Happy Growers! Relationship Quality in the German Organic Apple Chain

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Abstract

Relational factors between supply chain actors have been acknowledged to contribute significantly to competitiveness. With the example of the German market for organic apples the suitability of the concept of the Relational View for explaining competitiveness was investigated. Structured interviews were conducted with selected actors of the supply chain. Actors at all levels of the supply chain proved to be highly committed and described their business relations as satisfying and trustful. Strong vertical and horizontal collaboration was found. Thus, the Relational View proved to be highly suitable to explain competitiveness in the market for organic apples.

Keywords: Supply chain management, organic food and farming, competitive advantage, relational view.

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Introduction

The success of actors in markets is known to depend on various factors, such as the relation between supply and demand, the market structure (i.e., the number of suppliers and customers and their corresponding market shares), the degree of market transparency, the existence of market barriers and the degree of business integration (e.g. Knieps 2008, Treyer 1996). Earlier research emphasized technical aspects of markets such as supply and demand quantities or access to physical resources as well as cost relations when analyzing firms' or sectors' competitiveness. The focus has changed and various authors acknowledge the high impact of the quality of relationships within the whole supply chain on the success of market interactions and on competitiveness (Gellynck et al. 2011, Hunt and Arnett 2006, Naudé and Buttle 2000). Particularly, relational factors affecting the interaction of actors have been recognized to contribute significantly to competitiveness (e.g. Dyer and Singh 1998, Fischer et al. 2009).

Similar to conventional fruit and vegetable markets, competitiveness on organic markets has increasingly become a question of prices, and in many organic fruit and vegetable markets generally import shares are increasing (Hamm et al. 2010). In contrast to this development, import shares on the German organic apple market are slightly decreasing. In 2006 it was reported to be 52 % (ZMP 2008) but has been declining to 45% by 2008 (ZMP 2009). Reasons explaining this development can be found in improved storage facilities and the strong preference of German consumers for domestic products (ZMP 2008). Apples can be stored almost year round using modern storage technologies. However, this is also the case for other produce such as e.g. carrots, onions and potatoes. For carrots the sales quantities have increased by 22 % between 2007 and 2011 while the acreage used for carrot production increased only by 10% indicating an augmenting import share (AMI 2013). While producer prices remained relatively stable during 2007 and 2012 for products such as carrots, onions and potatoes, producer prices for organic apples increased by about 8% (AMI 2013).

Against this background, the objective of this study is to identify the reasons for the relative high competitiveness of the German organic apple sector. By applying the theoretical concept of the Relational View on the whole organic apple supply chain (Dyer and Singh 1998) the focus is laid on the quality of business relations. We used a qualitative case study approach based on in-depth interviews with various actors of the supply chain.

This article is structured as follows. Section Two discusses relationship quality in the light of the Relational View (RV). Section Three describes the structure of the supply chain of organic apples in Germany. Next, the methodological approach and research design are described. In the fifth section, the results of the study are presented. Topic of the following chapter is the discussion of the results against the background of earlier research. The implications of our results on other product markets and the limitations of our study are outlined in the conclusions.

Business Relations and Relational View

Traditionally, competitive advantage was understood as being mainly a matter of different access to resources. According to the Resource Based View (RBV), companies differ in the endowment with resources which are only imperfectly mobile (Barney, 1991; Spiller et al. 2005; Gold et al.

2010). Competitive advantage arises through the firms' control of these valuable and scarce resources. This perspective has broadened in recent years. The question of competition has shifted from the individual firm level to the supply chain level. Supply chains are characterised by consisting of numerous companies (Lambert and Cooper 2000, Zuh et al. 2008, Fischer et al. 2009) which are 'directly involved in the upstream and downstream flows of products, services, finances and/or information from a source to a customer' (Mentzer et al. 2001:4f).

Dyer and Singh (1998) first proposed to integrate the concept of relationship quality into the analysis of supply chains' competitiveness and called this perspective Relational View (RV) (s. a. Chen and Paulraj 2004). The RV poses that the resources which contribute to a company's competitiveness need not necessarily be controlled by the company itself. Instead, resources can span firm boundaries or can even be embedded in the inter-firm relationships. In consequence, the competitiveness of a firm no longer only relies on its own resources but also on those of its partners. The RV explicitly considers knowledge, information and relationship quality as resources which might be used jointly based on sound inter-organisational communication (Dyer and Singh 1998, Paulraj et al. 2008). Such relationship-specific resources and competences are often developed over a long period and are socially complex. Therefore, they are difficult to imitate and may be the driver of a sustained competitive advantage, e.g. by being an effective market entry barrier. Such a competitive advantage based on relationship quality can be measured in relational rents (Duschek 2004). Crucial factors for realising high relational rents are the existence of relation-specific assets, knowledge-sharing routines, complementary resources and capabilities and effective governance (Dyer and Singh 1998). These 'soft' resources are assumed to have a strong impact on the competitiveness of the whole supply chain (Gold et al. 2010, Teece 2007, Adams and Goldsmith 1999).

As the intensity of relationships grows, so does mutual dependency, and opportunistic behaviour becomes a greater threat to individual partners. This threat can be mitigated by effective self-enforced supply chain governance (Gold et al., 2009). Such self-enforced governance can be divided into two categories. The first is formal self-enforced governance (e.g., in the form of financial or investment needs). The second is informal self-enforced governance, which relates to reputation, goodwill and trust (Dyer and Singh, 1998; Duschek, 2004). The more the partners are able to use (informal) self-enforced governance, the higher the possible relational rent due to low transaction and control costs. At the same time, this form of governance mechanism is especially difficult to imitate.

The ability to gain above normal relational rents is of course dependent on the quality of the relationships. Relationship quality is a complex construct which is based on mutual trust, satisfaction, commitment, coordination, communication, joint problem solving, goal congruence, close personal relationships, joint investments and power and profits (Fischer et al. 2009, Naudé and Buttle 2000: 359, Paulraj et al. 2008, Qin et al. 2008) with close interactions between each other. Consequently, the quality of business relations is often operationalised by the dimensions of trust, satisfaction and commitment (s.a. Diller and Ivens 2004, Lages et al. 2005).

Trust is a multi-dimensional construct which includes contractual, competence and goodwill trust. Contractual trust involves respect for contracts and promises. Competence trust has to do with a firm's confidence in its partners' capabilities, and goodwill trust is related to the

preparedness of the partners to cooperate and 'to do more than expected' (Batt 2003: 67). Trust needs time to develop and thus requires long-term engagement in relationships (Batt 2003, Fritz and Fischer 2007, Gold et al. 2009, Skjoett-Larsen 1999, Wilson and Kennedy 1999) and can be understood as 'an investment in a relationship' (Adams and Goldsmith 1999: 242). Particularly under pronounced information asymmetry and/or uncertainty, trust is of major relevance (Grant and Baden-Fuller 2004; Welpe 2008, Wilson and Kennedy 1999). Both factors are inherent to organic apple production: Information asymmetry is frequently encountered between growers and their customers and uncertainty results from unstable yields which tend to hinder fixed long-term arrangements.

Satisfaction is the degree to which expectations align with reality. It is a cumulative evaluation of past experiences and a prerequisite for the formation of committed business relationships (Batt 2003, Gerlach et al. 2007, Spiller et al. 2005). However, satisfaction is not sufficient to tie business partners in the long-run (Naudé and Buttle 2000), additionally commitment is also a necessary factor in this regard. Commitment includes dedication and faith in common values and joint goals of business partners. Deep insights and willingness to invest into the quality of existing relationships without any immediate benefit characterise commitment. Grant and Baden-Fuller (2004: 62) describe commitment to reach a common goal by pooling resources to be typical for 'strategic alliances'. Such a commitment and close interaction offer firms the opportunity to realise higher benefits compared to conducting business without developing these relationships (Blankenburg Holm et al. 1999). Investments in relationships also create social ties which serve as effective exit barriers (Naudé and Buttle 2000).

Different levels of trust, satisfaction and commitment within business relations result in different forms of cooperation and collaboration (Naudé and Buttle 2000). Both require voluntary close interaction with other enterprises to realise mutual benefits. In contrast to cooperation, which usually is contract- and asset-based (Murphy 2004), collaboration is less formal and more flexible, long-term-oriented and not necessarily defined by written contracts (Weaver 2009). As with cooperation, horizontal and vertical collaboration exist with different intensities. Driving factors in collaboration are joint and mutually compatible goals and advantages which are not achievable individually (Murphy 2005, Vachon and Klassen 2006). Both, cooperation and collaboration have the potential to markedly improve the economic performance and competitiveness of the businesses involved (Abatekassa and Peterson 2011, Hansen and Morrow 2003, Reynolds et al. 2009, Weaver 2009) by reducing costs (Beamon 2008) and uncertainty (Carter and Rogers 2008). Because collaboration is not based on fixed contracts, a much higher degree of trust is needed than for cooperation. At the same time, collaboration builds trust (Gold et al. 2009, Rademakers 2000, Wilson and Kennedy 1999). Vachon and Klassen (2008) call for a collaborative paradigm (also Chen and Paulraj 2004) that fosters inter-organisational learning (Duschek 2004, Knoppen et al. 2010). Collaboration can be understood as an expression and a consequence of high relationship quality and largely determines the relative negotiation power of actors and therefore the competitiveness of enterprises.

The German Market for Organic Apples

Apples are an important product within the German organic fruit industry and account for approximately 23 % of the market for organic fresh fruit (AMI 2013). In addition to German

organic apples, organic apples from other parts of Europe (mainly Italy/South Tyrol and Austria) and from overseas (mainly Argentina, Chile and New Zealand) are traded on the German market. Organic apples produced in Germany are generally pooled by different types of sales organisations, such as producer organisations according to the European Regulation (1234/2007), private traders or marketing cooperatives (Figure 1). These sales organisations usually are responsible for sorting, storage, packaging and marketing. Some of the growers run their own storage and sorting facilities and thus take part in marketing more actively. A smaller share of organic apples is marketed directly to organic food wholesalers or retailers.[1] The sales organisations are then selling the organic apples to organic food wholesalers and organic retailers, as well as to traditional wholesalers and traditional retailers[2]. Traditional wholesalers are of minor relevance in this market, with few exceptions they market organic apples only in years and situations of high supply. In the period from 2008 to 2011, due to high domestic demand, only very small quantities were exported. For this research only distribution channels printed in black are of relevance.
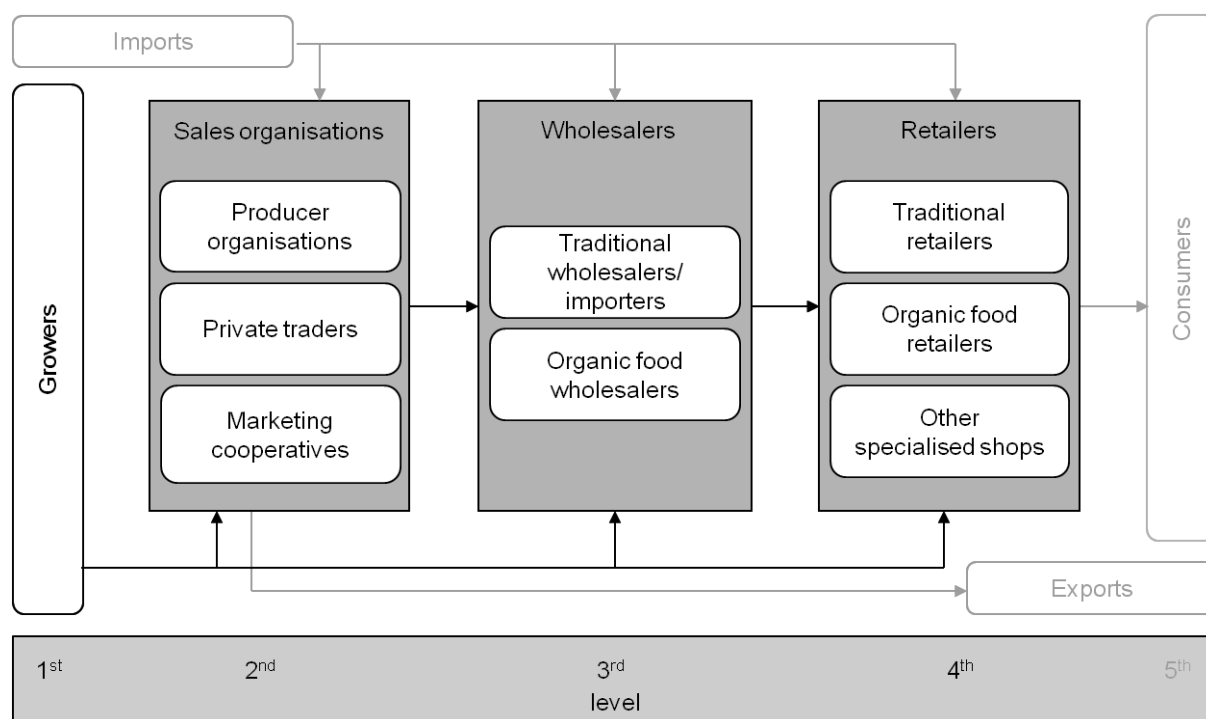
Figure 1. Flow of organic apples in the German market
Source. Own presentation

Apple production in Germany mainly takes place in regional production clusters around Lake Constance, Niederrhein and Niederelbe regions. These regional clusters enable sales

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[1] Table apples marketed directly to consumers were not part of this research.
[2] The term 'traditional' in this respect refers to entities which mainly trade conventional food and which have only recently added organic food to their product range.

organizations to bundle large amounts of produce at relatively low transportation costs. Actors may realise economies of scale in storage, sorting and packaging. Thus, traders are able to offer a large variety of different gradings, each in quantities big enough to satisfy the requirements of wholesalers and retailers.

In all regional production clusters, growers (1st level) and sales organisations (2nd level) face various marketing opportunities; they can market to organic and/or traditional wholesalers as well as to retailers. At the third level of the supply chain, wholesalers also have several potential customers. Supply shortages between 2007 and 2010 resulted in demand exceeding supply; a fact that had put suppliers in a rather favourable situation.

Methods and Research Design

Data basis of this research was a qualitative survey among the actors in the German organic apple supply chain. The analyses used a case study approach and concentrated on the supply chain of organic apples intended for table consumption. They excluded direct sales from growers to consumers.

Qualitative research generally does not aim at representativeness. Instead, its strength lays in the identification of 'salient characteristics' (Ritchie et al. 2003, 82). This specific objective determines the sample design. A 'stratified purposive sampling' identifies rather homogenous groups which vary with regard to particular aspects and takes interviewees out of all groups (Patton 2002, Ritchie et al. 2003). This approach was chosen to show the variation of perceptions at different levels of the supply chain.

Interviews with experts are generally useful during the exploratory phase of research because they can shorten long observation processes or generate theories and/or hypotheses. Experts are seen as representatives of other actors and can provide a quick overview of the central aspects of the research topic under question. Experts are often highly motivated to participate in interviews, particularly when they are interested in the research process themselves (Bogner and Menz 2005).

By means of in-depth telephone interviews, German organic apple growers and wholesalers were asked about their experiences with their suppliers and customers in order to deduce on the relationship quality within this supply chain. The focus of our research was on B2B relations, therefore consumers who in principle are also part of the supply chain, were excluded from this research. This study used a qualitative case study approach in order to explore the organic apple market and its related supply chains. Instead of statistical representativeness thematic representativeness was aimed at.

The perspectives of all levels of the supply chain were taken into account (with the exception of consumers) by interviewing representatives of growers (1st level), sales organisations (2nd level), organic wholesalers (3rd level) and retailers (4th level) (Table 1). In all enterprises, the persons responsible for apple trading were identified and interviewed. The experts were chosen in a two-

step manner: First, lists of all relevant actors at each level (except producers because of lack of availability) were compiled[3]. Second, potential interview partners were identified. Some participants were proposed by project partners, others were approached personally during a fair, others were just called by phone. Interest in the research topic and willingness to participate of potential interviewees were finally decisive for selection. So, the selection was purposive or criterion based which is typical for qualitative research not aiming at statistical representativeness. According to the concept of theoretical saturation additional interviews become redundant if new interviews no longer render new insights (s.a. Lamnek 2010). This point was reached at all levels. In total, 18 telephone interviews were conducted between March and May 2011, each of which lasted between 45 and 90 minutes. The total number at each level might seem to be low. It should be considered that the interviews at different levels of the supply chain were not independent from each other - repeatedly, information given at the supply side was confirmed by the customer side and vice versa. The number of interviews with retailers was limited by the actors' willingness to participate.

Table 1. Interviewees according to the level within the supply chain

Level	Supply chain actor	Number	Total number
1	Growers	5	n.a.
2	Sales organizations (producer organizations, private traders, marketing cooperatives)	6	9
3	Organic wholesalers	4	~ 20[1)]
4	Retailers	3[2)]	~ 20
	Total	18	n.a.

n.a. - not available
1 Additionally, there exist some smaller organic wholesalers.
2 Two traditional retailers and one organic retailer.

In order to obtain comparable results between supply chain levels, the interviews were based on a structured questionnaire, which included both closed and open-ended questions. It was adapted to the requirements of different actors in the supply chain. The topics of the questionnaire were supply and distribution, number of business partners, requirements concerning business partners, collaboration behaviour as well as contracting and relationship quality.

For analysing the relationship quality the interviewees were asked to use 'free association' to name those three expressions that best describe their business relations with suppliers and customers. The concept of trust was directly referenced with the question 'Would you describe your relationship with your partner as trustful?' and 'How could it be improved?' Additionally, the interviewees' free associations describing business relations were used to deduct on the degree of trust within the relationships.

The construct satisfaction with suppliers was broken down into the dimensions satisfaction with product prices, with product quality, with varieties and gradings, with supply continuity and

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[3] Because of close interconnectedness in some cases the exact numbers of all potentially relevant actors within each field is not available.

flexibility and with the general business policies of suppliers. Satisfaction with customers was disaggregated in satisfaction with product price, terms of payment, ordering behaviour, compliance with purchase promises and general business policies of customers. The interviewees indicated their degree of satisfaction on a scale from '1' (very good) to '5' (poor) satisfaction.

In order to draw inferences about the degree of commitment, again some of the freely associated expressions, such as 'personally', 'reliable', 'fair' or 'like in a partnership' were used. Additionally, goal congruence, the duration of business relations and the inclination to change business relations were taken as indicators of the degree of commitment.

The interviews ended with questions about specific activities to realise market adjustments, perceptions regarding the current situation and further perspectives regarding the organic apple market in Germany.

The answers of the interviewees were analysed using 'thematic coding': A technique which builds on the researchers' expertise in the extraction of the information relevant to the research question (Kuckartz 2007).

Results

This section starts with an overview over expressions the interviewees frequently used when asked to characterise their relationships with business partners. In the following, the results on trust, satisfaction and commitment as well as on cooperation and collaboration will be analysed in-depth.

When asked to freely associate relevant terms to describe the relationship with the customers all growers mentioned 'reliability'. Further attributes were 'competence', 'trust', 'friendliness', 'honesty', 'continuity' and 'correctness'. No negative expressions were used. The representatives of the sales organisations spontaneously described the relations with suppliers as 'trustful' with one exception. Other terms frequently used were 'friendly', 'continuous', 'reliable', 'fair', 'like in a partnership' and 'successful'. The relations with customers similarly were specified as being 'trustful', 'fair' and 'honest'. 'Long-term oriented' and 'steady' were other expressions frequently used.

At the wholesalers' level, terms such as 'trustful' and 'personally' mostly were used. Other expressions were 'continuous', 'engaging', 'reliable' and 'successful' regarding suppliers. With respect to customers again terms such as 'trustful', 'personal' and 'fair' were employed. At this level some difficulties were also mentioned by several interviewees: customers were sometimes judged to be 'independent', 'increasingly difficult' and 'unstable'. In contrast, retailers described the relation with their suppliers with terms such as 'reliable', 'fair', 'trustful', 'steady', and 'secure' but also with 'market oriented in a positive sense'.

Trust, Satisfaction and Commitment

This subsection answers the question on trust, satisfaction and commitment within the supply chain, by analysing different closed and open questions. Almost all interviewees described the

relationship with their suppliers as being trustful. Consistently, the question 'Would you characterise the relationship with your suppliers/customers as being trustful?' was answered by all actors with 'yes'. When asked how to improve the relationship, most of the interviewees stated that they could not think of any improvement. Others stated 'you could always improve something' without giving any specific information in which respect they would expect this improvement. There was no difference between various levels of the supply chain. And, although some of the wholesalers described the relationship with their customers as becoming more difficult, they did not went so far as to classify the relationship not to be trustful.

The concept of satisfaction was divided into several aspects with regard to customers and suppliers (see Section 4). Satisfaction with customers generally was high regarding all specific aspects and at all levels of the organic apple supply chain (Table 2). Although the presentation of average scores might be unusual in qualitative research with a very small number of observations, the numbers help to understand relative assessments of different aspects. Additionally, deviations in the answers were low, e. g. the lowest score for price satisfaction was '3' and the highest '1.5'. Satisfaction with ordering behaviour scored least at all levels of the supply chain. It was described as sometimes being too short-term. Interestingly, the satisfaction with product prices was on average 'good', there was only one grower who stated his satisfaction to lay somewhere in the centre of the 5-point Likert scale. All other interviewees were generally satisfied. Repeatedly, satisfaction was lower with regard to business partners from the traditional (non-organic) sector: This referred to the business policy and the ease of negotiations and fairness.

The interviewed actors majorly were quite satisfied with their customers' compliance with purchase promises. This is notable because there are mostly no written contracts on quantities. Also growers were quite satisfied with their customers' compliance with purchase promises, although they were identified to be the ones bearing the risk - according to this inquiry. Obviously, growers can trust in that their customers take all their produce at satisfying prices. They are able to rely on their experiences from previous years, so that they face rather high security in decision making on production and investment.

Table 2. Average satisfaction with customers at different levels of the supply chain[1]

	1st level **Growers** **N = 5**	2nd level **Sales organizations** **N = 6**	3rd level **Wholesalers** **N = 4**
Product prices	2.1	2.1	1.8
Terms of payment	1.9	2.2	2.0
Ordering behavior	2.7	2.5	2.5
Purchase promises	1.5	2.3	2.0
Business policy of customer	2.0	2.2	2.3

1 Numbers indicate the degree of satisfaction measured on a scale from 1 to 5, with '1' 'very good' and '5' 'poor' satisfaction.
2 Average scores need to be interpreted with caution due to low number of observations.

Regarding the **satisfaction with suppliers** different indicators were used as well (Table 3). The answers of the interviewees show that also satisfaction with suppliers was generally good and almost all ratings were in the range of 'good' satisfaction. Satisfaction with product prices was not asked for at sales organisations since prices are usually set by the customer and not by suppliers/growers. Particularly retailers but also wholesalers seemed to be very satisfied with supply continuity. Supply flexibility was rated worse by sales organisations, a fact which is due to the very nature of some of the sales organisations (i.e. producer organisations) who need to accept and to market all quantities produced by their associated growers. Wholesalers were less satisfied with the range of varieties and gradings offered.

Table 3. Average satisfaction with suppliers at different levels of the supply chain [1]

	2nd level Sales organizations N = 6	3rd level Wholesalers N = 4	4th level Retailers N = 3
Product prices	---	1.7	2
Product quality	1.8	1.8	1.7
Varieties and gradings	1.8	2.7	1.7
Supply continuity	1.9	1.3	1.0
Supply flexibility	2.1	1.5	1.7
Business policy of supplier	1.8	1.8	1.7

1 Numbers indicate the degree of satisfaction measured on a scale from 1 to 5, with '1' 'very good' and '5' 'poor' satisfaction.
2 Average scores need to be interpreted with caution due to low number of observations. .

Three indicators were used to capture the degree of **commitment**: the existence of joint business goals (goal congruence), the inclination to change business partners and the duration of business relations. The latter are closely related to each other. Additionally, the expressions the respondents had freely associated with their business relations were utilised to infer on commitment.

Most of the interviewees reported far-reaching goal congruence. The joint goals of growers and sales organisations were as follows: the provision of high quality products, increase of turnover, joint development and sustainable and reliable business relations. Common goals at the subsequent levels of the supply chain varied only slightly. For some of the organic actors 'fostering the concept of organic food' was also an important issue. At all levels, long-lasting business relations exist. These relations were mostly initiated at the beginning of producing or marketing organic apples. Close relationships exist between growers and 'their' sales organisations; indeed, quite a few of the sales organisations, i.e. private traders are spin-offs of first-generation organic apple growers. These sales organisations are still closely connected with the growers on a personal level.

Changes of business partners only occur when additional partners are acquired for the purpose of augmenting marketed quantities or to amplify the range of products offered. Interviewees had difficulties to answer the question on alternative suppliers or customers. Although alternatives

were theoretically available, none of the interviewed actors could think of any advantages of replacing his current business partners. Establishing new business relations and developing them until being comparable with previous ones would require significant effort and time. Business relations were described as 'personal', 'friendly', 'amicable', 'cooperative', a fact that proves a high degree of personal commitment at all levels of the supply chain.

These long-lasting business relations and limited supply were the reasons why traditional retailers have had difficulties in listing German organic apples. They entered the market for organic food only around 2000, when most domestic business relationships had already been established. Particularly in cases of supply shortage these actors have difficulties sourcing domestic apples.

Collaboration and Cooperation

Collaboration and cooperation were described to be an outcome of business relations of high quality with high degrees of satisfaction, trust and commitment (Naudé and Buttle 2000). Thus, the intensity of collaboration or cooperation within the supply chain may serve as another indicator for the quality of business relations.

According to the outcome of the interviews, stakeholders in the German organic apple chain intensively collaborate with their colleagues and business partners. Collaboration without fixed contracts is notably more common than classical contract- and/or asset-based cooperation. In some cases written contracts exist for general trading agreements. Written or non-written: The specific nature of apple production with high year by year fluctuations does not allow for long-lasting binding agreements on quantities. Instead, suppliers and customers need to rely on their trustful and satisfying relationships. In year by year negotiations on prices all partners are aware of the actual harvest of organic apple quantities and qualities, so that they are communicating on a level playing field.

Horizontal collaboration is wide spread within the supply chain of organic apples. Growers collaborate by exchanging labour force for field work and by jointly using sorting and storage facilities. At the level of sales organisations (producer organisations, private traders and marketing cooperatives) horizontal collaboration includes storage, sorting and distribution also at the interregional level. In case of product shortages, suppliers exchange produce with their competitors to meet their specific customer needs. Various interviewees of the second level stated that they felt responsible for the provision of their customers with varieties and grading they ask for. Organic food wholesalers collaborate horizontally via joint product acquisition to realise better prices and conditions and to improve the availability of information: Some of the organic wholesalers founded joint purchase associations to achieve these aims. The exchange of contacts with growers between wholesalers helps to secure the future supply and supports growers to find markets for all their produce. However, these strategies are not specific to the organic apple market; indeed, they were reported to be similar for most organic fruit and vegetable markets.

Forms of vertical collaboration are extension services for growers by the sales organisations. This is understood as a means of quality management as well as a means of management of

quantities by the traders. Additionally, the sales organisations provide their suppliers with general information on the organic apple market on a regular basis. The representatives of the sales organisations stated that they need to maintain good relationships with their suppliers, since growers may also sell to other organisations. That is why according to the interviewees sales organisations usually also have the financial needs of the growers in mind when negotiating on prices. Responsibility for the economic viability and ability to invest at the growers' side was also acknowledged at the following levels of the supply chain by organic wholesalers and conventional and organic retailers. This reflects not only in the price negotiations but also in the general business behaviour.

Another form of vertical cooperation is the joint planning of the offered varieties by retailers, wholesalers and growers. Production planning in apples is particularly challenging because apples are a perennial crop. In times of surpluses, actors of all levels of the supply chain jointly plan offers for consumers in retail stores.

Vertical and horizontal cooperation also takes place within the 'European Forum of Organic Fruit' (EBF). The EBF is a union of large European fruit growers (first level) and sales organisations (second level) and is organised as a registered association. They meet regularly and exchange information on production, storage and distribution quantities. Experts estimate that the share of European production covered by these numbers is approximately 65 % to 70 %.[4]

Implications for the Management of Food and Agribusiness Firms

According to the Relational View inter-firm relationships are major drivers for competitiveness (Dyer and Singh 1998, Paulraj et al. 2008). The quality of inter-firm relationships depends to a large extent on constructs such as trust, satisfaction and commitment (Fischer et al. 2009, Naudé and Buttle 2000: 359, Paulraj et al. 2008, Qin et al. 2008). The practical relevance of this concept was demonstrated using the case of the German organic apple sector. High degrees of trust and of satisfaction with business relations as well as high commitment were found at all levels of the supply chain. These specific properties of inter-firm relationships result in far-reaching collaboration activities, horizontally as well as vertically. Typical for the organic apple supply chain is collaboration without written contracts. Fischer et al. (2009) reported on the important role of implicit instead of formal, written contracts among small and medium sized enterprises, particularly when quality orientation is a stated object. Indeed, marketing organic apples of high quality was an important aim within the whole supply chain. Collaboration, even with competitors – as being the case in the organic apple chain - requires a high level of knowledge, information sharing and mutual trust. Our findings thus may serve as evidence for the relevance of the 'collaborative paradigm' (Chen and Paulraj 2004, Qin et al. 2008) which identifies 'strategic collaboration as a crucial source for competitive advantage' (Gold et al. 2010: 239). These authors observed strategic collaboration to be even more important in supply chains which include environmental or social aims (Gold et al. 2010).

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[4] Personal communication Peter Rolker, Vice President of EBF and Dr. Egon Treyer, Marktgemeinschaft Bodenseeobst.

Horizontal collaboration at the levels of growers and of sales organisations in form of mutual exchange of produce in case of shortages brings forward customer loyalty with their suppliers. Customers stated to clearly prefer to rely on 'old' suppliers instead of looking for new ones. Typical for the underlying philosophy were statements which referred to the organic apple chain to be a small family, without lone fighters. Networking was perceived to be important and the actors felt like 'sitting in the same boat'. This phenomenon of strong loyalty was referred to as an efficient form of self-enforced governance (Duschek 2004, Dyer and Singh 1998).

Organic apple production takes place in strong regional production clusters. Advantages of proximity refer to the physical dimension of short transportation distances but also to the personal dimension. They may facilitate information flow and market transparency. Close personal relationships and social networks among different stakeholders and high market transparency were found in the organic apple production clusters. This fosters horizontal and vertical collaboration. Although Gereffi et al. (2005) argue that high relationship quality may also exist and work well in spatially dispersed contexts this research follows Dyer and Singh (1998) who identified this proximity to be a supporting factor for high-quality relationships.

Our results also proved the relevance of personal relationships between business partners for building trust which has been found earlier by (Batt 2003, Fischer et al. 2009). Personal relationships are particularly strong between some of the growers and 'their' private sales organisations (second level) which are spin-offs of first-generation organic apple growers. Close personal relationships imply that many transactions are not market- and commodity-based; rather, they rely on long-term bonds. Such de-commoditisation is exactly what the RV calls for a source of advantage over the usual market-oriented business models (Dyer and Singh 1998).

The relevance of long-term relationships was highly stressed by our interview partners. They result in a very low propensity to replace one trading partner with another. The importance of long-term relationships for the retention of high market shares and for the expectation of high returns was stressed earlier by Batt (2003). The relevance of long-term relationships may be increased by the peculiarities of the perennial crop apples. On the one hand growers cannot easily switch to another crop in case of unfavourable market conditions and on the other hand customers would not be able to replace produce in the short-run. Since supply is short and setting-up of new plantations need time and specific know-how. Thus, business partners are mutually dependent and benefit from long lasting decisions.

These strong and binding structures build an efficient market barrier for new actors, particularly for traditional wholesalers and retailers. They only have access to German organic apples in case of noticeable over-supply. This phenomenon was referred to theoretically by various authors (s.a. Williamson 1985, Dyer and Singh 1998, Gold et al. 2010). It is particularly the described type of asset specific, human relationships in the organic apple chain which forms an effective barrier against new competitors seeking to access the market (Porter 2008) and which may create an important competitive advantage (e.g. Dyer and Singh 1998, Qin et al. 2008). Nevertheless, it has to be considered that demand in most years exceeds supply so that organic apple growers generally are in a rather favourable position.

Market transparency proved to be an important factor within the organic apple chain. It was perceived to be high at all levels of the supply chain. In this respect the 'European Forum of Organic Fruit' is of high relevance. Such transparency and information sharing is known to be a decisive determinant of competitiveness and is integral to the RV (Dyer and Singh 1998).

Conclusions

Business relations between actors in the supply chain for organic apples generally are of high quality. These relationships are characterised by a high degree of satisfaction and trust and by high commitment. All of these factors are of great importance from the RV. The actors in question share the goal of providing the German market with high-quality organic apples from local or domestic production at prices that ensure economic sustainability for all partners. Regional production clusters foster the bundling of produce and enhance information flow. They also help to create integrated networks of growers, independent of membership in different organic farmers' organisations.

There is evidence of the four factors that are essential in generating high relational rents: relationship-specific assets, knowledge-sharing routines, complementary resources and capabilities, and effective governance (Dyer and Singh 1998). The combination of these factors yields pronounced collaborative activity, both horizontally and vertically. Thus, our case study research fully supports the empirical relevance of the relationship quality for competitiveness and confirms the assumptions of the Relational View.

Within the supply chain of organic apples growers are mostly satisfied with the level and the only slightly varying product prices they receive. This stability allows growers to invest in production and storage technology, which helps to reduce annual fluctuations in production and improve product quality. Thus, growers can fulfil customer requirements regarding the quality and availability of local or domestic apples. Wholesalers and retailers thus have reliable business partners on the production side.

It can be assumed that the intense horizontal and vertical collaboration as well as market transparency in the supply chain for organic apples significantly limits the price wars that commonly disfavour (also organic) producers. The high willingness to collaborate, also among growers, is supposed to be fostered by the specific characteristic of apples as a permanent crop, which requires high investments and specific knowledge.

However, the success of the organic apple supply chain is not exclusively due to high relationship quality. Part of this success is caused by the nature of apple cultivation. Apples are a permanent crop that requires specific production technology and know-how, which generates path dependencies. This dynamic enhances willingness to collaborate and increases the commitment of growers. Furthermore, apples can be stored relatively easily and thus are available (almost) year round. Apples are also particularly well-perceived by consumers because they have a long tradition of consumption. A pronounced preference for local and domestic produce exists and at least some consumers have a good knowledge of apple varieties. The term 'Kulturgut' (cultural good) may help to better understand the particular relationship between consumers and the apple.

Due to these specific attributes of the product apple, the results of this research are not generalizable to all other product markets. However, there is evidence of the central relevance of high relationship quality and trustful collaboration between growers and traders. The provision of high quality German produce for the German market rather than the realisation of individual goals should become joint objectives of German growers and wholesalers in other product markets, too. Quality and taste, rather than price considerations, must be the focus of production and trade. Domestic growers competing with foreign producers may find that providing specific varieties which are particularly suitable to the taste of German consumers will ease the task of product differentiation.

The research regarding relationship quality was based on in-depth interviews with actors in the supply chain, who participated as experts in the research. The relatively low number of 18 interviews (which is typical for qualitative research) may question sector-specific and overall validity of the results. According to the concept of theoretical saturation, the share of repetition in the opinions of the stakeholders increased with the number of interviews and was high with the last interviews conducted. Therefore, the major issues concerning the organic apple industry are supposed to be covered by this research. The number of only three interviewed retailers is low. The reason for this low number was limited willingness to participate. However, this weakness does not question the general reliability of our results: the impact of retailers at the very end of the supply chain (consumers were excluded from this research) must be assumed to be rather similar in all product markets. Retailers thus may have only small impact on the peculiarities of the organic apple market.

The analysis presented here aimed at B2B relations. It therefore did not consider the views of consumers, although consumers are part of the complete supply chain. Because retailers are expected to react according to consumer requirements, our results may also indirectly reflect the point of view of consumers. Nevertheless, future research should also consider consumer perspectives.

This research demonstrated in which way high quality relationships may impact on a sector's competitiveness. Future research should consider comparative studies on relationship quality in different markets, e.g. the organic and conventional apple market or between different organic product markets to investigate and to prove if the relationship quality really differs between sectors.

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