

## Executive Summary

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### **Introduction**

The objective of workpackage 4 (WP4) is to generate insights and understanding about the role (prevalence, necessity and significance) of economic relationships and communication in selected EU food chains, and to identify the economic, social and cultural factors which influence relationships and communication. To achieve these objectives, data obtained from the representative cross-country, multi-commodity survey of farmers, processors and retailers in workpackage (WP3) are analysed.

Statistical methods are applied to examine the collected data. In particular uni-, bi- and multivariate techniques were used to analyse 1,443 valid responses. To test hypotheses regarding factors influencing the choice of governance structure and nature of economic relationships and communication, more appropriate statistical dependence techniques were employed. Governance structure analysis was performed by using a discrete choice model. Structural equation modelling was applied to test the hypotheses on factors influencing the nature of economic relationships and communication.

While the full dataset was analysed by UNI BONN in order to generate general, cross-country results, the data for individual countries were analysed by the respective country teams. Each country team interpreted their empirical country results in individual country chapters. The results of this analysis are a key source for the identification of country-specific research issues for workpackage 5 (WP5).

## **Cross-Country Comparison**

The objective of workpackage 4 (WP4) is to generate insights and understanding about the role (prevalence, necessity and significance) of economic relationships and communication in selected EU food chains, and to identify the economic, social and cultural factors which influence relationships and communication. To achieve these objectives, data obtained from the representative cross-country, multi-commodity survey of farmers, processors and retailers in workpackage 3 (WP3) are analysed.

The cross-country section presents and discusses the results of the analysis of the determinants of the choice of RT (RT) and the sustainability of economic relationships. The analysis builds upon a database containing information from 1,443 farmers, processors and retailers from six different EU countries (Germany, UK/Scotland, Ireland, Finland, Spain and Poland).

The analysis of the factors influencing the choice of RT involved the estimation of a binary logistic regression model. The categorical independent variable contains two RTs: formal and non-formal ones. Non-formal RTs comprise spot market transactions and repeated market transactions with the same buyer or supplier. Formal RTs include written contracts and financial participation arrangements. The key findings arising from the analysis are:

- Highly significant chain differences across all countries which are reflected in the estimated coefficients for the control factor “country&commodity”. Using Finland’s sausage chain as a reference category (the one with the highest share of formal RT), formal RTs are least likely to be observed in Spain’s cereal and Ireland’s pig meat chain followed by the beef chain in UK/Scotland. The magnitude of the estimated coefficients reveal that large differences between the individual chains exist which reflects the heterogeneous nature of the collected data with regard to the RTs.
- Relatively large significant differences between the two chain stages (i.e., the farmer-processor or the processor-retailer relationship) can also be observed. In general, and *ceteris paribus*, retailers tend to choose more formal RTs with processors as compared to farmers, indicating that downstream businesses are more likely to co-ordinate and organise their relationships more systematically and in a more standardised way.
- Long-term oriented businesses are more likely to choose formal RTs. Long-term orientation enables businesses to create a reliable legal basis for planning and securing future supply or sales.
- The opposite is true for independence. A strive for independence is a key driver for using informal RTs. Independent businesses prefer to transact without being formally bound to their exchange partners.
- Quality orientation on the market also proved to be a determinant, though weaker than the others, for conducting more formal RTs. The more quality-oriented the actors on the market are, the more likely an exchange partner will prefer to use a formal RT. In general, contracts can be used to secure quality standards by offering options for legal enforcement.

The determinants of sustainable economic relationships were analysed using structural equation modelling (SEM). Relationship sustainability has been defined as a multi-component construct. The considered components are “Our trust in this supplier/buyer”, “Our

commitment towards this buyer/supplier”, “Our satisfaction with this buyer/supplier” and “Our collaboration with this buyer/supplier in the past”. While relationship-sustainability index scores have been calculated assuming equal weights for all four components, the measurement models in the SEM have shown that satisfaction is the most important component, followed by trust, positive collaboration history and commitment. However, the differences in importance are small. In addition, the sequence of importance is also fairly stable in all estimated SEMs.

The analysis of the perceived levels of the sustainability of the economic relationships indicate that respondents evaluate their 'most important' business relationship as comparatively sustainable. This holds for all investigated EU countries, analysed commodities/products and chain stages. Differences in the observed scores are generally small. Nevertheless, the fact that we find downstream relationships being generally better than upstream ones, with the exception of Germany and the UK in the meat chain, confirms findings from the earlier stages of the project, in particular WP2.

As for the relationship-sustainability determinants, the SEM estimations revealed that, among the many variables on which data were collected and which were hypothesised on theoretical grounds to affect relationship sustainability, only four actually have a significant impact. These are:

- Communication quality (measured as a two-component construct involving “adequate communication frequency” and “high information quality”) as the most important determinant. This is true for the overall situation but also for all countries, and in particular for Poland, the UK and Spain. Only in Germany and Ireland other relationship-sustainability determinants are more important: equal power distribution between buyers and suppliers and the existence of personal bonds for Germany and the existence of personal bonds for Ireland. It is not immediately clear what the reason is for the different situations in Germany and Ireland. But in any case, it has little to do with the prevailing levels of communication quality which is above average in Germany and below average in Ireland. Thus other factors must be in play. It was also found that communication quality is particularly important in the processor-retailer chain stage and in the meat chain. This outcome confirms the results of other researchers who see communication as the most important factor in achieving successful inter-firm cooperation (Bleeke and Ernst, 1993; Mohr *et al.*, 1996).
- The existence of personal bonds is the second most important determinant for relationship sustainability in the cross-country analysis. In Ireland, it is even the most crucial determinant and it is also highly positively correlated with communication quality, suggesting that the variable has also an indirect impact as personal bonds seem to improve communication quality which in turn increases relationship sustainability.
- The impact of key people leaving is related to the existence of personal bonds since the variable very often is positively, significantly and highly correlated with the existence-of-personal-bonds variable. This indicates that key people are those who develop personal bonds with business partners. However, this is not the case in Ireland (no significant correlation between the two variables), where key people must be important in some other way for the business relationship. In any case, the impact of key people leaving has been consistently estimated as being negative, but it is not always significant and generally low in magnitude. Thus, while this variable is of some importance in the general SEM, it is only significant in Ireland and Finland, in the farmer-processor chain stage, the meat chain and in non-formal relationships.

- Finally, equal power distribution between business partners is the third most important determinant for relationship sustainability in the general SEM. It is also of highest relevance in Germany and second most important in Finland, but it seems to have no relevance in Ireland and Poland. In addition, it also does not seem play any role in formal business relationships. In these relationships, using a written contract may help to ease fears of falling victim of self-interested more powerful business partners, since the terms of co-operation can be specified in a contract and they are legally enforceable.

## **Germany**

The German chapter provides information on economic relationships and communication in the German sausage, beer and bread chains building upon a data set which consists of 134 valid cases.

Sustainable economic relationships positively influence on average profitability and turnover across the chains. However, within the chains, some differences can be identified. While farmers and food processors dealing with upstream partners claimed that the relationship enhanced their process- or product quality, downstream businesses, i.e., processors dealing with downstream partners and retailers, reported higher customer retention.

German agri-food businesses communicate with their main partner generally on a weekly basis, using mostly the telephone. Some differences were identified in the communication behaviour in the three reviewed agri-food chains. Sausage chain respondents see a stronger importance of telephone and communicate more often using non-personal communication means. In general, upstream businesses use more traditional communication means, such as ordinary mail, while down-stream firms communicate less personal and use the telephone more frequent. Communication in all three agri-food chains seems to be, by and large, of good quality.

RTs in German agri-food chains are analysed. Although a logistic regression model was not applicable due to the low number of valid cases, interesting findings were revealed using descriptive statistics and parametric tests. Most respondents claimed to be free in their choice of a RT. Lack of bargaining power, practices of the business partners and legal requirements limit the freedom of choice only for single cases. Despite the freedom of choice, responding businesses of the considered three agri-food chains use mainly repeated market transactions (RMTs), i.e., businesses transact mainly with the same exchange partner, however, without using formal written contracts. Within the beer chain, also formal written contracts (FWC) are a common RT. Across the three chains formal RTs are more common in the downstream part of the agri-food chains. In addition, downstream businesses agreed at a higher level than farmers and upstream processors that formal RTs (i) are a common business habit, (ii) are used to secure the demand and supply and also (iv) to guaranty a specific quality level (service or product). As a counter point, businesses referring to farmer-processor relationships agreed stronger that they use non-formal RTs because they are (i) a common business practice (ii) are convenient to use, and are (iii) used due to personal relationships. However, this group also agreed stronger than the respondents further downstream in the chain that the CAP reform is leading to an increased use of formal RTs.

Comparing the sustainability of the relationships across the different RTs, no major differences exist, neither up- nor downstream. Overall the results indicate that respondents evaluate their most important business relationship as comparably sustainable. This holds for all investigated chains, value chain stages and RTs. Divergences in the achieved scores are in

general small and only significant between the different value chain stages. Turning to the determinants of sustainable relationships, the following six key factors, ordered regarding their relative importance, have been identified using a structural equation model: (i) communication, (ii) personal bonds, (iii) equal power distribution, (iv) commercial reward, (v) competition and (vi) length of relationship.

## **Finland**

The Finnish country section presents the results of the analysis of two selected food chains, namely the pig meat-to-sausage chain and the cereal-to-rye bread chain. The aim of the section was to describe the role of RT and communication in the agr-food chains as well as to highlight the similarities and the differences between the two chains studied. Furthermore, the Finnish country section focused on examining those factors influencing the choice of a RT and the sustainability of a business relationship. Altogether 1808 questionnaires were sent to producers, processors and retailers operating in these two chains of which 224 usable questionnaires were returned (the response rate being 12.4 per cent). The great majority of the respondents (98.7%) were small businesses employing less than 50 people. Almost 70 per cent of the respondents were farmers.

In both chains, formal contracts were stated to be the most important RT used with business partners. Although for many businesses written contracts are a common business practice, the essential role of the contracts was the security they provide regarding the demand/supply and quality issues. Relative to the choice of the RTs, the main difference between the two chains emerged especially with the prevalence of spot markets and financial participation arrangements. The usage of spot markets was significantly more common in the rye chain when compared to the pig meat chain, while, on the other hand, financial participation arrangements were much more common among the businesses in the pig meat chain than in the rye chain. Furthermore, the analysis showed that most of the businesses in the pig meat chain claimed not to be free to choose the RT they use. Especially membership in a co-operative and practices of a business partner were mentioned as reasons that limit this freedom of choice.

The main business relations in both chains were described as having a long-term orientation and being based on formal written contracts. Typical for the main business relationships was also that they are not based on the existence of the key persons only; the relationship would remain even if the key people left the business. The quality of these relationships was satisfactory in both chains and across all the stakeholder groups, though the downstream processors and the retailers had a slightly more positive view on their main business partners than the farmers and the upstream processors. The businesses operating in the pig meat chain seemed also to be more dependent on their main business relations when compared to the businesses in the rye chain.

Although the communication means were rather similar in both chains (the phone being the most important), there was some variation between the chains concerning the communication frequency necessary to maintain the relationship with the main business partner. In short, the businesses in the pig meat chain seemed to appreciate more frequent communication with their main business partners when compared to the businesses in the rye chain. Personal meetings with the main business partners were quite rare in both chains. All the respondent groups were, however, fairly satisfied with the communication frequency and information quality between them and the main business partner.

The business cultures could be argued to be rather hegemonic among the businesses in the pig meat and rye chains. Avoidance of uncertainty, appreciation of long-term orientation and independence were considered important factors in the business cultures. Furthermore, trust, commitment and satisfaction in business partners were thought to be essential elements of business operations in all the respondent groups.

In order to investigate which factors have an effect on the choice of a RT, several hypotheses were tested by using binary and multinomial logit analyses. According to these analyses it could be argued that avoidance of uncertainty and risk has a certain effect on the RT chosen, i.e. the willingness to avoid uncertainty increases the probability to choose stable relationships, like repeated market transactions and formal written contracts, but not necessary those, which require high financial commitment (like financial participation arrangements). The probability of engaging in financial participation arrangements seemed to increase with long-term orientation. The hypotheses concerning the sustainability of the economic relations were tested by using structural equation model (SEM). In the Finnish model, five variables were found to have a positive and statistically significant impact on the sustainable economic relationship construct. Ordered relative to their importance, those factors are: (i) communication quality, (ii) personal bonds, (iii) equal power distribution, (iv) local embeddedness and (v) competition.

## **The UK/Scotland**

The descriptive analysis of the UK data showed that each supply chain (i.e., cattle to beef and barley to beer) is characterised by its own particular pattern of trading relationships. In the cattle to beef supply chain, the majority of business relationships were conducted through spot markets and repeated transactions with the same business partner, whilst in the barley to beer chain they were more commonly made through formal contracts and by repeated transactions with the same partner.

In both chains most of the stakeholders in the sample felt that they had a high level of freedom to choose the type of business relationship that best suits their purposes. As regards the reasons for using the specific relationship, the cattle to beef chain participants indicated that “common practice” and “easy to use” were the two main considerations for the use of spot markets. These were also mentioned as reasons for using repeated transactions with the same partner, but in addition the importance of ‘personal relationships’ was also cited. The mentioned reasons were also found in the case of the barley to beer chain; however, another driver in this chain was the “increasingly sophisticated demand” within the market.

As regards communication, both supply chains used telephone and e-mail as the main means of communication. In the cattle to beef chain ‘once a month’ to ‘once every 3 months’ were mentioned as the most desired frequency of communication and they were also the frequencies used. However, it seems that communication can be improved in terms of quality and relevance. In the barley to beer chain they communicate with their business partner approximately ‘once a month’ and this appears to be the optimal frequency according to respondents.

A multinomial logit analysis was used to study what explains the relationships chosen by the firms. The results of this analysis provided few clues and most of the hypotheses tested were rejected, except that long term considerations were important in the choice of relationships for the barley to beer supply chain. This also seemed of some importance for the cattle to beef supply chain, but the hypothesis was rejected at 1 per cent significance.

Structural equation modelling was used to investigate the sustainability of supply chain relationships. The results indicated that two factors were particularly important for explaining the sustainability of the relationship: the first factor was the ‘goodness of communication’, comprising information quality and communication frequency, and the second factor was whether the stakeholder indicated that the ‘relationship was commercially rewarding’, which had a positive effect on the business relationship. In addition, ‘personal bonds’ were found to be an important, significant factor in determining sustainable relationships in the cattle to beef supply chain.

## **Ireland**

The results of the Irish study are based on the cattle-to-beef chain and the pigs-to-pigmeat chain. In the cattle to beef chain, 69 farmers, 7 processors and 11 retailers participated in the study whilst in the pigs to pigmeat chain, 49 farmers, 7 processors and 5 retailers took part.

Repeated market transaction with the same buyer is the most frequently used method of carrying out business in both chains. Spot markets are used by one in seven beef farmers while less than 3% of pig farmers use spot markets. Formal written contracts is most closely associated with the retailer-processor relationship, with two retailers in the beef chain and two retailers in the pig chain reporting that they used contracts. Respondents along both chains generally agree that repeated market transactions are a common business practice while also being convenient to use. While respondents agree that personal relationships are important in repeated market transactions, personal relationships are not considered a particularly strong reason for engaging in repeated market transaction. Stakeholders in both chains were not convinced of the efficacy of repeated market transaction in reducing business costs but retailers in the beef chain thought that this type of transaction can produce some cost savings.

Both chains have enduring relationships with their business partners, in the beef chain the average business relationship is twelve years while in the pig chain the average business relationship is 8.5 years. Both chains consider their business relationships are robust and have the ability to endure whatever conflicts that may arise.

Little over half of beef farmers believe that their relationship is financially rewarding while three out of four pig farmers state that their business relationship is financially rewarding. Three out of four beef farmers see themselves to be in an unequal relationship while nine out ten pig farmers see themselves to be in an unequal relationship. Retailers in both chains believe themselves to be equal partners in their business relationship. Processors in both chains differ in their opinion that they are in an equal relationship.

Beef and pig farmers and processors believe that their communications needs are being met. Beef retailers communication needs match their requirements however pig retailers would like their communication with suppliers to increase in frequency.

Half of all beef and pig farmers reported that their communication with their buyers had a positive effect on their business performance in terms of profitability. However farmers in both chains were less convinced of the impact of communication on turnover, process quality or innovation. Few farmers in both chains believed that communication had any effect on market share or customer retention. Pig processors were more convinced than beef processors on the positive effects of communication on business performance. Eighty per cent of retailers in the beef chain believed that their communication with their main supplier improved their product or process quality. Retailers in the pig chain were divided on the effect communication had on product or process quality and on several business performance criteria. Telephone and face-to-face communication are the most frequently used form of communication across all chains. Structural equation modelling disaggregated good communication into frequency, reliability, timeliness and relevance. All were found to have a significant and impact on good communication

All members of both chains agree that they are risk adverse and try to avoid uncertainty whenever possible. While farmers and processors in both chains are prepared to accept taking part in business relationships where the buyer is more powerful than themselves, retailers will not accept this type of relationship. These findings indicate that change will be difficult.

Discrete choice models were estimated for all beef chain stakeholders to examine the factors influencing choice of RTs. Data limitations meant that it was not possible to run the model for processors or retailers separately. Lack of variation in the pig survey data and small sample size meant that it was not possible to generate a model for the pig chain. For the total beef chain, quality orientation, degree of competition in the market place and degree of risk aversion were not found to influence relationship choice. However, participation in a public/private quality assurance scheme (QAS), desire for economic independence, and degree of long-term market orientation was found to influence choice. Participation in the QAS and a higher degree of long-term orientation increased the probability of repeated market transactions whilst a higher desire for economic independence increased the probability of using spot markets.

Structural equation modeling was used to test the relevance of some determinants of relationship goodness across both chains and value chain stages. This analysis found that good communication and the existence of personal bonds between buyers and suppliers were found to be significant determinants of relationship sustainability. Satisfaction, trust and commitment proved to be key determinants of relationship quality whilst collaboration and the ability to endure conflict were important determinants of relationship strength.

Overall, the results highlight the impact of a range of factors (e.g. economic, technological, geographical, cultural, and political) on the nature and effectiveness of various RTs, as well as the influences of relationship choice and the determinants of relationship goodness. They also suggest that change will be difficult due to a certain level of complacency and lack of appetite for change, lack of perceived choice on the part of farmers in particular, and high levels of risk aversion and uncertainty avoidance amongst most actors.

## **Poland**

The Polish sample for the pig-to-ham chain consists of a total of 165 and that for cattle-to-beef chain of 161 stakeholders. The reviews (based on the questionnaires) were conducted on a face-to-face basis in the case of farmers and retailers and using e-mail or telephone in the case of processors. The survey had country coverage at processing level. Regarding the farm and retail levels, the survey was conducted in Wielkopolska region in case of pig-to-ham chain and in Mazowsze region in case of cattle-to-beef chain.

According to the respondents, both of the studied meat chains in Poland are characterised by strong market competition and above-average quality requirements. As concerns business culture characteristics, in the pig-to-ham chain farmers and retailers try to avoid risk and uncertainty. However, farmers turned out to be more long-term oriented than the other chains stakeholders. They also tend to strive for independence and do not accept unequal distribution of power between chains partners. Processors show less aversion to risk and are more willing to enter a relationship with more powerful partner. In the cattle-to-beef chain the majority of stakeholders tend to protect their independence, but they are more long-term oriented. Farmers and retailers try to avoid risk and hardly accept relationships with unequal distribution of power.

The desire to remain as flexible and independent as possible is reflected in the dominance of non-formal types of business relationships between buyers/suppliers in both studied chains, mainly in form of repeated market transactions. Spot market transactions are of less relevance. In the cattle-to-beef chain, this RT is indicated by 24% of the respondents. It appears mainly between farmers and processors (slaughterhouses). At the retail level, spot markets are not chosen at all as a form of business relationship with suppliers. In the pig-to-ham chain, spot market transactions are used by only 4% of the responding stakeholders. Repeated market transactions with the same partner dominate as a type of B2B relationships in Poland in both studied food chains. They are stronger at the farmer and retailer level than in processing and stronger in the pig-to-ham than in the cattle-to-beef chain.

Among the most important developments which are seen to stimulate the use of repeated market transactions with the same partner are: growing competitiveness, increasingly sophisticated needs of consumers and high quality requirements. The pressure of quality has a higher influence on the RT at processing and retail than at the farmer levels. The majority of the stakeholders in both chains see changes in the CAP as less important factor influencing the choice of business relationships type. The impact of the CAP reform is evaluated higher in cattle-to-beef chain than in pig-to-ham chain and higher in processing and retail trade than at farmer level.

Overall, the great majority of surveyed stakeholders in both chains feel independent in choosing the type of relationship with their partners. Especially processors declare to be independent, which reflects the power distribution within the chains. However, processors indicate a higher level of independence from farmers than from retailers. Those who do not feel free in choosing the RT state as reasons: insufficient market power and business practices used by buyers/suppliers.

The overall assessment of the sustainability of the relationships with the main partner is high in both chains, with being higher downstream than upstream. The ability to endure conflicts is appreciated more than personal bonds by the respondents.

The majority of the participating stakeholders in both chains see a positive impact of the relationship with their main partner on the performance of the firm. As concerns the main performance influencing factors, farmers indicate mainly the level of income and the amount of sales. In the case of the cattle-to-beef chain, increased quality is also mentioned. Processors indicate cost reduction, growing income and improved quality as the most important factors supporting the performance. Retailers point at such factors like: increasing amount of sales, assurance of supply (especially in cattle-to-beef chain), improved quality, and growing income.

Respondents value the communication with their business partner to be good. This holds for both chains and most processors and least for farmers. Factors influencing the communication between chain partners most are: frequency of communication, quality of received information and ability to endure conflicts. The experience from past collaboration is rated the lowest. As to the way of communicating telephone and personal contacts are considered the most important means. At farmer and retailer levels fax and e-mail are thought unimportant means for communication, while processor rate them higher.

The logistic regression analysis revealed that quality orientation on the market supports the use of formal RTs, whilst the structural equation model disclosed following significant factors influencing the sustainability of economic relationships: (i) communication, (ii) personal bonds and (iii) commercial reward.

## **Spain**

A total number of 337 questionnaires from farmers, processors and retailers in the wheat-to-bread and pig-to-cured ham Spanish chains are analysed. Respondents are located in the region of Aragon, and many of them, in Zaragoza. The size of interviewed business is quite small, mainly for farmers and retailers. Around 60% of farmers and retailers in both chains have only 1 employee. Around half of the fresh bread processors have between 4 to 10 employees, while around half of the cured ham processors have more than 10 employees. Processors have been longer operating in the market than the other actors and those in the wheat-to-bread chain have also been in the business than firms in the pig-to-cured ham chain.

In the wheat-to-bread and pig-to-cured ham Spanish chains, most of stakeholders use only one type of relationship when relate with buyers/suppliers. This holds especially for farmers. The 96% of wheat farmers uses only repeated market transactions while 90% of pig farmers are vertically integrated with their buyers.

Similar RTs are chosen by the processors and retailers in both chains. The main difference exists with respect to farmers: while in the wheat-to-bread chain repeated market transactions is most dominant type, vertical integration dominates in the pig-to-cured ham chain. It is interesting that processors prefer repeated market transactions with their suppliers and spot market transactions for buyers. The spot market is a complementary relationship for retailers whilst conducting mainly repeated market transactions.

The similarity of results between both chains when comparing the nature and the quality of economic relationships is high. Basically stakeholders are looking for equal power relationship, which finally provide good commercial results and somewhat independent from personal relationships. Stability, trust, satisfaction and past experiences are all important factors. They believe that conflicts can be solved with their partners and look for relationships characterised by equal power distribution.

Stakeholders are basically satisfied with the communication frequency and the information quality with their main buyers/suppliers. All of them believe that markets are very competitive, exigent on quality levels and uncertain. Their responses about the effects that relationships and communication have on business performance are quite similar stressing the positive effects on product and process quality.

Communication positively affects the sustainability of economic relationship measured by the trust, commitment, satisfaction, and collaboration history with buyers/suppliers. The factors that explain the sustainable economic relationship are the personal bounds and the local embeddedness. Personal bounds positively influence the economic relationship and this influence is higher than the positive influence of the local embeddedness on the economic relationship. In addition, while personal bounds positively influence both, the sustainable economic relationship and communication quality, the local embeddedness only positively affects the sustainable economic relationship. Moreover, the influence of personal bounds on communication is higher than the influence on the sustainable economic relationship.

## **Conclusions**

This report shows that both the preferred RTs and the sustainability levels of relationships in selected European agri-food chains can be explained systematically. For both phenomena we presented well-performing statistical models which help to identify the phenomena's main determinants.

Regarding the determinants for choice of RT, the analysis of the pooled dataset revealed that, three factors seems to determine the choice between non-formal (i.e., spot markets or repeated market transactions with the same buyer/supplier) or formal (i.e., written contracts or financial participation arrangements) RTs. Formal RTs seem to be preferred by long term-oriented and quality-oriented businesses. In contrast, businesses which strive for independence seem to prefer rather informal RTs. During the last years, EU policy making has focused on increasing the quality-orientation in agri-food chains. In addition, the production of quality often requires considerable investments in skilled staff, specialised machinery and supporting infrastructure, thus requiring businesses to adopt a longer-term business approach. It can also be argued that formal business relationships are likely to be more difficult to build and to manage. As a consequence, supporting agribusinesses via capacity-building and training measures related to topics such relationship management or contract law may help to increase the economic sustainability and quality-orientation of EU agri-food chains.

As for the sustainability of business relationships, our statistical analysis clearly showed that good communication is crucial. This may be true in particular for larger-scale businesses. For example, good communication could offset the negative effects for relationships that farmers perceive as a result of their customers' large scale and thus larger bargaining power. Moreover, where farmers can organise themselves, or where they can be organised into groupings that provide a feeling of enhanced market influence, improved relationships may result. This may be a particularly promising option for the agri-food sectors where equal power distribution has emerged from our estimations as being the relatively most important lever for enhancing B2B relationships. The importance of personal bonds to relationship goodness, especially at the farmer-processor level, suggests that the retention of key staff is of importance to chain relationships, or that the employment of supply chain staff who fit culturally and/or socially with those they transact with may facilitate relationships. Finally, the fact that a high correlation exists between good communication, equal power distribution between business partners and the development of personal bonds indicates that these factors can be collectively regarded as part of the relationship building process, and that as such they should be developed together to enhance inter-enterprise relations.