An Extended Transaction Cost Model of Decision Rights Allocation in Franchising: The Moderating Role of Trust

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This study develops and tests an extended transaction cost model to explain the structure of decision rights in franchising. Results show that the inclusion of trust in the transaction cost model supplements the transaction cost explanation of the allocation of decision rights in franchising. On the basis of the data from the German franchise sector, we found that environmental uncertainty has a negative effect on the allocation of decision rights to franchisees because the franchisor exercises more control over local outlet decisions when the local market environment is highly uncertain. Contrary to the traditional transaction cost view, we found that behavioral uncertainty has a positive effect on the allocation of decision rights to franchisees. This result implies that franchisors are more likely to delegate decision rights to franchisees when they encounter difficulties in measuring franchisees' performance and controlling their behavior. Finally, trust has a moderating effect on the relationship between transaction cost variables and franchisor's propensity to delegate decision rights to franchisees. Copyright © 2013 John Wiley & Sons, Ltd.

1. INTRODUCTION

Allocation of decision rights is one of the fundamental features of organizational design, as it has important implications for the governance and the boundaries of the firm. Franchisors govern their contractual relations by seeking an efficient allocation of decision rights between the headquarters and the franchisees. Decision rights refer to the use of both franchisor's system-specific assets, such as knowledge and skills in site selection, store layout, product and brand development, buying and merchandising, and franchisees' local market assets, such as their local market know-how in advertising, customer service, quality control,

human resource management, and product management (Mumdziev and Windsperger, 2011). This study presents an extended transaction cost analysis of the allocation of decision rights in franchising networks. Specifically, trust has been included as a moderator on the relationship between the transaction cost determinants and the franchisee's fraction of decision rights.

Trust can be defined as the expectation that an exchange partner will not engage in opportunistic behavior, even in the face of tempting short-term incentives (Mayer *et al.*, 1995). Traditional transaction cost literature has neglected the impact of trust on inter-organizational governance (e.g., Williamson, 1985), as it primarily focuses on transaction cost effects of environmental uncertainty, behavioral uncertainty, and transaction-specific investments. However, Williamson acknowledged in a later study (1991) that

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trust functions as a shift parameter by influencing the comparative cost of governance, and businessmen rely on trust much more than initially assumed.

A combination of transaction costs and relational variables, such as trust, has been extensively analyzed in the inter-organizational alliances' context (e.g., Bradach and Eccles, 1989; Gulati, 1995; Zaheer and Venkatraman, 1995; Nooteboom et al., 1997; Poppo and Zenger, 2002; Lui and Ngo, 2004; Mellewigt et al., 2007; Ryu et al., 2008; Hoffmann et al., 2010). For instance, Bradach and Eccles (1989) argued that trust affects economic exchange, serving as a powerful control mechanism, as it reduces the hazard of opportunism and thus the need for formal governance. Gulati (1995) analyzed the choice between equity and nonequity alliances on the basis of a sample of over 2,400 inter-firm alliances across different sectors. The results indicate that firms tend to choose governance structures with less control as they build confidence in their partners. Zaheer and Venkatraman (1995) developed a transaction cost model extended by the relational variable of trust and test its impact on the inter-organizational vertical control strategy with a sample of 329 insurance agencies. They found that higher trust exists in closer relationships between agencies and their carriers. The results indicate that two combined perspectives explain a significantly greater proportion of variance.

Most of the inter-organizational governance literature analyzes trust as a main effect within the transaction cost framework. The role of trust as a moderator has received much less attention (for exceptions, see: Lui and Ngo, 2004; Mellewigt et al., 2007; Ryu et al., 2008; Hoffmann et al., 2010). Lui and Ngo (2004) analyzed architect–contractor partnerships by extending transaction cost model with trust, as an alternative control mechanism. They show that trust has a moderating effect on the relationship between contractual safeguards and cooperative outcomes. Mellewigt et al. (2007) analyzed the moderating influence of trust on the relationship between asset specificity and contractual complexity. They confirm that trust mitigates opportunism risk and reduces contractual complexity as a control device. Ryu et al. (2008) tested the moderating role of trust in the relationship between environmental uncertainty and the propensity for vertical control in buyer–supplier relationship. Their results indicate that firms tend to loosen vertical control when they trust their exchange partners. Finally, Hoffmann et al. (2010) analyzed the role of trust in the firm's decisions to vertically integrate or cooperate. The results confirm both an opportunism-mitigating effect of trust that lowers transaction costs and an opportunism-independent effect that increases the transaction value of the cooperation.

Despite the large number of studies on trust in inter-firm alliances, few studies investigate the role of trust within the franchising context (with the exception of Dickey et al., 2007; Cochet et al., 2008; Davies et al., 2011; Lopez-Fernandez and Lopez-Bayon, 2011). Dickey et al. (2007) investigate the influence of trust on franchisees' behavior and attitude toward the franchisor. They argue that trust plays a critical role in reducing franchisees' opportunistic behavior in areas that are not covered by the contract. On the basis of a sample of 92 US franchisees, they demonstrate that franchisees' trusting belief in franchisors does reduce opportunistic noncompliance. Trust facilitates franchisees' positive attitudes, such as satisfaction and perceived franchisor–franchisee relationship quality. They also found that trust in the franchisor's competence reduces the number of implemented innovations that were not approved by franchisors, which is also considered to be a form of opportunistic behavior. Cochet et al. (2008) analyzed franchisors' reliance on relational governance mechanisms (such as trust) to attenuate agency problems that arise from franchisee autonomy. On the basis of a sample of 208 franchisor–franchisee dyads from the German franchise sector, they show that franchise firms use relational governance to counterbalance their loss of control associated with allocation of decision autonomy to individual franchisees. Recently, Lopez-Fernandez and Lopez-Bayon (2011) found that trust has a positive effect on the degree on the franchisees' autonomy. Davies et al. (2011) constructed and tested a relational exchange model that demonstrates how trust affects franchisee compliance. The findings confirm that both the level of satisfaction and conflict jointly determine the overall level of franchisee trust. More specifically, increased conflict reduces the level of trust, which consequently reduces franchisee's compliance.

This study develops an extended transaction cost model to explain the allocation of decision rights in franchising networks by including trust as a moderator on the relationship between the transaction cost determinants (behavioral uncertainty, environmental uncertainty, and transaction-specific investments) and franchisee's fraction of decision rights. According to the transaction cost theory, the allocation of decision rights aims at reducing transaction costs, due to transactional uncertainty and transaction-specific investments. We found that behavioral uncertainty has a positive effect and environmental uncertainty a negative effect on the delegation of decision rights to franchisees. Furthermore, we demonstrate that the inclusion of trust

in the transaction cost theory model supplements the explanation of the allocation of decision rights offered by the transaction cost theory. Our results confirm the moderating role of trust, showing that trust increases allocation of decision rights to franchisees as it alleviates opportunism risk and increases information sharing between the franchisor and the franchisees.

This study contributes to the literature in three important ways. Firstly, we extend the existing literature (mainly based on agency and property rights theory) that deals with decision rights in franchising (Arrunada *et al.*, 2001; 2005; Windsperger, 2004; Azevedo, 2009; Lopez-Fernandez and Lopez-Bayon, 2011; Mumdziev and Windsperger, 2011) by developing a transaction cost explanation of the allocation of decision rights. Secondly, we add to the literature that deals with trust in franchising (Dickey *et al.*, 2007; Cochet *et al.*, 2008; Croonen, 2010; Davies *et al.*, 2011; Lopez-Fernandez and Lopez-Bayon, 2011) by analyzing the impact of trust on the allocation of decision rights. Thirdly, this study extends the transaction cost literature by testing the role of trust as a moderator between the transaction cost variables (uncertainty and transaction-specific investments) and the franchisors' propensity to allocate decision rights to the franchisees. Adding trust as a moderator increased significantly the explanatory power of the transaction cost model. Finally, this study contributes to the literature of formal and informal governance in inter-organizational alliances (e.g., Gulati, 1995; Zaheer and Venkatraman, 1995; Poppo and Zenger, 2002; Lui and Ngo, 2004; Mellewigt *et al.*, 2007; Ryu *et al.*, 2008; Hoffmann *et al.*, 2010). We corroborate the findings of this literature, by showing that the combination of transaction cost determinants and trust provides an explanation of the governance choice in franchisor–franchisee relationships.

The paper is organized as follows: Derived from the analytical framework, we present in Section 2 the hypotheses of the extended transaction cost model of decision rights allocation in franchising. The data and the results of the empirical analysis are presented in Section 3. Finally, we summarize and discuss the results in Section 4, whereas Section 5 presents the conclusions of the study.

2. ANALYTICAL FRAMEWORK AND HYPOTHESES

The analytical framework consists of two sets of hypotheses. The first set refers to the hypotheses derived from the traditional transaction cost theory.

These hypotheses predict the impact of behavioral and environmental uncertainty, as well as transaction-specific investments on the allocation of decision rights to franchisees. The second set of hypotheses refers to the moderating effect of trust.

2.1. Behavioral Uncertainty, Trust, and Decision Rights

According to the transaction cost theory, behavioral uncertainty results from various forms of dishonest behaviors such as cheating and shirking (Hennart, 1993; Rindfleisch and Heide, 1997; Sutcliffe and Zaheer, 1998; Geyskens *et al.*, 2006). Williamson views behavioral uncertainty as a strategic nondisclosure, disguise, or distortion of information on the part of a transaction partner (1985, p.57). Some early studies that applied the transaction cost theory (e.g., Anderson and Schmittlein, 1984; Anderson and Gatignon, 1986) defined this concept as an internal uncertainty that exists when a firm cannot accurately measure agent's performance, due to opportunistic behavior. John and Weitz (1988) showed that behavioral uncertainty relates positively to the manufacturers' propensity of choosing vertically integrated distribution channels. Sutcliffe and Zaheer (1998) confirmed the positive relationship between behavioral uncertainty and vertical integration as predicted by the transaction cost theory. Geyskens *et al.* (2006) conducted a meta-analysis of empirical studies in various disciplines and contexts, which test the effect of transaction cost determinants on the choice between market and hierarchy. Their results confirm the prediction of the transaction cost theory that behavioral uncertainty increases the tendency toward hierarchical governance modes. Recently, by testing a transaction costs framework to explain the firms' make-or-cooperate decisions, Hoffmann *et al.* (2010) found that increased measurement difficulties of partners' performance significantly increase the tendency to vertically integrate.

Applying this transaction cost reasoning to franchising, behavioral uncertainty increases the franchisor's opportunism risk that arises in the form of dishonest and detrimental behavior of franchisees, such as cheating, shirking, or distortion of information. To reduce the risk of franchisee's opportunistic behavior, the franchisor exercises greater control over the transaction partner's activities. One way to increase control is to centralize decision making. Accordingly, we expect a negative relationship between behavioral uncertainty and the franchisees'

fraction of decision rights. Therefore, we formulate the following hypothesis:

H1
The franchisees' proportion of residual decision rights is negatively related to the franchisor's perception of behavioral uncertainty.

In their study on the firms' make-or-cooperate decision, Hoffmann *et al.* (2010) analyze the moderating effect of trust on the relation between performance measurement difficulties and vertical integration. The empirical results confirm the attenuating effect of trust on the probability to vertically integrate. They show that trust lowers fear of opportunistic behavior by the transaction partner, resulting in a less need for monitoring and control. Applied to franchising, if franchisees are perceived as trustworthy, franchisors' perception of behavioral uncertainty and hence their propensity to use formal control mechanisms can be reduced. Trustworthy franchisees are expected to be open, honest, and ready to share information with their franchisors. Consequently, they need to be less monitored, even if franchisors have difficulties in measuring their performance and competences. As a result, the higher the level of trust, the lower is the franchisor's necessity for hierarchical control through centralization of decision making. Consequently, we can derive the following hypothesis:

H1a
The relationship between behavioral uncertainty and the franchisees' proportion of decision rights is less negative under high trust.

2.2. Environmental Uncertainty, Trust, and Decision Rights

Environmental uncertainty arises when contingencies that characterize the context of economic exchange become difficult to predict and cannot be specified ex ante in the contract (Geyskens *et al.* 2006). According to the control view of governance (Williamson, 1975), firms increase their information-processing capacity by implementing elements of hierarchy if the coordination and control requirements increase because of environmental uncertainty. Stinchcombe (1990) asserted that organizations implement more elements of hierarchy when the degree of uncertainty increases. Similarly, Noordewier *et al.* (1990) showed that environmental uncertainty is positively related with the firm's level of control. John and Weitz (1988) analyzed the effects of

environmental uncertainty on the forward integration in distribution channels. Their empirical data support the positive relationship between environmental uncertainty and vertical integration. They argue that authority structures facilitate more adaptive decision making and enable quicker resolution of conflicts that arise from the different interpretation of environmental changes. Similarly, the meta-analysis of 200 transaction cost theory studies by Geyskens *et al.* (2006) shows that of environmental uncertainty increases the tendency toward hierarchical governance.

If we apply this transaction cost reasoning to franchising, a similar tendency toward higher control by the franchisor will be expected under increasing environmental uncertainty. Specifically, under increased environmental uncertainty, the franchisors can respond by setting up a governance structure that enhances the ability to react to volatile environmental situations. Therefore, when franchisors perceive increased environmental uncertainty, they tend to increase control over operational decisions at the local markets. Accordingly, the following hypothesis is formulated:

H2
The franchisees' proportion of residual decision rights is negatively related to environmental uncertainty.

In the context of supplier–manufacturer dyads, the results of Ryu *et al.* (2008) indicate that trust negatively moderates the relationship between the manufacturer's perception of environmental uncertainty and the propensity to control its supplier. Applied to franchising, that means that in high-trust relationships, which facilitate information exchange and reduce opportunistic behavior between the partners, franchisors will rely more on the delegation of decision rights to franchisees when environmental uncertainty increases. This expectation is summarized by the following hypothesis:

H2a
The relationship between environmental uncertainty and the franchisee's proportion of the decision rights is less negative under high trust.

2.3. Transaction-specific Investments, Trust, and Decision Rights

Transaction-specific assets are assets tailored for a specific transaction, which makes them difficult to redeploy or to use outside the particular transaction (Geyskens *et al.* 2006). Franchisees are required to make particular transaction-specific investments when

they enter a franchise system and set up local outlets. These investments include obtaining and adapting premises, tools and equipment, specific software or computer systems, advertising costs of launching of the new business, and others. Much of the equipment and fittings are trademarked, which makes the investments in such highly specific assets sink (Dnes, 1993). As transaction-specific investments of franchisees increase, their quasi-rents are likely to exceed the potential hold-up gains from opportunistic behavior, creating a bonding effect. Hence, this bonding effect increases the self-enforcing range of contracts (Klein, 1995, 1996, 2000). This self-enforcing effect of transaction-specific investments in turn decreases the costs related to controlling and monitoring franchisees, thereby reducing the franchisor's need to exercise more control over franchisees' actions. Hence, we can formulate the following hypothesis:

H3

The franchisees' proportion of residual decision rights is positively related to the franchisees' transaction-specific investments.

Because transaction-specific investments lead to higher quasi-rents, which in turn increase the franchisees' motivation to cooperate, higher trust can additionally increase the quasi-rent-generating effect of transaction-specific investments. This effect further increases the self-enforcing range of contract (Hwang, 2006). In this situation, the franchisor reduces hierarchical control by transferring a higher fraction of decision rights to the franchisees, relative to a situation with a lower level of trust. Therefore, the positive effect of transaction-specific investments on the allocation of decision rights

to the franchisees will be stronger in a high-trust situation. We formulate the following hypothesis:

H3a

The relationship between transaction-specific investments and the franchisees' proportion of decision rights is increasingly positive with higher levels of trust.

2.4. Summary of the Research Model

As described earlier, our research model consists of the three transaction cost determinants: behavioral uncertainty, environmental uncertainty, and transaction-specific investments (H1, H2, and H3; Figure 1). In addition, we hypothesize that trust moderates the impact of behavioral uncertainty, environmental uncertainty, and transaction-specific investments with regard to the delegation of decision rights to franchisees (see H1a, H2a, and H3a).

3. EMPIRICAL ANALYSIS

3.1. Data Collection

The empirical data for this study were collected via questionnaires from German franchise systems. To obtain the list of all franchise systems active in Germany and their contacts, we used the directory of the German Franchise Federation (DFV) and 'Franchise Wirtschaft' (a Bond's Franchise Guide-type directory published in Germany). The questionnaire was developed in several steps, refined, and discussed within in-depth interviews with franchise experts and practitioners. Finally, we conducted a pretest with 20
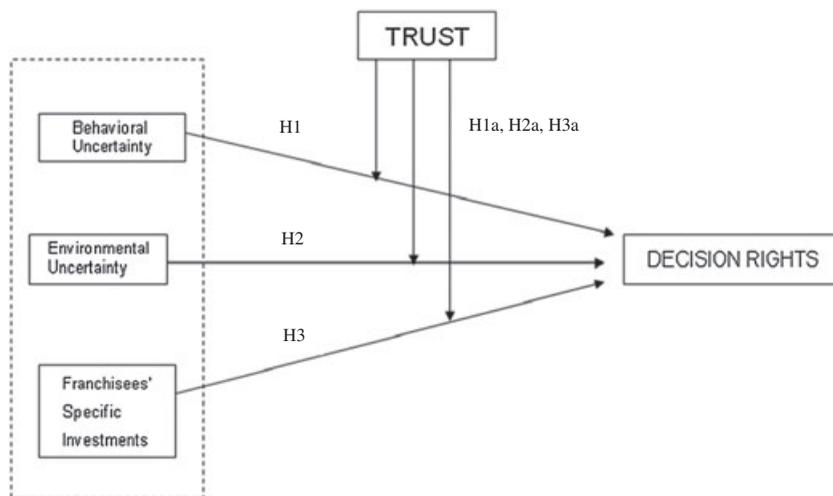

Figure 1. Research Model.

franchisors in Austria. We used the key informant approach for the data collection (McKendall and Wagner, 1997) to choose the respondents. Most of them were senior managers responsible for the franchise expansion. The questionnaires were sent to 491 relevant franchise systems. We received 137 completed questionnaires, which is a response rate of about 28%. The nonresponse bias was estimated by comparing early versus late respondents (Armstrong and Overton, 1977). Furthermore, the respondents were also compared regarding their age, size, advertising fee, and royalties to determine whether nonresponse was a problem for the data, because these variables were available in the Franchise Wirtschaft. On the basis of the study by Podsakoff et al. (2003), we used Harman's single-factor test to examine whether a significant amount of common method variance exists in the data. Common method bias could not be corroborated.

3.2. Variables

3.2.1 Dependent variable

Decision rights. On the basis of the measure developed by Windsperger (2004), residual decision rights are measured by asking franchisors to assess the influence of franchisee's on the following decisions: selection of suppliers, price decision, product/service offering, advertising decision, recruitment and training on the outlet level, choice of investment projects and financing of investment projects on the outlet level, application of accounting and controlling system. The strength of franchisees' influence on those decisions was assessed on a seven-point scale (1 = no influence, 7 = very high influence). By averaging the scale values, we constructed a decision index varying between 1 and 7. The higher the index, the higher is the franchisee's influence on residual decision making, that is, franchisees' fraction of decision rights.

Since the dependent variable is an index based on formative indicators, development and validation of the measure followed a procedure suggested by Diamantopoulos and Winklhofer (2001). After defining the domain of the index, a list of possible operational decisions was created by drawing upon the existing literature and applying Porter's value chain concept (Porter, 1985) and by conducting exploratory discussions with franchise practitioners. The scale was then purified and validated through an iterative process. It was, however, important to retain all indicators which fully capture the domain of the construct (DeVellis, 2003; Diamantopulous and Winklhofer,

2001; MacKenzie et al., 2005). The validation process was carried out with the help of AMOS software. The validity of indicators was assessed by constructing a multiple indicators and multiple causes (MIMIC) model, which allows for simultaneous estimation of the parameters and the test of the overall model fit. Jarvis et al.(2003) argue that MIMIC represents an ideal alternative to testing validity of a formative construct, as the formative constructs is not dependent upon the structural model and can be either an exogenous or endogenous construct. It is also not restricted by any theoretical constraints, enabling the use of the construct in the future research as well. The relevant model fit indicators resulted in acceptable values. The correlation coefficients between indicators were positive and relatively low, indicating no problems with multicollinearity. Finally, all variance inflation factors were far below the suggested threshold of 10 (Kleinbaum et al., 1988; Belsley et al., 1980).

3.2.2 Independent variables. The development of the reflective measures followed the procedure suggested by Churchill (1979). After defining the specific domain of each construct, items were generated from the relevant studies, which used similar constructs. Focus groups and interviews with franchise professionals helped to refine the final questionnaire and measurement items. The properties of the reflective latent variables were examined in several ways. First, the exploratory factor analysis was conducted for each construct to check unidimensionality. Furthermore, the same procedure was run for all constructs simultaneously to check if the same factor structure emerged. Both steps of the analysis supported the choice of the item sets. Reliability of reflective constructs was assessed by computing Cronbach's alpha estimates (Cronbach, 1951).

Trust. We measure partner-related trust with four items by asking the franchisor to assess the following items on a seven-point Likert scale: level of confidence between them and their franchise partners, atmosphere of openness and honesty with their partners, readiness of franchisees to cooperate when they are trusted, and trustworthiness of their franchise partners. Our indicators focus on the behavioral dimension by conceptualizing trust as the confidence the franchisors have regarding the reliability and integrity of the network partners (e.g., Seppänen et al., 2007). All factor loadings exceed the threshold of 0.70. Reliability analysis was assessed by Cronbach's alpha (0.87).

Behavioral uncertainty. Behavioral uncertainty arises from the inability to monitor and control the

performance of the local partners (Williamson, 1991; Rindfleisch and Heide, 1997). Similar to Zaheer and Venkatraman (1995) and John and Weitz (1989), we measure behavioral uncertainty by asking respondents to assess the following items on a seven-point Likert scale: difficulty to measure performance, control behavior and assess the capabilities, and competencies of the local managers (franchisees). Factor analysis confirmed the underlying construct, with all variables loading above the threshold of 0.70. Cronbach's alpha is 0.758.

Environmental uncertainty. This measure is based on Celly and Frazier (1996), and John and Weitz (1988). We asked the respondents to assess the following items on a seven-point Likert scale: possibility to forecast the local market development and fluctuations of outlet sales at the local market. Cronbach's alpha is 0.56, which is relatively low. However, recent research assigns more significance to maximize validity rather than internal consistency (John and Benet-Martinez, 2000). According to Pedhazur and Schmelkin (1991), reliabilities above 0.5 can be viewed as acceptable under the condition of construct validity.

Franchisees' transaction-specific investments. According to the transaction cost theory, the governance form is influenced by the transaction-specific investments of the franchisees (Williamson, 1983; Klein, 1995). In line with the findings of Dnes (1993), franchisees' transaction-specific investments were measured as the monetary value of franchisees' initial investments in tools, equipment, and other fittings to set up a local outlet, as required and prescribed by franchisors. To ensure the precondition of linearity, necessary for the linear regression analysis, the logarithmic transformation was applied to normalize the skewed distribution.

3.2.3 *Control variables.*

Sector. This is a dichotomous variable: 0 refers to services franchising and 1 to product franchising. Because of the different know-how intensity of product and services firm, their impact on the allocation of decision rights may also differ.

Size. The size of the network was operationalized by the total number of outlets. From the transaction cost perspective, larger firms have a higher coordination and control capacity (Erramilli and Rao, 1993). Therefore, we expect that larger franchise firms can realize economies of coordination and monitoring, thereby increasing control over operational decisions.

3.3. SUMMARY STATISTICS

Table 1a shows the descriptive statistics. The sample of 127 German franchise systems contains 81 'service franchising' and 46 'product franchising' systems. The decision rights index has a minimum value of 2.25 and the maximum of 7. The closer the index values are to 7, the stronger the franchisees' influence on operational decisions. A mean of 5.13 indicates relatively high influence of franchisees on the analyzed decisions.

The descriptive statistics regarding the components of the dependent variable (decision rights index) is specified in Table 1b. The values from 1 to 7 represent the extent to which franchisees have influence on a

Table 1a. Descriptive statistics

	N	Minimum	Maximum	Mean	Standard deviation
Sector	127				
Product franchising	46				
Service franchising	81				
Size	118	1	2520	155.84	328.42
Franchisees' specific investments	114	600	205,000	130,942.4	22,819.40
Decision rights index	127	2.25	7	5.13	0.10
Behavioral uncertainty					
Measurement of performance	127	1	7	3.33	0.140
Control of behavior	127	1	7	4.20	0.136
Assessment of capabilities	127	1	7	3.35	0.139
Environmental uncertainty					
Market development predictions	127	1	7	3.78	0.145
Outlet sales predictions	127	1	7	4.01	0.160
Trust					
Cooperation on partnership basis	127	1	7	6.10	0.094
Information exchange between partners	127	1	7	5.38	0.124
Existence of trust between partners	127	1	7	5.83	0.099
Openness and honesty between partners	127	1	7	5.87	0.097

Table 1b.   Descriptive statistics for the decision rights variable

	N	Minimum	Maximum	Mean	Standard deviation
Investment decisions	124	1	7	5.65	1.664
Financing decisions	125	1	7	5.64	1.802
Supplier decisions	126	1	7	4.33	1.971
Recruiting decisions	127	1	7	6.16	1.692
Employee training decisions	127	1	7	5.54	1.703
Product decisions	127	1	7	4.86	1.910
Price decisions	126	1	7	5.30	1.869
Advertising decisions	127	1	7	5.56	1.395
Accounting system decisions	126	1	7	4.69	1.982

Table 2.   Correlations between regression variables

	Decision rights	Sector	Size	Behavioral uncertainty	Environmental uncertainty	Specific investments	Trust
Decision rights	1						
Sector	0.038	1					
Size	0.160	0.053	1				
Behavioral uncertainty	0.370**	−0.045	0.071	1			
Environmental uncertainty	−0.085	−0.102	0.014	0.129	1		
Specific investments	0.021	−0.011	0.088	0.061	−0.313**	1	
Trust	0.357**	0.096	0.045	−0.056	−0.365**	0.056	1

**Correlation is significant at the 0.01 level (two-tailed). *Correlation is significant at the 0.05 level (two-tailed).

particular decision (1 = no influence on the decision; 7 = very high influence on the decision). Generally, we can divide them into values <5.00 and >5.00. The mean values that are <5.00 refer to the decisions regarding suppliers, product, and controlling system. These decisions are closely related to the business concept (e. g., which product to offer, which suppliers will provide final or intermediary products, and which controlling system to use). On the other hand, the decisions such as recruitment, employee training, advertising, and price decisions, as well as investments and financing, are under stronger influence of the franchisees. This may indicate that franchisees' local market knowledge and managerial capabilities play a more important role for these decisions.

Table 2 presents the correlations between the variables used in the regression analysis. None of the correlations seem to be large enough to indicate concern about multicollinearity (Hair *et al.*, 1998).

3.4. REGRESSION RESULTS

The hypotheses are tested by applying multiple regression analysis. Results are shown in Table 3. Model 1 includes only the control variables. Model 2 includes

the transaction cost variables (environmental uncertainty, behavioral uncertainty, and transaction-specific investments) and tests the hypotheses H1, H2, and H3. The moderating effect of trust, hypothesized by H1a, H2a, and H3a, is tested in models 3–6.Model 1 shows that the control variables have no significant effects on allocation of decision rights. Model 2 includes behavioral uncertainty, environmental uncertainty, and franchisees' transaction-specific investments, which then tests the first-order effects on the franchisees' proportion of decision rights. Behavioral uncertainty has a positive and strongly significant influence on the delegation of decision rights ($\beta = 0.424$; $p < 0.01$). Although the coefficient is significant, this result does not confirm the transaction cost hypothesis H1. A positive sign of the coefficient implies that the franchisors delegate more decision rights when they encounter difficulties in measuring franchisees' performance and controlling their behavior. This result is compatible with the incentive view of delegation (Aghion and Tirole, 1997). Under higher behavioral uncertainty, the franchisors provide more incentives by delegation of operational decisions. This result is significant across all tested models. The negative coefficient of environmental uncertainty is slightly supportive of the hypothesis H2 ($\beta = -0.177$; $p < 0.10$). This result confirms that franchisors tend to implement more elements of hierarchy, that is,

Table 3. Regression results[+]

Dependent variable: decision rights index	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	5.190*** (0.136)	5.248*** (0.102)	5.262*** (0.090)	5.352*** (0.091)	5.270*** (0.092)	5.360*** (0.088)
Control variables						
Sector	+0.032 (0.220)	+0.096 (0.212)	+0.094 (0.189)	+0.115 (0.089)	+0.065 (0.093)	+0.115 (0.086)
Size	+0.154 (0.000)	+0.117 (0.001)	+0.102 (0.088)	+0.098 (0.085)	+0.093 (0.090)	+0.102 (0.082)
Main effects						
H1: Behavioral uncertainty		+0.424** (0.102)	+0.504*** (0.096)	+0.542*** (0.094)	+0.437*** (0.096)	+0.550*** (0.092)
H2: Environmental uncertainty		−0.177* (0.112)	−0.089 (0.115)	−0.089 (0.108)	−0.036 (0.113)	−0.174** (0.110)
H3: Franchisees' specific investments		+0.102 (0.113)	−0.084 (0.101)	−0.152* (0.100)	−0.081 (0.108)	−0.075 (0.100)
Trust			+0.418*** (0.099)	+0.320*** (0.097)	+0.378*** (0.101)	+0.290*** (0.099)
Moderating effects of trust						
H1a: Trust × Behavioral uncertainty			−0.200** (0.095)			−0.163* (0.095)
H2a: Trust × Environmental uncertainty				+0.290*** (0.081)		+0.369*** (0.090)
H3a: Trust × Specific investments					+0.052 (0.094)	+0.268*** (0.098)
N	116	101	101	101	101	101
F-test	1.518	6.055***	8.874***	10.379***	7.907***	9.812***
R^2	0.026	0.240	0.398	0.436	0.371	0.490
Adjusted R^2	0.009	0.200	0.353	0.394	0.324	0.440

[+]Standardized regression coefficients are reported. ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$.

centralized decision making, when the degree of external uncertainty increases. As expected, the coefficient of initial investments, representing the effect of franchisee's transaction-specific investments on the allocation of decision rights, has a positive sign, but the coefficient is not significant. Hence, hypothesis H3 cannot be confirmed.

In models 3–6, we use moderated regression analysis to examine the moderating effects of trust on the allocation of decision rights (Sharma *et al.*, 1981). For the analysis, the scores of the main effects are mean-centered to avoid problems of multicollinearity. The correlations between the interaction terms and the centered main effect variables do not indicate any problems with multicollinearity. In addition, we control the variance inflation factors, which indicate how much of the estimated variance is increased due to the multicollinearity. All estimates are below the value of 2, indicating no concerns with multicollinearity (Belsley *et al.*, 1980).

Model 3 tests the moderating effect of trust on the relationship between behavioral uncertainty and decision rights allocated to franchisees. H1a hypothesized that the negative relationship between behavioral uncertainty and franchisee's portion of decision rights will be reduced under high trust. The interaction coefficient is negative and significant ($\beta = -0.200$, $p < 0.05$), indicating that trust as an implicit bond weakens the positive impact of behavioral uncertainty on the delegation of decision rights. Consequently, under high performance measurement difficulties, the franchisors have less need to delegate decision rights as formal incentives when they trust their partners. Furthermore, the results show that both the main effects—behavioral uncertainty and trust—and their interaction terms are statistically significant. This means that trust not only interacts with behavioral uncertainty but also directly impacts the delegation of decision making to franchisees. Trust is therefore a quasi-moderator (Sharma *et al.*, 1981). Its moderator effect is thus not clear, as each of the interaction components (behavioral uncertainty and trust) could be interpreted as a moderator. However, the transaction cost theory provides the theoretical justification for treating trust as a moderator variable, as the traditional transaction cost theory neglects the existence of trust between transaction partners and its effect on the governance choice.[1] The effect of this interaction term is also confirmed in model 6, where all interaction terms are included in the model.

In model 4, we test H2a, which predicts that trust will weaken the negative effect of market uncertainty on the allocation of decision rights to franchisees. The interaction coefficient is positive and strongly

significant ($\beta = 0.290$, $p < 0.01$), indicating that under high trust, franchisors increase the delegation of operational decisions to franchisees, as environmental uncertainty increases. Therefore, the negative effect of environmental uncertainty becomes weaker under high trust. The main effect of environmental uncertainty, although negative as expected, is not significant. Similar to model 3, trust is a quasi-moderator, as its main effect is statistically significant. This moderation effect also remains statistically significant in model 6.

Model 5 provides results for the hypothesis H3a, which predicts a positive moderating effect of trust on the relationship between franchisees' initial investments and decision rights. Although positive as expected, the coefficient of the interaction term is not statistically significant. Finally, model 6 provides regression results with all three interaction terms included in the regression analysis. In this model, all interaction effects are statistically significant. Compared with the results in model 5, the moderating effect of trust on the relationship between initial investments and decision rights is significant and positive as expected ($\beta = 0.378$, $p < 0.01$). This provides support for hypothesis H3a. Because trust increases the quasi-rent-generating effect of transaction-specific investments, the delegation-increasing effect of higher transaction-specific investments rises under high trust. The coefficient of trust as the main effect is also positive and strongly significant ($\beta = 0.290$, $p < 0.01$). The adjusted R^2 reaches 0.44, indicating that the model explains 44% of the variance. Overall, the empirical results provide some support of the transaction cost hypotheses. In addition, the results show that trust as a moderator has significantly improved the explanatory power of the transaction cost model.

4. DISCUSSION

4.1. Findings

This paper presents an extended transaction cost model of the decision rights allocation in franchising. The empirical results from the German franchise sector provide partial support of our transaction cost hypotheses. Firstly, consistent with the transaction cost theory prediction, the relation between environmental uncertainty and franchisees' influence on operational decisions is negative. Specifically, when franchisors perceive higher market and demand uncertainty, they impose higher control over operational decisions, hence reducing franchisees' influence on decision making.

Secondly, we find that behavioral uncertainty has a positive effect on the allocation of decision rights to franchisees. In contrast to the traditional transaction cost interpretation, these findings imply that franchisors tend to delegate decision rights to franchisees when they encounter difficulties in measuring performance of the franchisees. This result is compatible with the incentive view of delegation, proposed by Aghion and Tirole (1997). They suggest two main benefits of the delegation of authority to agents: (i) it increases an agent's incentive to acquire information and to search for and develop projects; and (ii) it facilitates an agent's participation in the contractual relationship. Consequently, in a situation of high behavioral uncertainty, the franchisor provides incentives and facilitates franchisees' participation by delegating decision authority instead of tightening control.

Thirdly, our results provide strong evidence of the moderating role of trust in the relationships between the transaction cost variables and the franchisees' fraction of decision rights. We find that trust reduces the negative impact of environmental uncertainty on franchisor's control over operational decisions. In a situation of high environmental uncertainty, the franchisors will transfer more decision rights to the franchisees if they are perceived to be trustworthy. This result is similar to the findings of Ryu *et al.* (2008), who found that trust weakens the positive relation between manufacturers' perception of environmental uncertainty and their propensity for vertical integration. Furthermore, we find that trust as an implicit bond weakens the impact of behavioral uncertainty on the delegation of decision rights. Therefore, in a high-trust situation, the franchisors have a less need for delegating decision rights as formal incentives. Finally, we find that trust increases the bonding effect of transaction-specific investments, hence strengthening its positive impact on delegation of decision rights to franchisees. Interestingly, the results show that trust functions as a quasi-moderator, as it has statistically significant direct and indirect effects on the dependent variable. Although the moderating effect of trust is significant, a significant main effect of trust is not expected by the transaction cost theory. This result could be explained from a relational governance perspective. This view sees trust as a principal mode of informal control (Ring and Van de Ven, 1992), which implies that the franchisor's reliance on the goodwill and integrity of the network partners (Ring, 1996) has a direct impact on the governance choice. Contrary to this view, the role of trust in transaction cost theory depends on its capacity to reduce the likelihood of opportunistic behavior by

an exchange partner. Consequently, trust has a moderating role on the impact of the transaction cost variables on the choice of formal governance (i.e., allocation of decision rights). In conclusion, our empirical results demonstrate that considering trust in the transaction cost model supplements the explanation of the allocation of decision rights in franchising offered by the transaction cost theory.

4.2. Implications for Theory and Practice

This study has important implications for both researchers and franchisors. Complementary to the agency-theoretical and property rights perspectives (Arrunada *et al.*, 2001, 2005; Windsperger, 2004; Azevedo, 2009), we develop an extended transaction cost explanation of the decision rights allocation in franchising networks. We find partial support for the impact of the transaction cost variables on the allocation of decision rights between the franchisor and the franchisees. The transaction cost model was extended by considering the moderating effect of trust. The results are largely supportive of these moderator-related hypotheses. In general, our results corroborate the findings of the inter-firm alliance literature, which shows that trust mitigates opportunism risk and that firms tend to loosen control when they trust their exchange partners. Therefore, we contribute to the literature by showing that the structure of decision rights in franchise networks can be partially explained by the transaction cost variables and that the inclusion of trust plays an essential role in increasing the explanatory power of the model.

The results of our study yield practically relevant knowledge for franchisors and franchisor-managers. On the one hand, on the basis of the incentive view of delegation, the franchisor should delegate a higher fraction of decision rights to the franchisees when behavior control and performance measurement at the local outlet are difficult. On the other hand, the transaction cost view suggests that the franchisor should increase control over operational decisions when environmental uncertainty is high. Furthermore, the results of this study show that trust has a substantial influence on the allocation of decision rights in franchise relationships. For the franchisors, it underlines the necessity to develop and maintain trustful relationships with their franchisees. Franchisor or franchisor-manager has always to consider in their governance decisions that trust-based relationships with franchisees will additionally increase the advantages through delegation.

4.3. Limitations

Our study has some important limitations: Firstly, the influence of the variables used in the regression analysis depends on measures based on the franchisors' evaluation. However, franchisors' assessment could to some extent deviate from franchisees' evaluations. To include both perspectives would contribute to the reliability of the measures. Secondly, because franchising networks evolve, the role of trust might vary with the relationship cycle. To grasp the dynamics of trust between the franchise partners, a longitudinal design would be beneficial. A third limitation of this study is that we examined the impact of transaction cost variables and trust on decision rights without investigating the performance implications of the decision rights allocation for the franchisor. Future research has to investigate the relationship between the decision structure and the efficiency of the franchise systems.

5. CONCLUSION

This study offers an extended transaction cost explanation of the allocation of decision rights in franchising. We demonstrate that considering trust in transaction cost theory supplements the explanation offered by the transaction cost theory on the allocation of decision rights in franchising. The results indicate that trust moderates the impact of transaction cost variables on the allocation of decision rights between the franchisor and the franchisees. Overall, we contribute to the franchising literature by constructing and testing an extended transaction cost model to explain the structure of decision rights in franchising networks. Furthermore, this study contributes to the literature on the relationship between formal governance and trust. Consistent with the studies that applied relational governance view (e.g., Poppo and Zenger, 2002; Lui and Ngo, 2004; Yu *et al.*, 2006; Mellewigt *et al.*, 2007), we show that trust operates as a quasi-moderator, as it also has a direct effect on the allocation of decision rights to franchisees. Consequently, we encourage further research on the governance of franchising networks from different theoretical perspectives, as the efficiency of inter-organizational networks depends on the interplay of formal and informal components of the governance mechanism.

NOTES

1. According to Sharma *et al.* (1981), the search for moderator variables should be guided by theory rather than

by strict empiricism and the definition of moderator variable need not be limited to the psychometric definition (which suggests only pure moderators).

APPENDIX MEASURES OF VARIABLES

Variable	Items
Trust	Please assess the following statements on a scale 1–7: 1 = I do not agree at all; 7 = I fully agree.
(1–1)	The cooperation is based on partnership basis.
(1–2)	The exchange of information between us and the partners goes beyond the agreed scope.
(1–3)	There is great trust between ourselves and the partners.
(1–4)	There is an atmosphere of openness and honesty between us and the partners.
Behavioral uncertainty	Please assess the following statements on a scale 1–7: 1 = I do not agree at all; 7 = I fully agree
(2–1)	It is difficult to measure performance of the franchisees.
(2–2)	It is very difficult to control the behavior of the franchisees.
(2–3)	It is very difficult to assess the competencies and capabilities of franchisees.
Environmental uncertainty	Please assess the following statements on a scale 1–7: 1 = I do not agree at all; 7 = I fully agree
(3–1)	It is very difficult to predict the market development at the outlet level.
(3–2)	The sales at the outlet level are very fluctuating.
Franchisees' specific investment	Natural log of initial investments (in EUR)
Decision rights index	To which extent do franchisees have influence on the following decisions? Scale 1–7 (1 = no influence at all; 7 = to a very high extent)
(4–1)	Investment decision
(4–2)	Financing decision
(4–3)	Supplier decision
(4–4)	Recruiting decision
(4–5)	Employees' training decision
(4–6)	Product/service decision
(4–7)	Resale price decision
(4–8)	Advertising decision
(4–9)	Accounting system decision
Sector	0 = service franchising; 1 = product franchising
Size	Number of franchised and company-owned outlets

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