that they had found a new partner with specific competence, a new perspective, unique experience or a good network.

**Matrimonial Enterprises.**

Many innovators in the development programme had businesses together with their spouses. In some cases the husband and the wife were running the company together. In these cases it was also interesting to note that the husband and the wife had different roles in the business. They were also very clear ant outspoken about the roles that they had in the companies. One such division was that one of the two was responsible for production while the other took care of authorities and customers. Another way to define the roles was to give one person an idea
creating role while the other spouse kept the books and counted the money. We also found that when new business ventures were created, the basic rule was that one of the spouses stayed in the established business and took a clear leadership position there, while the other spouse put all his or her effort into the new business venture. Areas to be specially debated were of course the interfaces between the innovation and the established business.

In other cases the husband and the wife had separate businesses, but supported each other in the planning of the day-to-day business and as advisors in decisions concerning new business and investments. Where spouses ran different businesses, the participants in the programme spoke with great pride and interest about the achievements of the husband or wife.

We also found a case where one innovator chose not to create the best company structure in order to maximise wealth accumulation and appropriation of profits in her own business. The wealth accumulation instead took place in a joint company with the husband. The important thing was to build a good future for the wife and husband together, not to optimise conditions for her company. In another case we met a married couple who had not made any legal arrangements to secure the family business in case of divorce or death. The thinking behind this was that they had jointly created and started the business. It was fun and profitable to run it together, but if one of the two spouses were missing for some reason, the business would be meaningless and could just as well fall apart. If something like that happened it was much better to start something entirely new. It is interesting that in this experiment we found business based on love, respect and shared visions. This makes a contrast toward the commonly expected, business founded for growth, profit and return on investment.

Experienced Innovators.

One common characteristic of all the participants in the development project is that they were all experienced people. The formal educational background was diverse, but all innovators had substantial experience from advanced agri-food business. Some had substantial managerial experience from other counties and international markets. Others had previous experience as executives for successful companies. All participants had been running their own companies for several years. Several of them were key actors in branch organisations and professional networks. Their personal networks were without exception large and their awareness of interesting developments in the industry was high. We must recognise the fact that the participants in the development programme were no average citizens. 29 people with
interest in Agri- and Food innovation applied to the first seminar and workshop. Several of these were very qualified and resourceful. Qualifications and resources are not enough, however. We also wanted people with clear visions and a strong personal motivation to innovate. Through the selection process in the scenario workshop described in the methodological section, we reduced the number of participants from 29 to 9. The persons that started in the projects all had such qualities that they could be expected to act with excellence in an innovation process. That is one reason why it is so interesting to learn about thinking modes and actions in this particular group.

Action
In the collective development workshops we organised the workshops so that the participants at the end of each workshop made a statement describing what they promised to do before the next workshop in order to push the innovation process further. The author has experience with this method from other development programmes. One specific characteristic was found in this group. They all did what they promised, almost without exception. From other development projects we have learned to listen to various explanations and apologies in which we were informed about why the participants could not deliver the action they had promised. Of course this also happened in this group of innovators, but surprisingly seldom. In principle the participants delivered what they promised and the ethos in this matter was that you deliver what you promise, otherwise you are not trustworthy. As a consequence, the participants formulated the promises very carefully and also checked with the others so that the promises were understood by the rest of the group as they were intended.

Willingness to Invest.
In other projects, the author has spent many hours, days and weeks together with entrepreneurs discussing how venture capitalists, business angels or other partners could be encouraged to invest in an invention, a promising concept or a new product. The key issue in those cases is to make it plausible to the investor that the product or patent presents a real business opportunity. Thus, it is important to present a solid analysis of market opportunities, sales forecasts, risk factors, cash flow projections to show when the investor can expect return on the investment. In these discussions, the entrepreneur is often impressed by his own technical invention or product and he is often quite sure that “someone” could sell this product successfully. The investors, on the other hand focus on return on investment and they
also evaluate the qualities of the entrepreneur. Two perspectives meet and in successful cases a healthy and innovative business is born at the interface between these.

In the group that we followed in the experiment the situation was quite different. The innovators in our group reflected themselves about the business potential of their innovation. They talked to possible users of the products and services, they talked to their spouses, they talked to customers and searched their networks for all possible relevant information. Having convinced themselves about the commercial opportunities, the innovators invested their own financial funds in the new venture. Having come this far in the analysis and in the innovation process they were convinced. They believed in their own project. They invested quite willingly their own funds. As described above, the focus was on running the new business and making a personal profit from that. The idea to develop the innovation and sell it to someone else or to share it with someone else was just not present. The innovators believed in personal risk taking to make personal profits.

**OPM**

OPM stands for Other Peoples Money. It is a concept that has been much debated in the earlier years of the millennium – especially in the aftermath to the burst of the IT-bubble. The debate has focussed on how hired executives have exposed capital invested in their companies to high risks, how they have taken too little responsibility for the company and how they have been too eager to get personal gains from the business rather than to develop the long term competitiveness of the company for the owners of the company.

Among our inventors we can use the OPM concept to separate between the innovators’ attitude towards the two kinds of funds. As we have described above, the innovators had a very healthy relation to their own capital funds. After a reasonably quick and efficient evaluation process, the innovators invested their own money in a professional and daring way. The myth about risk avoiding farmers finds no support in our experiment.

When it comes to other funds the picture is different. All the participants in the development project were rather well informed about funding through the farmers co-operative, through regional development funds, through the Common Agricultural Policy and through the Swedish state. Some of the participants were extremely well informed, not only about rules and regulations, but also about application procedures, decision criteria and important actors
in the system. Information was shared among participants e.g. about which civil servant in what part of Sweden was the most skilled and helpful. We were told who to avoid and with whom we should talk if we wanted public money into our projects.

The key advantage of the public funding was that public actors do not want shares of the profit or control of the company. The downside is bureaucracy, complicated decision making processes and in some cases nepotism and regional sub-optimisation. Therefore the whole group had learned about rules and procedures, key actors and amounts available. There was also a demand from the participants that we should include a session on these issues in the innovation workshops. We arranged that and invited a skilled consultant from the Farmers Co-operative sphere. We saw a brilliant lecture from a professional and many contributions from an audience with so much skills and insights that it was a pure pleasure to watch.

The downside of this attitude towards public funding is that the innovators attached practically no value to that kind of money and to services rendered through public financing. Since all kinds of money could be obtained through negotiation processes, there was never any discussion whether it was reasonable to invest public money in the projects. It was seen as self-evident that public money should be invested in the Agricultural sector. The participants were not aware of the fact that farm-based activities in fact has a very advantageous position versus other types of companies. When such issues were raised, we were bombarded by value statements about the importance of agriculture in modern society.

Following this line of reasoning, the dominating idea was that all public services should be available at zero cost. An example is the innovation programme and workshops that we arranged in this experiment. An intelligent combination of regional funds and EU-funding made it possible to offer the programme to the participants at 1/10 of the actual cost. We got very good feedback from the participants, all but one started innovation projects and several of them will benefit from this programme. We learned, however, that no one would pay the full cost for the programme as part of their investment in the innovation process. This attitude may limit the innovativeness in some farm based companies if knowledge and process support is not available at a very low cost. Even if most self employed business people have the view that the state wants too much tax and provide too few services for business, the attitudes towards public funding was extreme in this group. The difference between their views of Own Money and Other Peoples Money was striking.
The Dual Role of Farmers Co-operative Organisations

The farmers’ co-operative organisation has an important role in the upgrading of the competitiveness of Swedish farms and agriculturally based corporations. Several initiatives have been taken to help development processes in the farm sector. There are programmes to help farms in strategic change processes, there are programmes to encourage export, there are agencies to support change in all Swedish regions and there are specially trained specialists who can support those who dare.

On the other hand, the farmers’ co-operative movement is also based on common action to reach common goals. If strong bargaining positions should lead to commercial success, it is important that all farmers behave in similar ways and use similar standards. This has severe effects on innovation. If an innovative farmer develops new products with different quality standards or product attributes than what is offered by the average co-operative farmer, this is often seen as a threat by the farmers co-operative. We were told by more than one innovator that key actors in the co-operative movement contacted them and tried to persuade them not to develop the new product when the possibility of success was immanent. We were also told of cases where the co-operative members had tried to ruin the reputation of the innovator in the eyes of the customers, retailers and consumers.

For the innovators this is a very frustrating situation. One innovator expressed it like this: “They encourage us to make innovations, but if we are successful they try to stop us.”

Summary and Conclusions

In the analysis of the experiment that we have carried out the purpose was to analyse key characteristics of the innovation process among innovators in the Agri- and Food business. The key characteristics of the thoughts and actions of farmers – innovators that we have found are the following:

1. The innovators create innovations that they are interested to exploit themselves in their own business.
2. The innovators are not interested in selling their businesses.
3. Venture Capital is not a workable form of funding for innovators in this group.
4. Choice of business partners is a critical and problematic activity.
5. When choosing business partner, both professional and personal relations are important.
6. The experiment group presented many matrimonial enterprises.
7. In matrimonial companies, the division of roles between spouses was clear and well recognised.
8. The company structure and the company success were in some cases secondary to growth of family values and fortune.
9. We found businesses based on love, respect and shared visions rather than growth, profit and return on investment.
10. The innovators were very resourceful and experienced people with lots of managerial experience and strong personal networks.
11. The innovators were very willing and capable to act as part of the action-reflection process.
12. The innovators were willing to invest own funds when they were convinced by their own business plan.
13. The innovators treated own money and public financing in very different ways.
14. The innovators regarded public resources as a free resource that one should negotiate for, not pay.
15. The farmers’ co-operative has a dual role. It both encourages innovation processes and sometimes tries to stop successful innovations in agri-food companies.

Conclusions
One reflection based upon these results is that the willingness to control the own company and that the company has a basic role as a family enterprise is by no means unique for the Agri- and Food companies.

Most firms, new as well as established, are family business, i.e. operated by and for families with the intention of keeping the firm within the family after succession. The family is a dominant institution in most cultures and obviously a basic collective form of entrepreneurship as well. A number of researchers point out that in the family business the social and business systems overlap, see Brunäker 1991 for an overview. Obviously the family business is an arena where the social concerns heavily influence the way the business activity is organised and operated.\textsuperscript{10}

\textsuperscript{10} Johannission 2002 (a) p 14
The fact that our entrepreneurs represent the most common kind of company makes our observations about financing and venture capital even more interesting. The fact that many innovators and business entrepreneurs want to own and control their own company and preferably leave it to the next generation in the family makes us wonder about the clash between the thinking of the participants in our programme and the venture capitalist perspective.

Venture Capital in this context means (1) investment of equity capital, (2) in the form of minority positions, and in which (3) the investors act as temporary partners, but (4) with an active involvement in the targeted firms.\textsuperscript{11} For the venture capitalist, the investment must eventually be followed an exit. The whole idea of the venture capital business is to earn money selling shares in well developed companies at a much higher price than the price paid when the capitalist invested in the business. In principle the capitalist could sell back to the original owners, but if the business has been successful, this is usually too costly for the original owners. The option to sell back is most used when the company has been a failure. This means that in principle the family business and the Venture Capitalists have radically opposite views.

We can also notice a difference between the university based innovators and the family business innovators. The university based innovators, in most cases, have no problems with the idea of developing a patent together with a Venture Capitalist, selling the company and collecting the profit. After that he or she hopes to make a new innovation and to start a new company. The actual running of the business is not an issue so close to the heart as it is for the family innovator.

A way to handle this delicate situation is proposed by Johannisson & Landström. They suggest that the analysis of the capital needed should include (1) financial capital, (2), social capital and (3) human capital. In an example from Winborg (2000) they describe the following situation:

\begin{quote}
When local entrepreneurs trust each other and share identity they generate the social capital needed to reduce e. g. the need for investment in new machinery by acquiring used equipment or borrowing the capacity needed.\textsuperscript{12}
\end{quote}

\textsuperscript{11} Johannisson (2002 a) p 17, see also Johannisson & Landström (2002)
\textsuperscript{12} Winborg (2000) in Johannisson (2002 a)
Our conclusion is that it is valuable to work with all the three aspects of capital needed. The lack of one kind can to a certain extent be compensated by the availability of another kind. Johannisson also point to an advantage that the informal venture capitalists – normally referred to as business angels – have versus the formal risk capitalists. The informal venture capitalists often have a solid entrepreneurial background of their own. This means that even if they invest in order to get financial returns on their investment, they understand the thinking of the innovator and they also, through their own success bring credibility to the new business relation. In other words, their social capital is so much larger than the social capital of the formal venture capitalist companies, that the innovators may trust them and enter a relation. It has also been reported that the informal venture capitalists tend to make their investments within a relatively narrow geographical area.\textsuperscript{13}

One interesting conclusion from this is that informal venture capitalists can be counted as a major resource in an innovation cluster. An experienced innovator with financial means, who is willing to invest in areas, businesses or technologies that he understands well has advantages as a partner in newly created innovative companies.

We know from earlier research\textsuperscript{14,15} that the innovation process is so complex that the knowledge of other people is necessary in order to run the innovation process all the way though the three phases of the innovation process. We also know that different competencies are needed at different times. The individual with the unique idea will need other people in order to create an innovation - a successful business. This is also the reason why Johannisson talks about entrepreneurship as both an individual and a collective phenomenon.\textsuperscript{16} But we have also learnt that financial capital is needed to achieve high growth and such a high development speed that other companies do not imitate the unique products, concepts or services and sell them on the market before the innovator gets his act together.

Therefore family based entrepreneurs need to develop their ability to work with others and to choose what is important to control and what is not. In order to create successful ventures, incentives must also be given to new partners who bring new, unique competences and

\textsuperscript{13} Ibid p 19  
\textsuperscript{14} Lagnevik et al (2003)  
\textsuperscript{15} Reich (1987)  
\textsuperscript{16} Johannisson (2002 b)
resources to the company. Innovation and learning occur in interactive processes. The innovation cluster can provide interesting arenas and resources, but the innovator must also make an analysis of the balance between control and integrity on one side and efficient innovation processes on the other. We believe that the use of an analysis based on linkages between financial capital, social capital and human capital can be a constructive way forward.

References


