



TASK 6: Resilience of the value chain and the business/initiative – dealing with change and crises

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Summary

The resilience perspective:

The resilience perspective helps us understand how the mid scale organic value chains deal and cope with change and how well equipped they are to face the future. Resilience means that a system can absorb change and reorganise after change while retaining essentially the same functions and structure (Walker et al., 2004). Adaptive capacity is the ability of actors to cope with change and dynamics (Gunderson and Holling 2002). Partly depending on the adaptive capacity of the actors in the system (farmers, processors, retailers, consumers), resilience can be built or eroded. Thus, a high adaptive capacity of actors is a prerequisite for their resilience building capacity (Walker et al. 2004). A social-ecological system, such as a food value chain or a food initiative, with low adaptive capacity is more vulnerable to shocks, disturbances, and sudden changes.

Main analytical questions:

What kinds of changes/disturbances/crises have occurred in each particular case? What were the causes for changes/disturbances/crises?

How have these changes/disturbances/crises been managed? By whom?

What sources of adaptive capacity can be found in the cases?

Overall hypothesis:

The analysis of crises/changes and how these were dealt with allows understanding of how organic mid-scale initiatives and value chains build resilience and of the adaptive capacity that actors have in these systems.

Summary of results:

The overall dominant trajectory was growth impaired by more or less severe crises/challenges, but overall not threatening the economic survival of the initiatives. Another important trait was that growth was slow initially but took off the last few years. During their growth trajectories, all organic value chains experienced changes and challenges. In some cases, these were sudden shocks like increased prices for inputs or a sudden drop of customers. In other cases they were more like continuous stresses, e.g. the difficulty to find suitable market partners or organisational problems. The origin of challenges were both internal and external or a combination of both. In some cases growth itself produced problems, like economic problems, organisational problems or

quality or value problems. In other cases it was growth itself that was impaired by economic or organisational problems.

Many of the organisational and economic problems that go hand in hand with a growth process were solved by the mid-scale food initiatives through what could be summarised as professionalization. This manifested itself in different ways. One initiative changed organisational status before it could embark on a growth trajectory. Other cases had to attract more competencies and improve management skills. All initiatives strived to be well organised, but all did not want to transform into business-like organisations. Another way many of the cases handled challenges connected to the growth process was by working together with conventional retailers. They were able to invest and/or to accommodate the larger volumes produced. Thus, the concerned food initiatives operated both in “alternative” networks and in the “mainstream”. This can be interpreted as a strategy for flexibility when the initiatives used retailers to improve their room for manoeuvre. For example, the initiatives used the retailers to accommodate large volumes at the same time as other markets were opened up and/or own brands were pushed.

In most cases, diversity was a deliberate strategy. Diversity pertained to business branches, market channels, suppliers, products, market partners as well as to actors and knowledge. All cases had long-term partnerships. The “partnership logic” instead of the “competition logic” seemed to favour growth and to increase adaptive capacity. Apart from the economic value of working together, long-term partnerships had a basis in mutual personal sympathies and was also due to shared values. Disturbances offered an opportunity to learn if the shock/stress was small enough to induce adaptations, but large enough to make adaptations necessary. The process of professionalization was a kind of learning where new people with new competencies were included into organisations, and when organisations were adjusted to new circumstances.

Conclusion:

Learning, diversity, trust and social networks are key aspects of adaptive capacity and thus for building resilience (Walker et al., 2004; Milestad et al., 2010). The organic value chains explored in HG were able to overcome challenges and grow into mid-scale initiatives because they had adaptive capacity. Thus, they were willing to learn and took the opportunities to learn in order to adjust activities. They used diversity as a strategy to spread risks and to keep options open. Trusting relationships and long-term partnerships with market partners and other actors was strived for and accomplished with extensive social networks. Coupled with professionalization of business and value management, as well as using available market partners to their advantage, the organic initiatives strengthened their adaptive capacity and built resilience.

Key recommendations:

- Support diversity
- Support development of long-term partnerships
- Support learning activities and learning organisations
- Support business and value management professionalization
- Support development of wholly organic value chains (breaking the hegemony of conventional retail)

Introduction

Analytical perspective and theoretical framework - including terminology, hypotheses and analytical questions

The resilience perspective helps us understand how the mid scale organic value chains deal and cope with change and how well equipped they are to face the future. Social-ecological resilience is the capacity of a system (or in our case, a value chain with its social and physical parts) to absorb changes and reorganise while retaining essentially the same functions and structure (Walker et al., 2004). Resilience thinking originated in ecology and was a new way of conceptualising the dynamics of ecosystems and natural resource management (Holling, 1973). Since then, the use of the concept has been widened to include analysis of social-ecological systems such as agriculture, urban areas or the economy (cf. Gunderson and Holling, 2002). Resilience and adaptive capacity appear to be useful concepts when analysing food value chains since food value chains are complex and dynamic, and exhibit interdependence between humans and ecosystems.

Resilience means that a system can absorb change and reorganise after change while retaining essentially the same functions and structure (Walker et al., 2004). Adaptive capacity is the ability of actors to cope with change and dynamics (Gunderson and Holling 2002). Partly depending on the adaptive capacity of the actors in the system (farmers, processors, retailers, consumers), resilience can be built or eroded. Thus, a high adaptive capacity of actors is a prerequisite for their resilience building capacity (Walker et al. 2004), which is vital in the current context of climate change, changes in politics, and market fluctuations. A social-ecological system, such as a food value chain or a food initiative, with low adaptive capacity is more vulnerable to shocks, disturbances, and sudden changes.

Learning is a significant factor when building adaptive capacity and social-ecological resilience. Thus, if actors and organisations learn, there is a high probability that they will increase their adaptive capacity (Fazey et al., 2007). Other factors that are often mentioned to be conducive for adaptive capacity are diversity, social networks and trust (Elmqvist et al., 2003; Walker et al., 2006).

In order to be able to analyse resilience and adaptive capacity of a system, we have to define what it is that we want to be resilient. In the HG perspective, it is the ability to grow both in terms of volumes and values. Thus, the cases/value chains can be said to be resilient and the actors to have adaptive capacity if the food initiatives survive and grow in economic terms and if they maintain and advance their values at the same time.

In resilience thinking, an important underlying assumption is that the social and ecological worlds can be conceptualised as systems and that the social and the ecological are interlinked and interdependent (“social-ecological systems”). In addition, systems are perceived as dynamic, where change is non-linear and surprise is just as important and likely as steady-state growth. Problems are seen when there is a mismatch between the scale of decision-making and the scale of the resource in question, resulting in uninformed decisions that can erode the resource. Translated into the context of food

value chains, this can be the case when knowledge and power in the chain is distributed in a way that influences agro-ecosystems negatively or when signals from the agro-ecosystem are not understood/acted upon.

In the resilience thinking framework the food value chain is seen as a social-ecological system that is constantly changing due to internal and external drivers. All food value chains experience internal and external change, and crisis. We aim for understanding how these changes are dealt with (successfully and unsuccessfully), and how this influences the actors in the chains.

According to resilience thinking, disturbances can either be so large that they cause the whole system to lose resilience (collapse), or, they can be small enough for the system to cope with and even be strengthened by them. The reason for losing resilience (in our case, going bankrupt and/or deserting core values) can be: 1) too large and overwhelming disturbance, 2) actors in the system not able to adjust and learn, 3) the system so weak/close to collapse already that even a small disturbance pushes it over a threshold. Thus, severity of crises, adaptive capacity and vulnerability/strength are important entities for the analysis.

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What sources of adaptive capacity can be found in the cases?

Overall hypothesis:

The analysis of crises/changes and how these were dealt with allows understanding of how organic mid-scale initiatives and value chains build resilience and of the adaptive capacity that actors have in these systems.

Methodology including reflexive standpoint

Resilience analysis is not a distinct analysis based on a set of variables, but has to be adjusted to the context of research and the focus of the study. The point is a systemic view and a rich picture of the overall research question. In HG we focus on the actors in mid-scale organic value chains as well as the trajectories of the core cases. In order to answer the question “how resilient are the cases?” or “how do the cases build resilience?” we have to find proxies that we use to describe important aspects of resilience. We focus on the crises experienced and handled by the core cases and the adaptive capacity of the actors.

There are some weaknesses in the analysis. One weakness is that the case studies have been produced by different researchers with different disciplinary backgrounds and thus with different perspectives on the issues handled (possibly giving different weight to different issues and possibly giving more or less positive or critical views on the cases). Another, related problem, is that in many cases the managers/founders/speakers of the core cases have a very strong voice in the case study reports. Thus, sensitive and/or problematic issues may be downplayed. As a consequence, the descriptions of events, crises and solutions depend on a few people’s interpretations and have not been analysed more in-depth.

Reflexive standpoint: coming from agronomy sciences with a dominance of natural science but then shifting to more social science fields of research such as rural development, resilience thinking is attractive since it tries to encompass natural resource issues in a holistic and systemic way. This has also resulted in a truly interdisciplinary approach, the weakness being a lack of “home” in any field of study. While resilience thinking offers a supportive framework for research, it does not offer a methodology and a solid theoretical base, i.e. the analysis has to be supported by theories from other fields of research. Also, resilience thinking has some weak spots (e.g. power issues, a critical perspective). While we focus on the core issues in a resilience analysis, we try to be aware of these weaknesses. Resilience can be used as both a normative and a neutral concept. When we talk about “building” resilience it is clearly normative.

The case studies used for the resilience analysis are: EL, UB, Polar shiitake, Røros dairy, Røros meat, Gram castle, Food communities, Landwege, Bohlsen, Achleitner, BvB, Biocoop, Eko Zemaitija, Ekodar, Planika, Sunder, Kolonihagen. The territorial cases are left out since they would need another focus of analysis. Also, all case studies are not used to the same extent since the accounts in the reports may not be rich enough/I have not been able to analyse them in depth.

Core results

Changes, disturbances, crises and their causes

The overall dominant trajectory is growth impaired by more or less severe crises/challenges, but overall not threatening the economic survival of the initiatives.

Another important trait is that growth was slow initially (Landwege, Sunder, Polar shiitake, Røros meat, Røros dairy) but has taken off the last few years.

Six of the cases (Ekolådan, Achleitner, Landwege, Biocoop, Food communities, Bohlsen) represent fully organic value chains (i.e. all or the vast majority of their market partners are also fully organic enterprises). This fact frames the context in which the initiatives develop, as does the national context (market demand, competition, available state support). Where there is a strong organic market (DE, AT, DK, FR and to some extent SE) competition is also stronger from other organic value chains as well as from conventional actors that also want to profit from the demand for organic products. In the countries where the organic market is weaker (SLO, TR, LIT, NO, FI) the initiatives either focus on the export market (Sunder, Polar shiitake) or have to make large efforts to develop the domestic market (e.g. EkoZemaitija).

National context summaries:

UB, Ekolådan (SE): growing organic market, hegemony of large-scale retailers and wholesalers, consumers buy most of their food in conventional supermarkets, where most organic food is also sold

Røros dairy, Røros meat, Kolonihagen (NO): dwindling political support for organic agriculture, strong values regarding regional food

Kiuruvesi, Järvifisu, Polar shiitake (FI): two retail chains dominate the market

Gram, Food communities (DK): strong organic market, hegemony of large-scale conventional retail chains

EkoZemaitija (LIT): developing organic market (weak), influence from Russian embargo

Landwege, Bohlsen (DE): strong organic market, a diversity of organic value chains, competitive market also for fully organic value chains

Biocoop (FR): a diversity of organic value chains, no hegemony of large-scale conventional retailers on the organic market,

Achleitner, BvB (AT): strong organic market, large-scale conventional retailers dominate the organic market

Ekodar, Planika (SLO): weak (but growing) organic market

Sunder (TR): weak organic market

During their growth trajectories, all organic value chains experienced changes and challenges. In some cases, these were sudden shocks¹ like increased prices for inputs or a sudden drop of customers. In other cases they were more like continuous stresses, e.g. the difficulty to find suitable market partners or organisational problems. The origin of challenges were both internal (value disputes, organisations that need to develop, competencies that are not up to date) and external (repercussions of the financial crisis 2008, weather events) or a combination of both (lack/change of market partners, general economic problems).

All explored cases of organic value chains experienced their own challenges and handled them in individual ways. Some had to deal with severe crises, while others “only” had to learn from and seek new solutions in minor issues. If crises are large enough to shake the organisation, but small enough to be able to learn from, they help to build resilience and strengthen the system (Walker et al., 2004).

More than half of the cases have not experienced any severe crisis (as interpreted by the national teams), but have grown steadily or grown after making adjustments so as to be able to grow (typically what can be summarised as professionalization). However, all core cases have experienced challenges and changes since their founding, and have also been able to manage them.

Two cases have experienced severe crisis (impairment of turnover), which they have not (yet) recovered from (Ekolådan and Ekodar?). The main reasons for these crises were external, where changes in society and/or market partners induced the decline in turnover.

In some cases growth has itself produced problems, like economic problems, organisational problems or quality or value problems (Achleitner, Biocoop, to some extent Landwege). Achleitner grew very fast and the organisation and quality management did not keep pace. Biocoop also grew fast during the 1990's and was soon

¹ Shocks = crisis in the resilience terminology. This means more or less sudden and surprising events with a large impact. Stresses = gradual changes that challenge the initiative. The difference between shock and stress is not clear-cut but is subject to interpretation.

criticised for forgetting about their core values. Landwege grew fast after changing organisational status, but also encountered economic problems as they were overwhelmed by their own expansion into more shops in a short time span.

In other cases it has rather been growth that was impaired by economic or organisational problems (Ekolådan, Ekodar, Röros meat, Röros dairy, Polar shiitake, Sunder). Other initiatives had internal organisational and managerial problems to develop (Röros meat, Röros dairy). Polar shiitake experienced economic problems before they found an international market, as did Sunder (to some extent).

The cases were affected by the financial crisis to differing degrees. While some felt the crisis as a flatter growth rate (e.g. Biocoop) and/or indirectly (by more cautious partners and customers, but without any severe repercussions in the turnover, e.g. Röros diary, Polar shiitake) other cases were more severely affected – in many different ways. Gram had difficulties to obtain bank loans due to the instable financial situation; EkoZemaitija was hit by lower milk prices. Ekolådan and Bio Sunder lost customers while Ekodar had a general experience of financially weak consumers. Thus, a seemingly straightforward type of crisis such as the global financial crisis hit the cases very differently.

A number of cases have experienced problems along the way, but small enough for the initiatives to keep pace with growth (Gram, UB, Bohlsen, BvB, EkoZemaitija). This does not mean that these initiatives did not feel the severity of crisis (as e.g. in the case of Bohlsen that went nearly bankrupt due to high grain prices), but rather that the challenges were overcome relatively fast and cannot be detected on the general development of turnover.

Causes for changes, disturbances, crises

In summary, the causes for shocks and stresses can be found within the initiatives, in the value chains, and in the overall context in which the initiatives operate. In addition, these levels interact and influence each other (i.e. cross-scale interactions). For example, if an initiative is badly organised or does not have the right competencies it may not be able to deal with changes in the outside world or to grab chances when they occur (as in the case of EkoZemaitija that was not able to bid for a large program for milk in schools since they did not have the skills to do it). This in turn, hampers growth.

A cause for weakness in some of the cases (explicit in UB, Ekolådan, Bohlsen, Achleitner) is that the key actors and founders are getting close to retirement and it is unclear how succession will be dealt with. In addition, many cases (UB, Ekolådan, Bohlsen, Achleitner, Gram, Röros, BvB, Sunder) are dependent on key actors that have built the initiative and/or have important social networks that are vital for the functioning of the initiatives/businesses. A successful transition to young/new people must involve transmission of values and networks, and partly building new networks and partnerships. In none of the cases this transition has been made yet, thus this is a stress that will influence them in the near future. Other stresses and causes for shocks (in the history and anticipated) include:

Internal in the businesses/initiatives (sub-system):

Organisations not keeping pace with growth (Achleitner, Ekolådan), economic problems hampering growth (Gram, Sunder, Polar shiitake), lacking competencies to support growth (EkoZemaitija, Röros dairy, Röros meat, UB), dependence on one market partner (UB, Gram, Röros meat, Ekodar(?), BvB)

The initiatives and their interaction in the chain (focus system):

Lack of/change of market partners (UB, Ekodar, Sunder, Röros meat), lack of market access (Polar shiitake, EkoZemaitija, UB), economic problems in the chain/among partners (Ekodar, BvB), differing values between actors (UB, Kiuruvesi, Biocoop)

The context (overall system):

Increasing competition – for their suppliers or for their customers (Ekolådan, Biocoop, Bohlsen, Landwege, EkoZemaitija, UB, Polar shiitake), the financial crisis (Ekolådan, EkoZemaitija, Sunder, Polar shiitake), loss or lack of support funds (UB, Röros), weak organic market (EkoZemaitija, Sunder, Ekodar).

Management of changes, disturbances, crises – tracking the sources of adaptive capacity

Many of the organisational and economic problems that go hand in hand with a growth process were solved by the mid-scale food initiatives through what could be summarised as professionalization. This manifested itself in different ways. One initiative changed organisational status before it could embark on a growth trajectory (Landwege). Other cases had to attract more competencies and improve management skills. All initiatives strived to be well organised. Another way many of the cases handled challenges connected to the growth process was by working together with conventional retailers. They were able to invest and/or to accommodate the larger volumes produced. Thus, the concerned food initiatives operated both in “alternative” networks and in the “mainstream”. This can be interpreted as a strategy for flexibility in the cases where the initiatives used retailers to improve their room for manoeuvre. Thus, the initiatives used the retailers to accommodate large volumes at the same time as other markets were opened up and/or own brands were pushed.

Professionalization – a prerequisite for growth?

Many of the organisational and economic problems that go hand-in-hand with a growth process have been solved by the core cases through what could be summarised as professionalization (meaning division of tasks internally, using “conventional” management knowledge and instruments, education of staff/suppliers, focus on product quality). This is very clear in the Landwege example, which had to change organisational status in order to embark on a real growth process. In other cases (Achleitner, Bio Sunder, BiovomBerg, Bohlsen, Ekolådan...) more competencies have been added to the businesses/initiatives as growth has continued. In the case of Ekolådan, this development helped when they had to reverse growth and lay off staff – the employment agreements introduced by the trade union helped to make the process of lay-offs better organised (and less personalised). Other examples are Röros dairy, Röros meat and EkoZemaitija – they had to improve management skills in order to move forward and be able to engage with larger players on the market. In other cases professionalization has not taken place. This holds for Upplandsbondens, which

organises just like in the beginning of its history, without employees. All initiatives strived to be well organised and to have control of their economy. However, in terms of division of tasks (away from a feeling of shared responsibility?) professionalization was seen more critical. For example, Ekolådan has decided to stay in the organisational form of a foundation, even if transferring to another organisational form would improve chances to grow more. A professional business like Achleitner (and Landwege, Biocoop) has solved it differently, e.g. by taking measures that the employees know the values the business stands on and by making sure there is a “we-feeling” in the business (through a culture of meetings, room for discussions).

Some specific examples from the cases:

Ekolådan: professionalization started in the growth phase to better organise the internal work and make responsibilities clear. This was an advantage in the decline phase. In the decline phase, many of the middle-level responsibilities disappeared. Lay offs were easier to carry out with the trade union rules they had just started to apply. Some key actors think professionalization stands in conflict to feeling of shared responsibility to some extent.

Röros dairy and Röros meat: new competencies were added to the board and management after the investor appeared to save the companies. New strategies developed (e.g. new pricing strategy). Professionalization was an important way to solve the problems.

Polar shiitake: improved management skills and especially the possibility to use the “good man” (as advisor in management issues)

EkoZemaitija: adding new competencies (market specialist, new staff in own processing unit, for management) were vital for finding new markets and becoming less dependent on the dairy.

Landwege: change of organisational form enabled professionalization. Adding new competencies in accounting as a consequence of one crisis, adding other competencies as the initiative grew.

Bohlsen: continuous adding of competencies as the business grows, but not as a direct response to crisis. Rather, a precondition for growth and to survive in a very competitive market.

Biocoop: professionalization on the national level (new manager from conventional retail) and tightening of charter/values/local procurement (incl. adding competencies for that) as a response to critique/crisis.

BvB: using the professional management and skills of their market partner, without which it would not have been possible for the farmers to push for the brand in retail.

Achleitner: cutting of a business branch as response to crisis at the same time as the internal organisation was tightened up and made more quality conscious.

Sunder: constant learning about markets, possible partners, regulations, labels, quality schemes. Not an expansion of people with new competencies but rather learning among the managers and key people.

Relationship with conventional retail/wholesale – a strategy for flexibility?

The majority of cases work together with large, conventional retail chains. In many cases, this is one important reason and prerequisite for growth. This mainly concerns the producer cooperatives (Upplandsbondens, EkoZemaitija, BiovomBerg, Ekodar, Röros meat, Röros dairy) but also businesses like Gram, Järvifisu, Polar shiitake, Bio Sunder

and Achleitner. Whenever there are large volumes and the initiatives have no direct market channel of their own to reach consumers (as Landwege, Biocoop, Ekolådan, Kolonihagen and Food communities have) retailers have the logistics and the market to sell larger quantities. This can be interpreted as conventionalisation of the initiatives (if retailers would pressure prices and force the initiatives into conventional structures) or as hybridity (they operate both in “alternative” food networks and in the “mainstream”) or as flexibility. In the latter case, this means the initiatives use retailers as a strategy to improve their room for manoeuvre. This does not mean that they have the upper hand or even equal power as retailers. Working with retailers is a strategy for flexibility when the initiative is not solely dependent on the retailer, but uses it to accommodate large volumes at the same time as an own brand is built up and/or additional (regional) markets opened up (BiovomBerg, Upplandsbondens, Ekodar, Röros, Gram). Other ways to use the mainstream food system for flexibility is when e.g. Upplandsbondens expands the number of slaughterhouses their members can choose from to secure high prices and to be less dependent on the whims of the regional partner.

Some examples from the cases:

UB: work with conventional retailer and slaughterhouses to be able to grow, accommodate large quantities, create financial stability when regional partner failed. Deliberate decision to depend on market partners for processing and retail. Trusting relationship with national conventional wholesaler partner

Röros dairy: licence production for conventional retailer as well as using a multitude of conventional market channels for products with its own brand (50-50). Uses retail to accommodate large quantities. Not explicit way to solve (internal) problems but prerequisite for growth and reaching the market.

Röros meat: Cooperation with Rema 1000 did not work but work with COOP works better and was a solution to some of the problems and a prerequisite for growth.

Polar shiitake: Work with conventional wholesalers on the export market was a solution for the problems to reach the market in Finland. Specialised product and large quantities needs conventional retail to accommodate volumes.

Gram castle: finding a partner in Rema 1000 was a solution to the lack of funds for investments and a market solution at the same time. Feeling of shared values regarding organics. Gram keeps identity in the shops since they use their own brand.

EkoZemaitija: works with conventional dairy (to accommodate quantities they cannot accommodate themselves) and conventional retail as market channel for products of their own brand. Market specialist was needed to target the right supermarkets. Their own brand and products create autonomy and a larger control over the value chain, but retail is needed for the last part of the chain.

BvB: close relationship with regional conventional retailer that enabled development of BioAlpin and its brand BvB. Strong feeling of shared values on organics between the retailer and BioAlpin. Continuous development of new products, in iteration with the retailer. Parallel development of number of market channels to decrease dependence on the retailer.

Ekodar: works with conventional retail as main market channel.

Sunder: works with conventional wholesale (exports) to accommodate volumes and get the right price for their products. Increased the number of market channels during the economic crisis. Market partners are buyers, not close partnerships.

Flexibility through diversification

Diversity, in its widest sense, is often mentioned as one of the most important features of a resilient system. That is, a resilient system displays diversity e.g. in the sense of redundancy and/or heterogeneity. This can be on the level of genetic heterogeneity, species richness, or a high number of competencies and roles of social actors. Thus, there is not *one* type of diversity. There are two major reasons diversity is considered so important for building resilience.

First, it is about not “putting all eggs in the same basket”. This means that diversity (of production lines, of market partners, of suppliers) is an insurance to (unforeseen) changes that may take away some of the “eggs”. In this case, it is about many similar things, i.e. a redundancy. The implicit idea is that it is possible to lose some of the “eggs” if the rest remain safe in other “baskets”. For example, in the case of Upplandsbondens, where only one person in the board has an overview of the economic situation of the cooperative, this is a lack of redundancy and thus a weakness.

Second, it is about heterogeneity, meaning that there may be an end in itself to have differences (different market channels, different types of products, different production branches, different experiences, knowledge and views). This is because one type of production line or market channel can fail (for whatever reason). If there are other business branches or market channels, they can substitute and/or make up for the lost one. Thus, as in the case of Ekolådan, if the box scheme is weak during a few years, the wholesale business may compensate the losses. Or, as in the case of Landwege and Biocoop, if actors meet with differing views on the future of the cooperatives, the cooperative may come out stronger after thorough discussion and deliberation, than if the discussions had not taken place.

Examples of diversity from the cases:

UB: finding more slaughterhouses (in and outside the region) for members to choose from, aiming to selling their own brand to a higher extent, aiming to start up the meat box market channel again, aiming to differentiate into cured meat products -> diversity of market channels (and products)

Ekolådan: the box scheme is one of three major business branches (along with wholesale and trading) -> diversity of business branches

Röros dairy: many different market channels for their own products -> diversity of market channels

EkoZemaitija: diversifying into their own processing facility, own products with own brand, appearing in increasing number of supermarkets -> diversity of market channels and business branches

Landwege: using the experiences of staff, consumers and farmers in decision making -> diversity of knowledge

Biocoop: using the experiences of staff, shop owners, consumers and farmers in decision making -> diversity of knowledge

Bohlsen: diversification of products, business branches, suppliers (as response to crisis), market channels, production facilities and partners (from local bakeries to national organic retail) -> diversity of business branches, of partner, of market channels, of products

BvB: diversification of production facilities (e.g. using a number of small dairies instead of one large), products and market channels/partners

Achleitner: box scheme one out of four business branches (restaurant, wholesale, shop). Cooperation with other box schemes for products and logistics instead of keeping everything in own business -> diversity of business branches, of partners

Sunder: development of market channels as response to crisis -> diversity of market channels

Many cases are good examples of a diversity of products under their own brand (Gram, Röros dairy, Röros meat, Ekodar, EkoZemaitija, BvB, Sunder, Bohlsen), i.e. they constantly expand the range of items sold with their identity.

Stability through long-term partnerships and regional embeddedness

Cases that have a vivid (regional) network of partners and contacts with other organisations (businesses, CSO, public organisations etc.) can create more opportunities for learning occasions. For example, Landwege, Bohlsen, Achleitner, Biocoop, Gram and to some extent Röros dairy and Upplandsbondens engage in activities that are regionally based (sponsoring events, participating in events/projects, offering courses). In the case of Landwege these activities are formalised in sister organisations (“Landwege fellows”), while in the other cases it is the cooperative/business that acts on the regional arena (for marketing, communication, responsibility purposes). In the case of Kiuruvesi, the whole idea is to build local partnerships between municipal procurement and local suppliers.

The presence of long-term partnerships brings stability, possibility to make new investments and a “we-feeling” in the chain. In a crisis, a long-term partner is more likely to accept late payments or to be flexible in other ways (e.g. the help Bohlsen got from the trusting relationship with its bank).

Another point is equality and fairness in the initiatives and in the value chains. Negotiations on equal footing is a feeling that actors have (or not) and are also an interpretation of the market situation, while fairness can be interpreted as sharing of profits/surpluses. It may be the case that the cases in HG experience less pressure from retailers and wholesalers to lower prices, and that individual farmers negotiating with the initiatives in HG (Landwege, Biocoop, Achleitner, Ekolådan) have less problems to get the prices they want. However, it is still a negotiation and generally, the closer to primary production the initiative is, the harder it is to obtain a good price (cf. UB, Ekolådan).

All cases have long-term partnerships. In some cases the relationship is between the initiative and the (member) farmers (e.g. Ekodar, UB, BvB, Landwege, Biocoop, Röros, EkoZemaitija, Ekolådan, Achleitner, Sunder). These partnerships will only hold as long as the members find the cooperatives useful for them. Indeed, both UB and EkoZemaitija struggle to figure out how to make farmers stay in the cooperative. In the case of Achleitner it is also interesting to note that this case has developed close partnerships with other box schemes. The “partnership logic” instead of the “competition logic” seems to favour growth and to increase adaptive capacity. In none of these examples, there are written agreements between suppliers (farmers) and buyers (?). Thus, partnerships between farmers and the initiatives are based on trust. There can be instances where

trust is indeed high, but where written agreements are needed all the same, especially when the partner is a conventional wholesaler or retailer (e.g. Gram-Rema 1000, UB-National wholesaler, BvB-MPreis). In such cases the process leading to the agreement can be based on personal interaction that is high in trust.

Apart from the economic value of working together, long-term partnerships have a basis in mutual personal sympathies and could also be due to shared values (UB, Ekolådan, BvB, Gram, Bohlsen). For example, key people in BiovomBerg and MPreis meet in their leisure time. Some of the cases have evolved together with (larger) market partners (Upplandsbondens, Gram, Röros) to which they have a close relationship (however mostly based on market principles, the partners seem to be interested in organic values to some degree). There is an interaction between shared values and trust. If trust is high, it is possible to develop shared values, which in turn may reinforce trust. If values are shared, it may be more likely that trust can develop between people and initiatives. However, this does not always work (e.g. UB and its relationships with the regional wholesale partners where *regional* values are shared but trust has not developed. In this case, the organisations do not share *organic* values).

Learning as an integral part of management

Learning is key for adaptive capacity since adaptation mostly happens after actors have learned (been able to interpret feedback, been able to reflect on their own activities in relation to other actors' activities, etc.). Every face-to-face encounter entails a potential for learning (about food, about the realities of others, about the perspectives of others). Other instances where learning can take place are via educational activities or interaction via ICT solutions (social media, homepages). Learning can also be "built into" the organisation by meetings/activities where people with different experiences and competencies meet. Disturbances offer an opportunity to learn if the shock/stress is small enough to induce adaptations, but large enough to make adaptations necessary. One way to put it is to claim that all cases in HG have learnt since they have been able to adjust to new circumstances and constantly develop. It is also possible to look for instances where actors in the initiatives/value chains have opportunities to learn. The process of professionalization is a kind of learning where new people with new competencies are included into organisations, and when organisations are adjusted to new circumstances. All cases provide possibilities for end-consumers to take contact and say what they think about the food (reclamations, possibility to give feedback). All cases that are cooperatives (UB, BvB, Biocoop, Landwege, EkoZemaitija, Ekodar, Planika, Food communities, Röros(?)) offer opportunities for members to meet during yearly assemblies. Other examples from the cases include (i.e. apart from professionalization, reclamations, formal yearly meetings):

Upplandsbondens: organised education in organics for national wholesaler, worked together with marketing bureau, face-to-face at yearly summer meeting, occasional informal meetings with market partners at fairs, food galas, meets end-consumers during appearances in supermarkets

Ekolådan: study tours to farms (offered to end-consumers), newsletters to consumers

Achleitner: composting workshops for farmers, farm visits, Facebook group, many internal meetings, many encounters at markets, in the restaurant, in the farm shop, close cooperation with other box scheme, newsletters to consumers

Landwege: executive board with staff, consumers and farmers; Landwege fellows (a multitude of educational activities/projects for children, interested people, staff)

EkoZemaitija: courses for staff

Kiuruvesi: sharing experiences with other municipalities, active dialogue between farmers and kitchen staff

Röros: courses and meetings under the regional umbrella of “Ökomat Röros”

Biocoop: meetings at national, regional, local level between staff, shop owners, farmers and consumers; training of new shop owners, magazine

Bohlsen: involvement in regional and national organisations for organic education and development, regional development and networking

BvB: close contact with regional retailer, supports regional events, regional networking, shop demonstrations of products, field visits

Sunder: educational activities with suppliers, farm visits

Polar shiitake: use of “good man” for management issues and exchange of knowledge

In many of the examples above it is about suppliers’ or end-consumers’ learning. However, it is also about the initiatives themselves, and their learning (feedback, meetings, exchange of experiences).

Important actors/governance models to cope with change

In all cases, the management/manager/board have been the key people to solve problems and deal with challenges. The interesting part is where additional actors have been important. Some examples are listed below:

Landwege: The executive board comprised of farmers, consumers, staff - a support to the two CEOs

Biocoop: The commissions and groups of consumers, producers, staff, shop owners

Polar shiitake: The “good man” provided by the municipality (?) to provide guidance and good advice in business matters

Röros dairy: The investor that happened to be interested in saving the initiative and made many changes

Bohlsen: the regional bank that was able to handle the severe economic crises since Bohlsen was known to be a reliable partner

All cooperatives (UB, BvB, EkoZemaitija, Röros, Ekodar, Landwege, Biocoop, Food communities(?)), have yearly or biannual assemblies where all member have a vote. This shows the potential for many actors to take part in decision-making but does not say much about the actual situation. A cooperative structure does not mean that the decision-making is inclusive. It can be, but it does not follow from the cooperative structure, i.e. the governance model does not say anything about where the power lies in each case.

The climate or culture in the initiative/business is also important. The structure can be “conventional” in the sense of management with a manager at the top (e.g. Achleitner, Bohlsen, Gram, Sunder) but it is still possible to have a “reflexive culture” which means staff and other actors are able to bring in their concerns and issues and suggestions in an open climate.

A combination of the governance model, the amount and diversity of actors involved, the openness for discussion and meeting culture could maybe say something about the status of the case in terms of governance models conducive for adaptability.

Discussion

Professionalization of business management seems to be a prerequisite for growth beyond a certain size. The cases where new competencies were added as the initiative developed were well equipped to handle change. At the same time, there is not one way to professionalize an organisation. In some cases, hierarchies, division of tasks and responsibilities can move the initiative away from a situation where all employees feel they share responsibility for the initiative. Thus, only if professionalization of business management goes hand-in-hand with professionalization of value management will it help to combine volumes and values (management skills and value management – two types of learning). The same is valid for the cooperation with conventional retailers: in the cases where (organic) values were shared with key actors in the retail businesses the cooperation stabilised the initiatives and supported further growth with sustained values.

Organisational development and the combination of growth and values do not come automatically. In some cases a strong contributing factor was a “reflexive” approach, meaning a culture of meetings and discussions within the initiatives. Thus, learning was strived for and accomplished by using different competencies and views. By maintaining face-to-face interaction between actors in the value chains the potential for learning also increased - the effect being closer feedback loops and possibilities to adjust activities accordingly. In addition, long-term and trusting relationships with market partners were a stabilising factor. These could be used when other market channels failed or were being developed. When values were shared between chain partners – at least to a considerable degree – long-term partnerships could develop. Many cases strived for a high level of diversity, both in the sense of spreading risks and in the sense of taking advantage of heterogeneity. Diversity pertained to issues such as market channels, products, market partners, business branches, competencies and experiences used in decision-making.

Conclusions (2 pages)

No growth process is smooth and without challenges and crises. If change is expected rather as seen as a problem, organic initiatives will be able to focus on developing their adaptive capacity and how to handle change rather than trying to block out change (which is doomed to fail). Organic food value chains face the dual challenge to grow successfully (in economic terms) and to maintain and strengthen core values of the initiatives. Thus, it is not enough to make profits; the organic values need to be advanced as well. The initiatives that manage this challenge best share some important traits.

If values are shared between key actors in the value chain that have to work closely together (e.g. primary production and wholesaling) the actors are more likely to develop

long-term partnerships and trust between each other. This seemed to be more important than the relative size and market power of the actors. The initiatives that could rely on trusting partnerships were better equipped to face challenges. The initiatives that struggled to find suitable market partners were more brittle.

Learning and ability to adapt is supported when more than one actor or one type of competence influence decisions and development routes. The adaptive (and partly transformative) capacity of the two cases where consumers, staff, farmers and shop owners have the opportunity to take part, exchange experiences and contribute with their knowledge were very robust and able to deal with challenges in a way that strengthened the values they wanted to convey. Obviously, a diversity of actors influencing decisions is not the sole reason for success, but seem to be a very promising way forward. The willingness to learn and adapt while strengthening values is key to adaptive capacity.

The growth process puts higher demands on management skills, accounting, controlling and other competencies related to any economic activity that grows in turnover, staff and impact. **Professionalization** in these respects may well be a prerequisite for economic growth. However, this process does not only bring solutions but also new challenges. The value management has to be taken as seriously as the economic management. In some cases, actors feel the initial “we-feeling” and shared responsibilities suffer when the organisation is professionalized and each competence takes care of its own expert area. Thus, the initiatives that were able to handle the transition from small, family-like business to mid-scale organisation while finding ways to transmit values were most successful. Ways to do this included staff training (including study visits to farms), internal meetings and a reflexive approach, outward activities (showing who they are and what they stand for), and sponsoring events in line with the values. Many of the initiatives were still run by the founders, of which a high number will retire in the near future. Thus, value management professionalization is key for the initiatives to survive after succession.

Conventional wholesalers and retailers were important partners for all cases that did not work within wholly organic value chains. Since conventional retailers hold a powerful position in many countries, there is no way around them for most mid-scale initiatives – they are a prerequisite for handling large volumes and reaching the market in the current context. Such partnerships built adaptive capacity of the initiatives when:

- Organic values were shared between key people in the organisations, and/or
- Personal relationships and trust were more important than rigid negotiations and low price (from the part of the retailer), and/or
- The organic initiatives were not solely dependent on the conventional retailer (but had other market channels and partners as well), and/or
- The organic initiatives could develop their own brand/identity on the market in the process (either in parallel processes or with the retailer)

Diversity spreads risks in two (overlapping) ways. One is when there are more of similar things (redundancy) – as when many people had the same skill or many suppliers supplied the same product. The other is when there are many, different things (heterogeneity) – as when an initiative used different market channels, produced many different products or relied on many different business branches. In most cases,

diversity was a deliberate strategy, even if the initiatives did not always manage to obtain the level of diversity they liked to (mainly in terms of product differentiation and market channels). Diversity pertained to business branches, market channels, suppliers, products, market partners as well as to actors and knowledge.

Further research on organic value chains and resilience should involve examples that have failed to survive economically and/or where values clearly have been compromised in the growth process.

Recommendations targeted at practitioners and stakeholders

Based on the analysis in task 6, the following (partly overlapping) recommendations to stakeholders can be made:

Build long-term partnerships – at different scales (regional, national). Look for partners that are dedicated to organics and that are interested in advancing organic values as much as making a profit, and/or partners that understand the value of your initiative and want to support it.

Organic initiatives that do not control the whole value chain themselves (typically producer cooperatives, processing businesses and wholesalers) need to cooperate with other businesses to reach the end consumer. If these partners are dedicated to organics in a similar way as the initiative is and if the understanding is that partnerships are long-term and a commitment on both sides, the value chain is stabilised and more probable to be successful. Shared values seem more important than matching scales of the organisations or the relative market power. For example, Upplandsbondens found a regionally oriented wholesaler and packager of meat that shared values on localised production and consumption, and a nationally oriented (large-scale) wholesaler and packager of meat that shared (or at least understood the virtues of) organic values. The cooperation with the national wholesaler worked much better than with the regional one. This was due to the development of personal relationships between key people in the organisations, the way values were understood and discussed (and related to economic activities), the differing ideas of the time-horizons of the cooperation and the differing degrees of (perceived) mutual dependence.

At the regional scale, the initiative may be important for employment and/or the image of the area (e.g. Bohlsener Mühle that is well-known regionally and an important actor), which in turn can be one important factor when building relationships with actors that can support the initiative (the local bank, local NGOs, other local businesses and public organisations). In the case of BM, this fact was vital when the business faced an acute economic crisis and the local bank was supportive in a way that “anonymous” banks would not be.

Involve as much of the staff and people in the organisation in the value management as possible – embed the important values into the organisation and keep discussions concerning values alive.

If founders and/or key people in the initiatives are the ones responsible for advancing and safeguarding the core values of the initiatives, it is not necessarily so that each decision regarding the development of the initiative will be checked against core organic

values. This will only take place if all concerned staff understands and shares the values. Involving staff and other key people in discussions about values, both informally and formally, can do this. Formal ways for involvement can be as in the case of Biocoop where shop managers, consumers, shop staff and farmers take part in different commissions and assemblies. Informal ways can be through a “culture of discussions” internally, or taking staff on study visits to farmers (i.e. enabling face-to-face interaction with other actors for deepened mutual understanding and insights).

Enhance diversity (regarding products, staff, suppliers, business branches). Diversity spreads risks both by redundancy (many similar options) and by heterogeneity (many different options). Hiring staff with different knowledge and background will provide heterogeneity while staff with similar knowledge will back-up if one e.g. retires. High age and/or heavy dependence of key people were a potential problem in many of the HG cases (e.g. Upplandsbondens, Ekolådan, Bohlsener Mühle, Achleitner, Gram). Diversity of business partners, business branches and products reduces dependence on one particular actor/product/branch. However, there needs to be a balance between the diversity and the in-depth engagement (with a business partner, for example).

Constantly **learn and adjust** by providing opportunities for face-to-face interaction between actors and by developing management skills among staff along the development and needs of the organisation.

Face-to-face interaction between e.g. farmers and consumers/customers can enable learning and adaptations to each other’s needs. This is also the case of actors in the value chain. Opportunities for face-to-face interaction and learning can be events such as markets, open house days, study visits, farmers-in-shop events, etc. It can also be done in cooperation with school meal initiatives, nature conservation organisations, and the like. In this way, organic values are pushed for that may increase demand for organic products in the long run. An example from the cases is Landwege, which has a whole range of educational and nature conservation work going via associations indirectly linked to the cooperative itself.

As an initiative develops and experiences increased turnover and volumes, staff has to be acquired/educated to support this development in terms of business skills. This is not unique to organic value chains.

Increase flexibility by using conventional retailers and wholesalers to accommodate large volumes.

For initiatives that do not control the whole value chain themselves (producer cooperatives, processors, wholesalers) in contexts where there are no all-organic value chains, growth will result in cooperating with conventional retail and wholesale in one way or the other. This is especially the case in countries where the main part of organic food is sold via conventional channels (e.g. Denmark, Austria, Sweden). In this context, it is vital for the initiative not be “over-run” by conventional retail, but to keep control. This can be done by cooperating with key people in the conventional organisation who share organic values and where personal relationships and trust are more important than rigid negotiations about price. Control can also be achieved by not being too dependent on the conventional retailer (in terms of market channels and volumes), and/or by developing an own brand/identity that is not exchangeable (either with the retailer or as a parallel market channel). In the project, we have examples of all these

cases. For example, Gram castle developed close cooperation and partnership with a large conventional retailer, but has its own brand on the products on the shelves. Rörös dairy channels half its milk through a conventional retailer and the other half through channels where the milk has the Rörös brand. Bio vom Berg developed in close cooperation with the regional conventional retailer MPreis, which has been vital in developing the product range, the packaging and the demand of products. However, since conventional retail and wholesale is a price-pressuring sector, dependence on a strong actor always has to be balanced with other opportunities. This is the case at the same time as there can be personal sympathies and shared values between key people.

Recommendations related to policy development

Based on the analysis in task 6, the following (partly overlapping) recommendations to policy makers can be made:

Support long-term partnerships between value chain actors – at different scales (regional, national). In order for partnerships to work actors should be dedicated to organics and be interested in advancing organic values as much as making a profit. The minimum is that actors understand the value of organic initiatives and are prepared to support them.

Organic initiatives that do not control the whole value chain themselves (typically producer cooperatives, processing businesses and wholesalers) need to cooperate with other businesses to reach the end consumer. If these partners are dedicated to organics in a similar way as the initiative is and if the understanding is that partnerships are long-term and a commitment on both sides, the value chain is stabilised and more probable to be successful. Shared values seem more important than matching scales of the organisations or the relative market power. For example, Upplandsbondens found a regionally oriented wholesaler and packager of meat that shared values on localised production and consumption, and a nationally oriented (large-scale) wholesaler and packager of meat that shared (or at least understood the virtues of) organic values. The cooperation with the national wholesaler worked much better than with the regional one. This was due to the development of personal relationships between key people in the organisations, the way values were understood and discussed (and related to economic activities), the differing ideas of the time-horizons of the cooperation and the differing degrees of (perceived) mutual dependence.

At the regional scale, the organic initiative may be important for employment and/or the image of the area (e.g. Bohlsener Mühle that is well-known regionally and an important actor), which in turn can be one important factor when building relationships with actors that can support the initiative (the local bank, local NGOs, other local businesses and public organisations). In the case of BM, this fact was vital when the business faced an acute economic crisis and the local bank was supportive in a way that “anonymous” banks would not be. In this case, supporting regional clusters of production, processing, wholesaling and retailing may strengthen partnerships, value chains and individual initiatives.

Support development of business skills and value management at appropriate scale. As an initiative develops and experiences increased turnover and volumes, staff has to be acquired/educated to support this development in terms of business skills.

This is not unique to organic value chains, but an important step for many initiatives that go from partly voluntary or one-person organisations to business-like family firms or cooperatives. It is important that developed business and management skills do not take out the feeling of shared responsibility or the joint work for a higher end than economic profit.

If core organic values should be maintained in this process, it is important to develop the management of these values along with the growth of the organisation. This means that organic values should not be safeguarded by founders/managers alone, but be embraced by all staff and permeate the organisation and its doings.

Involving staff and other key people in discussions about values, both informally and formally, can help transmit organic values throughout the initiative. Formal ways for involvement can be as in the case of Biocoop where shop managers, consumers, farmers and shop staff are members of the cooperative, taking part in different commissions and assemblies. Informal ways can be through a “culture of discussions” internally, or taking staff on study visits to farmers (i.e. enabling face-to-face interaction with other actors for deepened mutual understanding and insights).

Support diversity (regarding products, staff, suppliers, business branches). Diversity spreads risks both by redundancy (many similar options) and by heterogeneity (many different options). Hiring staff with different knowledge and background will provide heterogeneity while staff with similar knowledge will back-up if one e.g. retires. High age and/or heavy dependence of key people were a potential problem in many of the HG cases (e.g. Upplandsbondens, Ekolådan, Bohlsener Mühle, Achleitner, Gram). Thus, these initiatives would need support in broadening the recruitment base and finding the right (younger) people to take over responsibility.

Diversity of business partners, business branches and market channels spreads risks. This diversity can be supported by helping potential partners to find each other (via platforms, events, etc.) and by enabling the formation of (regional) clusters.

Support learning activities and learning organisations. Learning is a prerequisite for adjustments and adaptations in organisations and value chains (and therefore the resilience of these value chains). Learning need to take place both internally in the initiatives (learning about core organic values, product development, etc.), between the initiative and partners in the value chain (learning about other actors’ needs and wishes, about demand and supply issues, other actors’ values, etc.), and between actors in the value chain beyond the initiative (farmers learning about consumers’ wishes, consumers learning about conditions for farmers and agro-ecological specificities, butchers learning about qualities of different breeds of animals, etc., etc.).

Opportunities for learning can be created by face-to-face interaction between actors, the possibility to give feedback to each other, or by substitutions for face-to-face interaction (such as different forms of social media). Face-to-face interaction can take place in meetings such as markets, open house days, study visits, farmers-in-shop events, etc. It can also be done in cooperation with school meal initiatives, nature conservation organisations, and the like. In this way, organic values are pushed for that may increase demand for organic products in the long run. An example from the cases is Landwege, which has a whole range of educational and nature conservation work going via associations indirectly linked to the cooperative itself. However, such events cost time

and money. Upplandsbondens was able to fund its marketing activities (participation in markets, farmer-in-shop events, production of printed material) via a state support program for value added production. However, a new interpretation of the rules for obtaining these funds halted this support and UB lost the money over night. Thus, other/new possibilities to fund such activities would be needed.

Learning organisations can be supported by platforms of discussions, such as the commissions of consumers, producers, staff and shop owners in Biocoop, the seminars organised by the Danish food communities or the executive committee made up of the CEOs, consumers and farmers in the Landwege producer-consumer cooperative.

Support the development of wholly organic value chains and clusters, enabling innovation and creativity at many scales.

In countries where conventional retail has an overwhelming part of the organic market (such as Austria, Denmark, Sweden, Finland) the number, and relative market success, of fully organic value chains is limited. While conventional retailers are effective in reaching end consumers and accommodating large volumes, they are typically not forerunners in organic innovation or considered to have much credibility in advancing organic values. Fully organic value chains are more likely to be in the forefront of organic development and innovation. An example is SBP/Ekolådan, which has constantly changed and adapted as to be ahead of the large market players. Other examples are Landwege and Biocoop, which have managed to stay close to deep organic values and regionalism despite economic growth. Further examples are initiatives that focus on market channels far apart from conventional retail such as Food communities or box schemes (Achleitner, Ekolådan, Kolonihagen). However, the competition from conventional retail is harsh (especially in the Ekolådan case) and thus the innovative power of these initiatives depends on their economic success.

For initiatives that do not control the whole value chain themselves (producer cooperatives, processors, wholesalers) in contexts where there are no all-organic value chains, growth will result in cooperating with conventional retail and wholesale in one way or the other. In this context, it is vital for the initiative not be “over-run” by conventional retail, but to keep control. This can be done by cooperating with key people in the conventional organisation who share organic values and where personal relationships and trust are more important than rigid negotiations about price. Control can also be achieved by not being too dependent on the conventional retailer (in terms of market channels and volumes), and/or by developing an own brand/identity that is not exchangeable (either with the retailer or as a parallel market channel). For example, Gram castle developed close cooperation and partnership with a large conventional retailer, but has its own brand on the products on the shelves. Röros dairy channels half its milk through a conventional retailer and the other half through channels where the milk has the Röros brand. Bio vom Berg developed in close cooperation with the regional conventional retailer MPreis, which has been vital in developing the product range, the packaging and the demand of products. However, since conventional retail and wholesale is a price-pressuring sector, dependence on a strong actor always has to be balanced with other opportunities. This is the case at the same time as there can be personal sympathies and shared values between key people.

References

Elmqvist, T., C. Folke, M. Nyström, G. Peterson, J. Bengtsson, B. Walker, and J. Norberg. 2003. Response diversity, ecosystem change and resilience. *Frontiers in Ecology and Environment* 1:488-494.

Fazey, I., J. A. Fazey, J. Fischer, K. Sherren, J. Warren, R. F. Noss, and S. R. Dovers. 2007. Adaptive capacity and learning to learn as leverage for social-ecological resilience. *Frontiers in Ecology and the Environment* 5:375-380.

Gunderson, L. H., and C. S. Holling, editors. 2002. *Panarchy. Understanding transformations in human and natural systems*. Island Press, Washington, D.C., USA.

Holling, C. S. 1973. Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4: 1-23.

Milestad, R., Westberg, L., Geber, U. & Björklund, J. 2010. Enhancing adaptive capacity in food systems: learning at farmers' markets. *Ecology and Society* 15:3 29. [online] URL: <http://www.ecologyandsociety.org/vol15/iss3/art29/>

Walker, B., L. Gunderson, A. Kinzig, C. Folke, S. Carpenter, and L. Schultz. 2006. A handful of heuristics and some propositions for understanding resilience in social-ecological systems. *Ecology and Society* 11(1):13. [online] URL: <http://www.ecologyandsociety.org/vol11/iss1/art13>

Walker, B., C. S. Holling, S. Carpenter, and A. Kinzig. 2004. Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society* 9(2):5. [online] URL: <http://www.ecologyandsociety.org/vol9/iss2/art5/>.

Appendices:

Working tables

Case	General trajectory	Specific/critical events	Context-specific issues	Comments
Upplandsbondens	Steady growth of turnover and members since 2006	Frequent change of market partners Received state support to develop own brand	Increasing demand for organic meat Hegemony of large retailers in organic market	Developing their own brand as well as producing for retailer's own brand
Ekolådan	Initial growth of boxes and staff (since 2002), decline and decrease of turnover 2009, losses for three years, stabilisation	Lay offs of staff during the decline years	Part of SBP: wholesale, trading and box scheme in organic products	A fully organic value chain
Röros diary	Slow initial growth (since 2001) that took off in 2010 after reorganisation	Contract with COOP Change of management / board	Only organic dairy in Norway Regional food highly valued	Having their own brand as well as producing for retailer's own brand (licence production)
Röros meat	Slow initial growth.	Change of market	Regional food	

	Problematic economic situation until 2013(?) when growth took off	partner (from one retailer to another) Change of management	highly valued	
Kolonihagen	Steady growth?			
Kiuruvesi	Steady growth of number of products	Political support and political will to localise food procurement	No regional slaughterhouse or dairy	Municipality-led public procurement of local organic food
Polar shiitake	Slow initial growth, problematic economic situation	Could not get into national market – focus on export market	Two retail chains dominate market	
Gram castle	Steady growth since 2007, especially after finding a retail partner 2010	Retail market partner partly owns the business Use of support funds (CAP)	Hegemony of large retailers in organic market Strong demand for organic products	Food production and leisure activities on the castle
Food communities	Steady growth	When groups get to a certain size they split		Fully organic value chain
EkoZemaitija	Steady growth since 2006, small ups and downs	Use of support funds Expansion of market (into retail)	Russian embargo pressed down milk prices Weak organic market	Developing their own production line and brand as well as producing for dairy
Landwege	Growth after reorganisation into new organisational form (growth took off in 2000)	Opening of new (5) shops	Increased competition from other retailers High demand for organic products	Strong regional focus Fully organic value chain
Bohlsen	Steady growth (expansion of business areas, employees, products, turnover) since 1979	Nearly went bankrupt when grain prices were high 2007/08	Important organic actor in region High demand for organic products Competition from other mills	Focus on their own brand but also licence production for other organic brands (Alnatura) Fully organic value chain
Biocoop	Steady growth since 1986, slowed down during 2008/09	Enforcing organic values and local procurement	Increased competition from other retailers	Fully organic value chain
BvB	Steady growth of members, market partners, turnover and number of products	Expansion of market partners	High demand for organic products	Working with regional retailer with BvB brand
Achleitner	Steady (partly very fast) growth after box scheme was introduced 1998	Lay offs and reorganisation when the business had to decrease in size due to economic problems Moving main office from the farm	High demand for organic products	Fully organic value chain Wholesale operations largest business branch Cooperation with other box scheme operators
Ekodar	Growth between 2010 and 2012, decline of turnover between 2012 and 2014	Change of market partner (slaughterhouse)	Weak organic market	Working with retailer, using the Ekodar brand and OR codes
Planika dairy	Steady growth of turnover, steady decrease of employees	Selling organic since 2013	Weak organic market	Selling to public institutions
Sunder	Growth after initial problems (started 1995), fast growth after	State support received Expansion of number of	Weak national organic market	

	investment in new plant 2012	market partners	Export oriented organic production	
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Case	Shocks	Cause of shocks	Management of shocks	Important actors	Comments
Upplandsbondens	Financial deficit due to loss of state support 2013 - > all market-related activities cancelled Market partner SB abolished all regional brands -> had to find new partner to push brand	New administrator (and new interpretation of rules) SB got contract with COOP to produce all their organic meat, could not cope with regional brands as well	Finding better paying slaughterhouses, also outside the region, taking on work for farmers outside the region Finding regional market partner, staying with SB but without the UB brand (working with conventional retail)	The board, especially the chairperson and treasurer	No employees
Ekolådan	Loss of customers 2009 with subsequent losses for three years and lay-offs of staff -> had to adjust organisation	Combination of financial crisis, increased competition from retailers, competition from other home delivery systems	Downsizing the organisation, cutting costs, clearer responsibilities, staying with their original idea (professionalization of management)	The management/board of SBP and key people at Ekolådan	The overall foundation SBP did not make losses during these years
Röros dairy	Lack of money 2007 Demand from retail decreased	Lack of management skills, poor pricing strategy Financial crisis 2008	New chairperson, new CEO, new competencies, new pricing strategy (professionalization of management AND working with conventional retailers)	The external investor, the new chairperson, the owners backing up	Luck that the external investor decided to focus on Röros dairy
Röros meat	?				
Kolonihagen					
Kiuruvesi	None				
Polar shiitake	Economic problems	Financial crisis 2008 (less demand from restaurants and export), hard to get loans in remote areas	Cooperation with research institutes	Management, good man as advisor	
Gram castle	Lack of funds for investments and taking over the castle	Could not get loans during financial crisis	Cooperation with Rema 1000 that bought a part of the castle business (20% of the shares) (cooperation with conventional retail)	The owners of the castle, the board of the castle business company and key people at Rema 1000	Cooperation with the municipality
Food communities	?				
EkoZemaitija	Drop of milk prices 2008 Drop of prices	Financial crisis (indirectly) -> dairy reduced prices paid to	The cooperative covered parts of farmers losses, bought premises and equipment	The management and board members of the cooperative	

	2014	farmers Food product embargo from Russia	for milk processing Development of own processing facility, strategic marketing within LT (professionalization of management, adding new competencies, working with conventional wholesaler - but limiting cooperation)		
Landwege	Stuck in development, mid 1990's Economic problems 2008	Type of organisational form that did not allow growth No buffer in the bank, no accounting warning system Reduced margins (price boom), lack of structural adaptations	Changed organisational form (to registered cooperative) after long and painful discussions Changed accounting system, added new competencies (professionalization of management, new competencies)	The two CEOs backed up by the executive board (3 farmers, 3 consumers, 1 staff) – they meet eight times/year	Favourable market demand all the way
Bohlsen	Close to bankruptcy 2007/08 (shrinking assets during 6 months)	High grain prices -> difficult price negotiations between Bohlsen and supplying farmers	Hope, trust between Bohlsen and its bank, long-term partnership with the bank (they were each others reliable partners) Diversification of suppliers	The CEO of Bohlsen supported by staff and key people in the bank(?)	Luck that grain prices went down after a while
Biocoop	Decrease of growth rate 2008/09 Withdrawal of several shops at once from the network	Financial crisis Conflicts between visions, being able to run the shop individually, launch a new network	Professionalization -> integration of competencies for higher efficiency (logistics, management), new general manager from conventional retail sector Strengthening shop managers' commitment towards Biocoop -> admission commissions, admission procedure, formal commitments of shop managers	Management and managers	
BvB			(working with one conventional retailer)		No crises or major disturbances -> constant innovation cycle powered by demand from consumers

					and retailer
Achleitner	Economic problems 2007/08 (close to bankruptcy) Severe flooding, influencing placement of buildings and expansion of production	Too fast growth -> quality could not keep up (staff did not manage the larger quantities of everything) Could not build on flooded area	Outsourced wholesaler business branch to BioGast, reduction of staff, cooperation with other box scheme operators, improving internal quality management Built new offices/main building in business area and not on farm -> favourable for restaurant, spreading out of the fields for cultivation (different production sites) (professionalization of management/adding new competencies)	The manager, the bank, key people at other box schemes (especially Adamah)	No external obstacles to growth
Ekodar	Economic problems 2013	Main processor of meat was changed	(working with conventional retailers)		
Planika					
Sunder	Economic problems 2009	Financial crisis, lack of buyers	Did not lay off employees or finish contracts with suppliers but took the risk and used credits to overcome the crisis, searched for new markets actively -> came out of the crisis stronger with a larger market, growth was stronger	The two managers (a couple) and the management (e.g. the daughter that works in sales, visits fairs, speaks perfect English)	Supports supplying families with education for children

Case	Stresses	Cause of stresses	Management of stresses	Important actors	Comments
Upplandsbondens	Low volumes sold under own regional brand Finding members that want to work in the board Retirement age among board members Slaughterhouses/wholesalers that try to by-pass UB	Different values between the organisations, lack of trust with regional market partner Farmers lack time, younger farmers less interested Meat business being a rough business	More focus on finding slaughterhouses members can chose from [diversification] Convincing members of the benefits of UB (as opposed to being alone) Aiming to employ market specialist to decrease burden on board [professionalization] Convincing members of the	The board	

			benefits of UB, giving members best price on the market, development of meat boxes (again) [partnerships]		
Ekolådan	<p>Increased competition from retailers</p> <p>Competition from other home delivery systems</p> <p>Key people in retirement age</p>	<p>Retailers have expanded and improved their organic range of products (veg and fruits)</p> <p>Ready food baskets with pre-decided dinners as well as internet shopping at retailers are popular</p> <p>Key people have been around since the 1960's</p>	<p>Constant improvement, finding new unique selling points (high quality produce and home delivery not enough) at the same time as staying with core values [professionalization]</p> <p>Want to find the new generation of key people, but not been successful yet.</p>	Board and management (partly the same people)	
Röros diary	<p>Lack of management skills and economic resources</p> <p>Low degree of political support to organic production</p>	<p>The growth process put new demands on the business</p> <p>New government with new policies</p>	<p>New investor, new chairperson, new strategies and market partners/products [professionalization, diversity of knowledge, partnerships]</p>	<p>New investor, people in old board letting go, new chairperson</p>	<p>Half of turnover from licence production for COOP, half is sold under own brand</p>
Röros meat	<p>Poor economic situation (now better)</p>	<p>Wrong market partner (now changed)</p>	<p>Changed market partner (from one retailer to another) Added competencies, strategy process 2014, increased learning capacity in the organisation [professionalization, diversity of knowledge, partnerships]</p>	<p>Same as in Röros dairy</p>	
Kolonihagen	<p>Loss of customers</p>	<p>Change of computer system</p>			
Kiuruvesi	<p>Difficult to find local organic suppliers</p> <p>Merging two public kitchens into one</p>	<p>Climate conditions, no regional dairy or slaughterhouse</p> <p>The health sector more interested in low price than in organics (different values)</p>	<p>Focus on the products that are available [partnerships]</p>		
Polar shiitake	<p>Increased competition</p>	<p>Export market</p>	<p>Quality</p>	<p>The</p>	

	Low market access in national market	with many actors Could not get into Finland's two dominating retailers	management, cooperation with research [partnerships, professionalization, diversity of knowledge] Focus on export market instead of national market	managers, the municipality, the entrepreneurial advisor allocated to them	
Gram castle	Incorporating Rema 1000 into the ownership group	The retailer bought a part of the castle in response to Gram's inability to loan from the bank and in response to the agreement with Gram	Selling 20% of the shares to Rema 1000 Main buyer of products incorporated into the business [partnerships]	The owners of Gram, the board and key people at Rema 1000	
Food communities					
EkoZemaitija	Finding new markets Consumers mix up labels in the shops (choose the wrong items) Keeping farmers in the cooperative, not all share the organic values	Weak organic market Consumers with low level of knowledge of organics Other milk processors try to buy the milk of the farmers	Employing a market specialist [professionalization] Meetings are organised where farmers are asked not to leave the cooperative [partnerships]	Management and board of the cooperative	Missed opportunity to gain new market channel (public procurement) due to small size and low degree of professionalization
Landwege	Fast growth and expansion of the number of shops Increased competition from other organic retailers	High market demand, available supply High market demand	Professionalization of the organisation -> adding new competencies and using input from members Using its unique selling point and values: regionality, cooperative structure [partnerships, diversity of knowledge]	The two CEOs backed up by the executive board and member farmers, consumers, staff	
Bohlsen	CEO close to retirement age Strong competition in organic grain business	Family business, no designated successor Mills have closed down and only the large/competitive remain	Quality differentiation (organic production), growth and diversification of products and distribution channels [professionalization]	The CEO and the team around him Openness in the organisation to suggestions and critique	The regional context is important at the same time as the products are sold nationally and internationally [partnerships] Constant adjustment and development of

			n, diversity, partnerships]		supply, products, staff competencies, buildings
Biocoop	Internal value disputes, external critique Competition in the organic market	Fast growth during the 1990's Many conventional retailers see the profit margins in organics	Change in management model, change in people -> more voices for staff and producers, new provisioning strategy (more focus on local products), competencies added, adjustment of chart (values), professionalization at national level (people from retail sector), new shop admission procedure [professionalization, diversity of knowledge]	Collectively through shared governance (whistle blowers everywhere)	Multilevel and participatory management model -> reflexive meetings at different levels (from shop, over region, to national level)
BvB	Economic situation for farmers Need for new market partners Dependence on key people and their personal relations	Organic standards difficult to meet for small-scale producers in less-favoured area Dependence on one market partner undesirable	Finding new market partners and developing new product lines, engagement with many small dairies (instead of one large), professionalization (with support from the retailer) [professionalization, diversity, partnerships]	Manager and chairperson of BioAlpin, key people at MPreis, state/support authorities	Trial-and-error -> new products, new market partners, new packaging, constant innovation cycle
Achleitner	Loss of 1000 customers 2014 General challenge to keep pace with growth	Change of computer system Quality and staff competencies has need to develop with the business	Professionalization of staff and management -> not running the business as a farm enterprise, cooperation with other box scheme operators rather than doing everything themselves [professionalization, partnerships]	Manager, staff	No external limits to growth
Ekodar					
Planika					
Sunder	Organisational development and competencies	New requirements for new markets (labels, quality programs, etc)	Constant learning	Managers	Long-term relationships with suppliers (farmers) and their families [partnerships]