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Trust as a supply chain management tool for slaughterhouses: Empirical evidence from north-western Germany

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Abstract:

Supply chain coordination can be solved by market, contracts or vertical integration. Within the framework of the market-hierarchy-paradigm, as part of the transaction cost theory, there are frequent discussions and empirical analyses about the question which forms of governance should be used. The following contribution proposes trust management as a complement to governance mechanisms such as market, contracts, and vertical integration. It is focused on supply chain management through the building of trust as a means of relational governance. In a large empirical study, 357 pig producers were interviewed about their trust in the slaughterhouses they supply. Specific to our approach is the comparison of results on the enterprise and sector level. There are high differences between slaughterhouses. Furthermore, the determinants of trust which stand for two leading slaughterhouses in the market are essentially different. To our best knowledge, the present work is the first attempt to reveal trust and its determinants by comparing different enterprises with the general sector results.

Keywords: Buyer-supplier relationships, Trust continuum, Meat industry, Relational governance

1 Trust within supply chains

Due to increasing competition, relationships between processors and farmers are often fraught with conflicts. The pork industry in Germany is traditionally characterised by arm's length transactions (SPILLER et al., 2005). In a highly competitive surrounding, the supply chain shows a certain level of distrust, which leads to distinctive inefficiencies, e.g., the repeated failures to establish Salmonella monitoring. All in all, practitioners complain of a high level of distrust for their processors (SPILLER et al., 2005). Chain coordination executed by processors is increasingly being contested by countervailing power farmer initiatives such as the "Bund Deutscher Milchviehhalter" or "Interessengemeinschaft der Schweinehalter

Deutschlands". Traditional organizational forms such as cooperatives are no longer sufficient to guarantee the coordination of the value chain.

Against this background, the following paper takes up the debate on suitable governance forms and tries to find an empirical answer. Primarily, trust management stands as a complement to governance mechanisms such as market, contracts, and vertical integration. In the literature, there are many conceptual reflections on this, but only little empirical work.

Therefore, a model to measure trust and determinants of trust between pig farmers and slaughterhouses was developed and tested by a large-scale survey. Specific to our approach is the comparison of results on the enterprise and sector level. Significant differences were revealed. In a scientific respect, this contribution provides evidence against making too broad generalizations of sector-level data for practice-oriented application and recommendation.

2 Theoretical framework

2.1 Governance-mechanisms in the supply chain

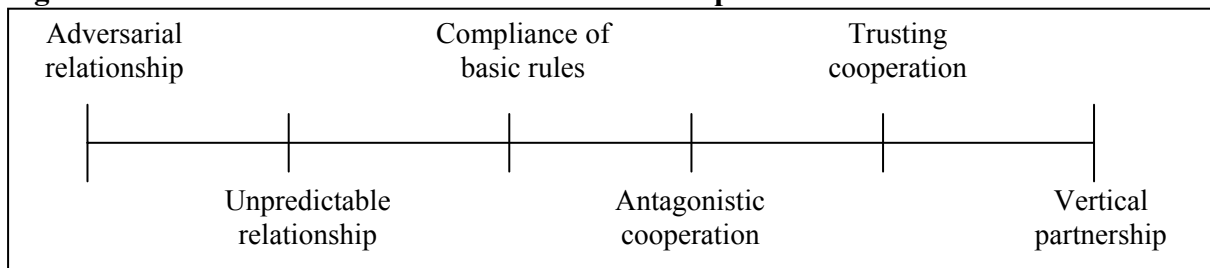
The appropriateness of governance systems in supply chain management is analyzed from different perspectives of economic theory (SCHULZE et al., 2006). Outstanding importance is devoted to the transaction cost theory which in terms of the market-hierarchy-paradigm distinguishes market, contract and hierarchy as alternative governance forms (WILLIAMSON, 1985). However, the concentration on contracts and vertical integration in transaction cost theory is often criticized in the literature for a number of reasons (NOOTEBOOM, 2004). One major drawback of the theory is that matters of trust are neglected. Contracts stay unavoidably incomplete. However, given a high degree of uncertainty and high specific investments, the resulting risk cannot be reduced only through ties of ownership-rights or strict contracts but also through trust (GRANOVETTER, 1973; BRADACH AND ECCLES, 1989). Another weakness of the transaction cost theory is that the rather apodictically set opportunism premise which generally recommends distrust strategies cannot be so explicitly observed in practice. Typically, managers know some companies they can rely on. In addition, modern economical research points out to many trade-offs between the dimension of control and the intrinsic motivation of a business partner (FREY and JEGEN, 2001). Therefore, a relationship based on distrust, contractual ties and control, which the transaction cost theory implies in its conception of the human being, might paradoxically force opportunism as well as an absence of intrinsic motivation to cooperate (negative self fulfilling prophecy). As

NOOTEBOOM (2004) puts it, “the expression of distrust, based on the assumption of opportunism, is likely to destroy the basis of trust as the relation unfolds”.

Given a number of failed attempts to prove a substitutional relationship between trust and control (WOOLTHUIS ET AL., 2002) in newer economic research, there are several contributions which emphasise the complementary role of trust to safeguard business relationships. Trust reduces transaction costs (DONEY and CANON, 1997; GALIZZI and VENTURINI, 1999), supports commitment as well as cooperative behaviour (BÜSSING, 2000), and establishes a safe environment for critical information transfer, services, goods and resources (PELZMANN, 2005). Trust functions as a self-strengthening tie or a bold concession and can be a reasonable complement to contracts or vertical integration (POPPO and ZENGER, 2002: 707). There are also several empirical hints from agribusiness research that the establishment of trust in business relationships provides competitive potential (BATT and REXHA, 1999; CLARE et al., 2005).

Still, trust is not a dichotomous variable. In Figure 1, we introduce a continuum of business relationships in terms of trust and conflict (SPILLER ET AL., 2005). At the one end of the continuum there are adverse relationships which are characterized by a high level of conflict and opportunism. Each party tries to push its own interests through, if necessary by abusing power imbalances. Whilst in this case, parties are sure that their counterpart will exploit them whenever possible, there may also be business relationships in which the partner’s behaviour cannot be anticipated at all. In this uncertain and incalculable business environment (not knowing whether the other is cheating or not) a high level of mistrust leads to cautious behaviour. The third step is that at least compliance to basic rules is assured if sector-specific standards or general understandings of exchange behaviour are shared by all industry members. An antagonistic cooperation (“Co-Opetition”, BRANDENBURGER and NALEBUFF, 1996) describes relationships where there is some goal compatibility whilst in other parts the relationship is strongly adversarial. In contrast to an unpredictable relationship, both parties have the aim of working together for a certain goal despite great differences of interests in other fields (e.g., prices and distribution of profits). A trusting cooperation is characterized by a strong confidence that one will not be exploited by the partner because he is interested in continuing the relationship. A vertical partnership is at the other end of the continuum. This type of relationship is characterized by strong interpersonal bonds, mutual goals and perhaps even friendships between the partners.

Figure 1: Continuum of trust in business relationships



2.2 Determinants of trust

In order to shed a light on how trust between farmers and processors is developed in the pork chain, a second aim of this contribution is the measurement of trust determinants, i. e. those factors which can lead to a higher level of trust. We assume that these might be clues for enterprises' trust management. Accordant reports can be found in research about channel marketing (YOUNG and WILKINSON, 1989), later also more generally in the relationship marketing literature (WEITZ and JAP, 1995). Credibility and benevolence are discussed as dimensions or determinants of trust in different studies (GANESAN, 1994; KUMAR et al., 1995; GANESAN and HESS, 1997). Recently identified factors influencing trust formation between business partners are shared values (Dwyer et al., 1987; ANDERSON and WEITZ, 1989; MORGAN and HUNT, 1994), perceived productivity of the partner, communication quality and quantity (MATANDA and SCHRODER, 2004) as well as friendship between parties (WILSON, 1995). Also the partner's overall reputation can foster trust (DASGUPTA, 1988; BARTELT, 2002), while one-sided dependency is found to hinder the development of trust (ANDERSON and WEITZ, 1989; STERN and REVE, 1980). Finally, the importance of power and trust within relationships also has been investigated (for an overview, see Ireland and Webb, 2007). Further hints on potential trust determinants are provided by research on satisfaction and relationship quality, where constructs such as opportunism, power asymmetries and structural bonds were introduced (ANDERSON and NARUS, 1990; DWYER et al., 1987; JÄRVELIN, 2001).

There is also a huge amount of empirical research from different sectors of the agribusiness. Studies by HANSEN et al. (2002) and CLARE et al. (2005) target the general exploration of trust within cooperatives, and between farmers, regional cattle dealers and slaughterhouses, respectively. Besides trust, CLARE et al. (2005) also inquire into parameters, such as power symmetry, reciprocal dependence etc. which SPEKMAN et al. (2000) identified as important success metrics in an earlier survey.

BATT (2003) reveals determinants of trust between fresh produce growers and market agents buying the products on behalf of retailers. The study is based on a survey among 196 Australian farmers. The trust dimension, as the dependent variable, in this study is measured through perceived honesty, credibility of information, and reliability of promise, which are, from our viewpoint, not components but determinants of trust. The same holds for the factor “relational satisfaction” which BATT finds to be the most important factor in the development of trust between Australian growers of fresh produce and their buyers. It comprises constructs which in our opinion have to be distinguished from satisfaction, as perceived fairness of the buyer, complaint management, and conflict. Other influencing factors in his sample are goal compatibility, relational investments, power and opportunism. Even if the duration of the relationship does not have an impact on supplier trust in BATT’s survey this determinant is often discussed as important in other studies (GANESAN 1994; BATT and REXHA, 2000).

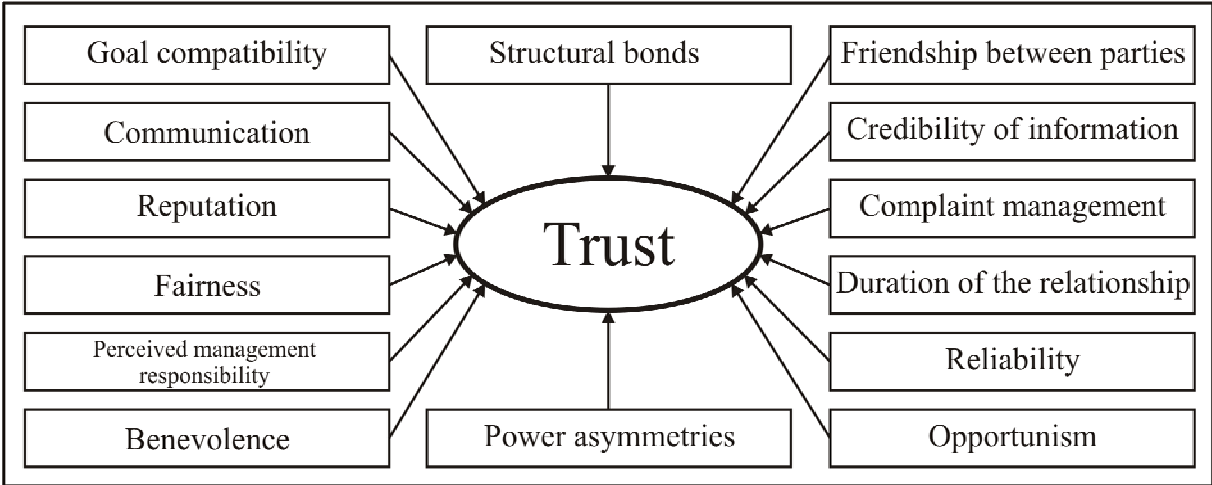
JAMES and SYKUTA (2006) analyse farmers’ trust in cooperatives and investor-owned firms for the soybean and corn market. They confirm their hypothesis of a higher level of trust towards cooperatives. Furthermore, farmers perceive cooperatives to be more honest and to have a higher competence.

These considerations in a whole lead to the research model depicted in Figure 2. Some central constructs are similar to the results of BATT (2003). However, in contrast to BATT, who subsumed many items under the term relational satisfaction, we first developed a strongly disaggregated model in order to identify and distinguish determinants of trust sharply. Hence, our basic measurement model comprises the aspects of goal compatibility, communication, reliability, fairness, reputation and perceived management responsibility, friendship between parties, credibility of information, complaint management and duration of the relationship, which are all assumed to have a positive influence on trust in business relationships.

Factors which are assumed to negatively influence trust are opportunism, power asymmetries and structural bonds. Opportunism in our study is measured through sector specific problems such as partly doubtful grading processes and a lack of price transparency in the market which have been repeatedly reported by practitioners, which cause conflicts and lead farmers to question the credibility of their buyers (SPILLER ET AL., 2005: 287). Structural bonds includes the perception of marketing alternatives as well as one-sided dependency and reciprocal dependence.

Specific investments as analysed by BATT (2003) have no relevance in the sector we refer to in this paper, which is mainly characterised by commodity production.

Figure 2: Measurement concept of trust



2.3 Transferability of trust analyses

In general, scientific studies pursue the target of deriving empirical results with a high degree of universality. With regard to the question of antecedents of trust, this means that many studies show a trend towards postulating sector-trespassing results – even if, as in many cases, only a single branch is analysed. However, far-reaching recommendations for business practice are derived without testing. This limitation is in fact often mentioned in the last chapter of a scientific paper but attempts to prove the transferability are rare.

In the remainder of this paper we assume, according to the logic of critical rationalism (POPPER, 1984; ALBERT, 1992), that the validity of cause-and-effect chains has to be investigated critically time and time again. Even a single falsification confutes a generalized model. We investigate the hypothesis that a trust model emerging from sector-level (meso-level) can also be transferred to single enterprises (micro-level). This question is of importance for economical research which tries to generate guidelines for practitioners. If a result, which is derived from a general model, is not applicable to all companies, recommendations should be handled carefully.

3 Materials and methods

With regard to the above-mentioned questions, the business relation between pig farmers and slaughterhouses is analyzed within the framework of an empirical study. In spring 2005, 357 pig producers were debriefed in Weser-Ems and Westfalen-Lippe which are known to be the centres of German pig production. The sample comprises above-average large-scale and future-oriented farms in north-western Germany (average age of farmers = 41 years, high education level, average herd size = 1413 pigs).

Due to the fact that farmers are able to supply several slaughterhouses at the same time (in a whole, 101 companies were mentioned), interviewees were asked to complete the questionnaire only with respect to their most important customer, which they had to indicate at the beginning. Only in the cases of Westfleisch (cooperative) and Tönnies, with sub-samples of 66 and 57 suppliers respectively, enterprise-level analyses are possible. These companies and their governance structures shall be roughly described in the following passage. For the other companies, samples were too small to carry out further multivariate analyses.

In 2006, the market leader Tönnies, a private company, slaughtered 10 million pigs, accounting for a market share of 20 %. Westfleisch, the last remaining large-scale cooperative, butchered 5.4 million pigs, corresponding to a market share of 10%. The enterprise ranks third in the sector, while the Dutch VION with 18.8% market share ranks second (ISN, 2007). Westfleisch covers 70 to 80 % of their need by individual contracts with farmers, while at Tönnies, procurement is effected mainly through livestock dealers who also provide the transportation services and do the settlement with their pig-producers instead of direct contracting with farmers.

The measurement of trust is mostly based on seven-point Likert scales, ranging from -3 (“strongly disagree”) to +3 (“strongly agree”). There are also seven-point semantic differential scales as well as some rating scales from 0 – 100 (cf. appendix). By using principal component factor analysis, the postulated constructs of section 2.2 are tested and the complexity of data is reduced. A second factor analysis is carried out over three items which all directly and therefore one-dimensionally measure trust. The resulting trust factor is then used as a dependent variable in three multiple linear regression models, for the whole sample and for the sub-samples of Westfleisch and Tönnies suppliers, respectively.

4 Trust within a sector and within unique business relationships

4.1 Farmers' trust in their main buyers

By means of descriptive statistical analyses, a rather low level of trust is revealed in the German meat business. On a scale from 0 (“XY tries to take me for a ride whenever possible.”) to 100 (“I can blindly trust in XY.”) the mean value is 64 ($s = 18.8$). For this question, the company Westfleisch scores an average value of 66.7 while the competitor Tönnies only receives a score of 58.7 from its suppliers. With regard to the outlined trust-indicators in Figure 1, more criteria such as the risk of opportunistic behaviour (reliability and credibility), compliance with basic rules (classification neutrality), the existence of goal divergences as well as the degree of social contacts are analysed. Table 1 shows results of the whole sample in comparison to those of the suppliers of Tönnies and Westfleisch, respectively.

On average, the relationship is judged to be halfway incalculable, halfway restrictedly cooperative from the farmers' point of view. This uncertainty revealed in high frequencies of the reply “partly”. However, 67.6 % of the interviewees reject the statement that arrangements with slaughterhouses are broken opportunistically. More willingness to cooperate or deepened personal relations can hardly be found, although there are significant differences particularly concerning the last point. Thus, referring to the continuum of trust presented in Figure 1, the farmer-processor relationship on sector level can be classified as “compliance to basic rules”. Looking at the company level, Westfleisch suppliers show a higher level of trust compared to Tönnies suppliers, which is in line with theoretical considerations and empirical findings in the literature, that farmers trust more in cooperatives, which are producer-owned, than in investor-owned companies (JAMES and SYKUTA, 2006).

Table 1: Characteristics of business relationships in the German meat business

| | Total | | Westfleisch | | Tönnies | |
|---|-------|----------|-------------|----------|---------|----------|
| | μ | σ | μ | σ | μ | σ |
| • It often happens that agreements with XY are broken. (reliability) | -0.97 | 1.672 | -1.00 | 1.728 | -0.80 | 1.641 |
| • XY treats me in a fair way. (fairness) | 0.70 | 1.176 | 0.80 | 1.070 | 0.29 | 1.043 |
| • Farmers and XY strive for different goals. (goal compatibility) | -0.26 | 1.550 | -0.44 | 1.551 | 0.47 | 1.217 |
| • I can be sure that XY will consider farmers' interests. (benevolence) | 0.16 | 1.421 | 0.44 | 1.204 | -0.32 | 1.377 |
| • Information provided by XY is not always credible. (credibility of information) | -0.47 | 1.535 | -0.35 | 1.595 | -0.23 | 1.375 |
| • The grading process at XY is neutral. (opportunism) | 1.10 | 1.366 | 1.32 | 1.230 | 0.88 | 1.156 |
| • I have a good and personal relationship to some employees of XY. (friendship between parties) | -0.41 | 1.915 | 0.33 | 1.859 | -1.33 | 1.409 |

4.2 *Determinants of trust towards business partners*

In the next step, factor analysis (using principal component analysis) was conducted in order to approve the constructs considered in our research model empirically. Seven factors with Eigenvalues higher than one were extracted. Reliability of the factors was checked by Cronbach's alpha analysis. The coefficients are all higher than 0.6, which is acceptable according to HOMBURG and GIERING (1996). An overview of the extracted factors, their KMO and Cronbach's alpha coefficients is given in the appendix. Some constructs of the initial model (Figure 2) could not be confirmed as factors. These are goal compatibility, fairness, power asymmetries, duration of the relationship and credibility of information. Other items which initially were part of the constructs friendship between parties and complaint management respectively now are included in the factor "communication and service".

Regression analyses then were carried out first for the whole sample and then for the sub-samples of Westfleisch and Tönnies suppliers respectively. As independent variables, not only the factors, but also single items were included, which were not confirmed as multidimensional constructs in the factor analysis. These are Non-opportunism ("The grading process at XY is neutral") and benevolence ("I can be sure that XY will consider farmers' problems"), which are supposed to have a positive impact on trust, as well as the lack of goal compatibility ("Farmers and XY strive for different goals") and lack of credibility of information ("Information provided by XY is not always credible"), which should have a negative impact on trust.

Results of the regression analyses are shown in the following Tables. In the whole sample, 9 significant variables of the model explain 67% of the variance in trust. The most important determinants of trust are perceived fairness, neutrality of grading process as well as the competence of slaughterhouse management. While benevolence, reputation and cooperation orientation of the management have an average impact, the existence of goal divergences, credibility of information as well as communication and service are of less importance. Referring to our initial model (Figure 2) we detect that structural bonds and power asymmetries as sector specific determinants have no significant effect on the trust building process. The same applies to reliability and duration of the relationship. Furthermore, the determinants of the initial model must be completed by benevolence.

Table 2: Determinants of trust in business relationships (total)

| Exogenous variables | Beta | t |
|---|-------|----------|
| Fairness | 0.27 | 5.213*** |
| Non-opportunism | 0.23 | 4.876*** |
| Management responsibility (<i>factor</i>) | 0.20 | 4.877*** |
| Benevolence | 0.17 | 3.254** |
| Reputation (<i>factor</i>) | 0.14 | 3.241** |
| Cooperation orientation of the management (<i>factor</i>) | 0.14 | 2.983** |
| Lack of goal compatibility | -0.12 | -2.406* |
| Lack of credibility of information | -0.11 | -2.560* |
| Communication and service (<i>factor</i>) | 0.10 | 2.235* |

Dependent variable: Trust; n = 357; Adj. R² = 0.674; F = 48.36; *** p ≤ 0.001; ** p ≤ 0.01; * p ≤ 0.05

Table 3 and 4 show results of the company specific regressions. At Westfleisch the top three influencing variables are identical and also in the same order as in the total model (cf. Table 3). Compared to this the results for Tönnies strongly differ from the total model with respect to both the order of factors and the weight of influence (cf. Table 4).

Table 3: Determinants of trust at Westfleisch

| Exogenous variables | Beta | t |
|---|------|----------|
| Fairness | 0.44 | 3.760*** |
| Non-opportunism | 0.36 | 3.146** |
| Management responsibility (<i>factor</i>) | 0.22 | 2.132* |

Dependent variable: Trust; n=66; Adj. R²: 0.544; F: 18.47; *** p ≤ 0.001; ** p ≤ 0.01; * p ≤ 0.05

Whereas for Westfleisch, perceived fairness plays a very important role, this component does not stand in any significant context to supplier trust in Tönnies. In this case, the company's good reputation builds the foundation of trust. Management cooperation, quality and intensity of communication and service as well as credibility of information are other relevant determinants of trust.

Table 4: Determinants of trust at Tönnies

| Exogenous variables | Beta | t |
|---|-------|----------|
| Reputation (<i>factor</i>) | 0.47 | 4.881*** |
| Cooperation orientation of the management (<i>factor</i>) | 0.40 | 4.086*** |
| Communication and service (<i>factor</i>) | 0.37 | 3.721*** |
| Lack of credibility of information | -0.26 | -2.614* |

Dependent variable: Trust; n=57; corr. R² = 0.725; F = 20.82; *** p ≤ 0.001; ** p ≤ 0.01; * p ≤ 0.05

The comparison of mean values for the whole sector and the individual companies (see appendix) shows that Tönnies obtains the poorer results for almost every statement, which explains the relatively higher trust of Westfleisch-suppliers. Since competence and neutrality of grading are normally considered to be the strengths of a cooperative, here there are deficits with respect to the interests of the farmers. The results for Tönnies show distinct weaknesses in communication and service offered to the suppliers. However, the reputation of the

enterprise is relatively positive. All in all we observe very different patterns of trust for the two processors. Reasons for these differences can not be drawn from the survey but it is likely that the results are due to different organizational structures (coop versus private company) as well as different procurement mechanisms (contract farming versus livestock dealers).

4.3 On the relationship between contractual und relational governance

In a last step, the relationship between trust and relational potentials such as the willingness to cooperate, to recommend, to invest or to enter into a long-term relationship is analyzed for both companies by means of bivariate correlations.

Table 5: Correlations between trust and the potentials of business relations

| | Westfleisch | | Tönnies | |
|---|-------------|-------|---------|-------|
| | r | p | r | p |
| Willingness to cooperate (<i>factor</i>) | 0.619 | 0.000 | 0.446 | 0.001 |
| Willingness to invest (<i>factor</i>) | 0.213 | 0.111 | 0.427 | 0.002 |
| Willingness to switch buyer (<i>factor</i>) | - | - | -0.235 | 0.096 |

r = Pearson's correlation coefficient

p = level of significance

As far as Tönnies is concerned, it becomes obvious that significant correlations exist between suppliers trust and willingness to invest and to cooperate. Analogue calculations for Westfleisch only result in a very high and significant correlation with the willingness to cooperate (cf. Table 5). The unbound suppliers of Tönnies become more loyal at an increasing trust level. Still, this correlation is only significant at the 10 %-level.

The common opinion in economical research that trust stands as a substitute to formal contracts is queried by the results of our study. Altogether, both examples are indicative of a complementary relationship between trust and the formal coordination of the supply chain. Although preferring marketing contracts, Westfleisch enjoys a much higher trust level.

However, the differences pointed out in section 4.2 may also underlie differing legal forms and formal governance structures. Due to the cooperative structure, Westfleisch benefits from a significantly longer-term business relation. In this relation, the farmer's expectations of the Westfleisch management regarding fairness and competence are correlatively higher than of a private enterprise to which contacts take place only rarely or indirectly through livestock dealers. It is also worth mentioning that explanatory variables, such as benevolence, reputation or credibility have no impact on the Westfleisch model. Deficits at Tönnies as far

as communication and service are concerned presumably are due to the already mentioned great importance of intermediate traders who pursue their own interests and appear as gatekeepers in the communication process.

5 Conclusion

To our best knowledge, the present work is the first attempt to compare trust and its determinants across a range of enterprises. For the German meat sector, the low level of trust indicates a rather dysfunctional business relationship which is in line with reports of practitioners (LEHNERT 2004). We suggest that an increasing alienation between farmers and processors is a result of concentration of the industry and leads to a decrease in commitment and trust on both sides, and consequently to a loss of total chain performance.

Trust communication is complex because it is always counteracted by a danger of being perceived as not authentic public relations. Thus, we propose a comprehensive supplier relationship management concept which would go beyond trust communication because it would imply new internal management tools (e. g., supplier evaluation and development programs) as well as instruments to enhance vertical transparency, personal bonds, participation, complaint management etc. (RYDER and FEARNE, 2003; STOELZLE and HEUSLER, 2003). Further research is needed to gain a broader understanding of the general antecedents of trust and especially of the instruments needed to build trust in a sector coming from a very low level of reliability.

Due to the heterogeneous determinants of trust found within the same sector and region, scientists should be careful when inferring from sector-level results, particularly if they aim at giving normative recommendations for business management. Two of the most important determinants of the sector model have only a negligible importance for Tönnies.

Limitations of our study are especially caused by the relatively small samples on enterprise level. The samples of only two large enterprises provided significant results. To substantiate our conclusions, further research is needed in order to check if there are differences in trust building between private enterprises and cooperatives similar to those we found between Tönnies and Westfleisch. These analyses could be done in the meat sector but also in other branches. A basic approach could also be to develop different trust measurement models dependent on the governance structure.

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Appendix: Factors and individual means and standard deviations of the companies' scores

| Factors | Total | | Westfleisch | | Tönnies | |
|--|-------|----------|-------------|----------|---------|----------|
| | μ | σ | μ | σ | μ | σ |
| Results of 1st factor analysis | | | | | | |
| Factor Trust (Cronbach's Alpha = 0,73; 76 % variance explained ; KMO = 0,724) | | | | | | |
| Rank the trust in XY on a scale from 0 to 100. 0 = "XY tries to take me for a ride whenever possible."; 100 = "I can blindly trust in XY." | 64.27 | 18.788 | 66.77 | 17.819 | 58.68 | 17.513 |
| I can trust in XY. | 1.04 | 1.197 | 1.34 | 1.189 | 0.74 | 1.027 |
| From long-term experiences I know that I can trust in XY. | 0.87 | 1.275 | 0.95 | 1.169 | 0.46 | 1.235 |
| Results of 2nd factor analysis (65 % variance explained; KMO = 0,855) | | | | | | |
| Factor 1: Communication and service (Cronbach's Alpha = 0,84) | | | | | | |
| I often have contact with XY. | -0.96 | 1.723 | -0.36 | 1.706 | -1.60 | 1.223 |
| XY often gives me good advice concerning my production, etc. | -0.96 | 1.606 | -0.64 | 1.536 | -1.10 | 1.471 |
| I have a good, personal relationship with some of the employees at XY. | -0.41 | 1.915 | 0.33 | 1.859 | -1.33 | 1.409 |
| I always feel well-advised by XY. | -0.22 | 1.416 | 0.15 | 1.384 | -0.50 | 1.178 |
| XY takes farmers' problems seriously. | 1.349 | 1.821 | 0.31 | 1.249 | -0.18 | 1.212 |
| Factor 2: Management responsibility (Cronbach's Alpha = 0,76) | | | | | | |
| I perceive the managers of XY to be competent business people. | 1.11 | 1.202 | 1.26 | 1.144 | 1.40 | 1.015 |
| I believe XY will be successful in the long run. | 1.08 | 1.135 | 1.43 | 0.893 | 1.36 | 0.912 |
| I perceive the managers of XY to be: incompetent – competent. | 1.11 | 1.089 | 1.30 | 0.926 | 1.21 | 0.848 |
| XY is one of the best companies in the sector. | 0.73 | 1.165 | 0.86 | 1.052 | 1.07 | 1.120 |
| Factor 3: Lack of transparency of price grids (Cronbach's Alpha = 0,70) | | | | | | |
| Changes in price grids should be made public earlier. | 1.07 | 1.624 | 1.08 | 1.652 | 1.26 | 1.345 |
| The discounts that XY makes are unfair. | -0.13 | 1.517 | 0.09 | 1.538 | 0.16 | 1.268 |
| XYs' price grids are not comprehensible. | -0.82 | 1.405 | -0.86 | 1.285 | -0.40 | 1.348 |
| Price grids change too often at XY. | -0.77 | 1.522 | -0.14 | 1.509 | -0.67 | 1.480 |
| Factor 4: Cooperation orientation of the management (Cronbach's Alpha = 0,82) | | | | | | |
| I perceive the managers of XY to be: I perceive the managers of XY to be: condescend – like a partner. | 0.48 | 1.185 | 0.32 | 1.315 | 0.00 | 1.030 |
| I perceive the managers of XY to be: uncooperative – cooperative. | 0.66 | 1.151 | 0.59 | 1.146 | 0.31 | 1.025 |
| I perceive the managers of XY to be: unfair – fair. | 0.75 | 1.065 | 0.75 | 0.925 | 0.45 | 0.923 |
| Factor 5: Unreliability in daily operations (Cronbach's Alpha = 0,66) | | | | | | |
| XY is not reliable. | -1.43 | 1.413 | -1.56 | 1.416 | -1.09 | 1.430 |
| It often happens that agreements with XY are broken. | -0.97 | 1.672 | -1.00 | 1.728 | -0.80 | 1.641 |
| XY sometimes makes me wait too long for delivery, until the pigs are too fat. | -1.73 | 1.110 | -1.91 | 1.027 | -1.65 | 0.947 |
| XY exerts negative influence on my results through bad transportation practices. | -1.66 | 1.009 | -1.60 | 1.025 | -1.44 | 0.867 |
| Factor 6: Reputation (Cronbach's Alpha = 0,74) | | | | | | |
| XYs' image is not overwhelming. | -0.58 | 1.415 | -0.67 | 1.320 | -0.38 | 1.240 |
| XY has a good reputation in the sector. | 0.79 | 1.266 | 0.84 | 1.194 | 0.64 | 1.055 |
| Factor 7: Structural bonds (Cronbach's Alpha = 0,64) | | | | | | |
| I have many different slaughterhouses I can deliver to. | 0.68 | 1.547 | 0.03 | 1.682 | 0.50 | 1.417 |
| In my region there are relatively few marketing alternatives. | -1.19 | 1.488 | -0.65 | 1.653 | -0.67 | 1.637 |

