This paper investigates the determinants of the franchisors’ performance. In line with resource based view, we argue that intangible resources of the franchisor (brand name assets) and the intangible resources of the franchisee (local market know-how, HRM, innovation, quality control and administrative capabilities) will positively impact franchisor performance. Based on the transaction cost view, we show that environmental uncertainty is negatively related to franchisor performance. Although resource based view and transaction cost economics have been extensively used, no previous study examined the moderating role of control on the impact of the resource-based and transaction cost variables on franchisor performance. According to literature, in presence of tacit knowledge the potential for hazards is expected to be higher, hence the franchisors usually exercise more control by delegating less responsibilities or formulating more detailed contracts that tend to more closely define remedies. In fact, the franchisee aims to maintain authority although the franchisor goal is to sustain his long-run uniformity. Therefore, we extend the franchise literature by arguing that the main determinants of franchisor performance are derived from resource-based view and transaction cost economics while using control as curtail moderating factor. We use cross-sectional data from the franchise sector in Germany to empirically test the raised hypotheses.
1. Introduction

Ronald Coase (1937) introduced one of the central questions to organizational economics research - why firms exist. Williamson (1975, 1985) advanced Coase’s idea of comparing the costs of using a market with the costs of using hierarchy. He argued that hierarchies are used whenever market contracting is too expensive. Transaction Cost Economics (TCE) started to grow attracting many proponents, who advanced further the view that contractual hazards are key determinants to firms’ make or buy decisions (Oxley, 1997; Shelanski and Klein, 1995). A group of scholars, on the other hand, rejected the idea that firms are only being used if the market is too costly, but suggested that firms hold an ‘organizational advantage’ over market mechanisms (Wernerfelt, 1984, Barney, 1991, Grant, 1991, Peteraf, 1993, Amit and Schoemaker, 1993, Collis, 1994). Firm capabilities are the main theoretical component of resource-based view (RBV) explaining organizational performance differences and competitive advantage. In the 1990s, this theoretical development triggered a paradigm shift in strategic research from industry to firm specific effects (Spanos and Lioukas, 2001). More specifically, RBV focuses on internal firm-specific factors and their effect on firm performance. Therefore, researchers in economics and management, including the founder of TCE -Williamson (1999), have started to suggest whether other important factors in addition to transaction cost variables could contribute to the understanding of the firm’s governance decisions (Argyres, 1996; Leiblein and Miller, 2003; Nickerson and Zenger, 2002; Silverman, 1999).

Correspondingly, both theories have been used by several authors to enlighten why firms facing similar levels of contracting hazards organize their transactions differently (e.g. Madhock, 2002; Mayer and Salamon, 2006; Silverman, 1999; Revilla et al., 2011; Zott and Amit, 2006). In addition to exchange characteristics, Silverman (1999) and Mayer and Salomon (2006) emphasized technological capabilities role in firm diversification and governance decisions. Similarly, the seminal paper by Madhok (2002) unites both theories and theoretically showed the importance of aligning governance structures, resources and transactions. However, most of these studies concentrated on explaining firm’s strategies and internal organization structures. Hence, there is a lack of research that investigates the impact of firm boundaries on firm performance. Specifically, more empirical research is necessary to explore the impact of transaction cost and resource-based variables on the performance of networks, such as franchising networks.

Firm boundary portrayal becomes more blurred in networks. The interesting phrase “work for yourself, not by yourself” used by Lawrence and Kaufman (2011) illustrates franchisor-franchisee cooperation complexity. This hybrid nature of organization structure, where the franchisor attempts for more control and the franchisee for more autonomy, is often the source of conflict (Frazer et. al., 2012), but also important determinant of chains success (Pizanti and Lerner, 2003). Therefore, more systematic empirical investigation is recommended to illustrate the impact of control in inter-organizational and franchising context (Elango and Fried, 1997; Van der Meer et al., 2006). Control reflects the place of residual decision rights concentration in the franchise organizational structure. Consistent with RBV and TCE, we assume that control in franchising is desirable to facilitate access in franchisees complementary resources and minimize the cost of potential opportunism.

Therefore, this paper augments the organization literature by combining important components of TCE and RBV using control as moderation variable to empirically explain franchisors’ network performance. Our contribution is twofold. We apply TCE and RB reasoning to the performance of franchising networks and explore the moderator role of franchisors’ control on the impact of transaction cost and resource-based variables on franchisor performance.

The succeeding sections explores the importance of resource based view, intangible assets of both franchise partners impact in performance as well as the impact of control as moderator in this relationship. The second part reviles TCE perspective including environmental uncertainty hazard impact in franchisors’ performance with the moderating role of control in this relationship. Next,
data collection methods, data analyses and ordinary least squares (OLS) regression results including interactions terms are presented. Finally, discussions and implication remarks follow.

2. Franchisor’s Performance, Intangible Resources and Environmental Uncertainty

Franchising occurs in businesses that must be performed near customers. Due to clients living in dispersed geographic locations, outlets must be replicated and dispersed accordingly while keeping their distinguished uniformity. According to the franchising agreements, their contracts allocate decision rights and residual income rights between the franchisors and the franchisees. The franchisee purchases the right to use franchisor’s brand-name as well as operational system and business format benefiting from proven trade mark and tested services (Michael and Combs 2008; Brookes and Altinay 2011; Gauzente and Dumoulin 2012). In return the franchisor gets royalties based on sale volumes plus initial and advertising fees entering new markets with lower costs and risks (Windsperger, 2001).

Franchising has shown a tremendous growth that is increasing faster compared to other business sectors according to IHS Global Insight report (2013). Similar results have been revealed by Madanogluet, al., (2011), who in each risk-adjusted financial performance measure found that franchising restaurant firms performed better than their non-franchising counterparts. It is estimated that only in United States the output of franchise establishments in nominal dollars will advance to $802 billion in 2013.

Franchising as inter-firm collaboration increases the possibility to access firm complementary resources according to RBV perspective. Whilst according to TCE, firm partnership occurs only when it minimizes the cost of governing that activity jointly as opposed to governing it separately (Combs and Ketchen, 1999). Correspondingly, rather than aiming to compare which theory offers a better image of franchising reasons for alliance formation, we use both theories as complements to enhance our understanding why franchising is important for empirical research as an organizational form being highly adapted.

2.1. Resource Based View Perspective

One of the main contributions to explain performance differences among firms in the strategic management literature is RBV. The likelihood that the explained performance variation among firms is due to their idiosyncratic and unique resources is rather high (e.g. Barney, 1991; Eisenhard and Martin, 2000; Madhok, 2002). Homogeneously distributed resources do not provide firms with continues and high returns (Barney, 1991). In contrary, resource attributes of prosperous firms should be sticky, imitable, tacit or hard to transfer (Madhock, 2002). It follows that the most influential resources to sustain high firm performance are intangible (Barney, 1991; Galbreath and Galvin, 2008). Likewise, Gorovaia and Windsperger (2013) consider intangible resources as highly important to competitive advantage and superior performance of franchise networks.

- The impact of intangible assets of the franchisor in performance. Similar to other service sectors, the success of the franchise network relates to the ability to effectively manage and maximize the value of the intangible resources (Watson et al, 2005). The franchisor’s intangible resources refer primarily to the system-specific know-how and brand name assets (Klein and Leffler 1981; Norton 1988b, Hall, 1989, 1993; Windsperger 2004b) that are characterized by a low degree of contractibility. Franchisors’ intangible resources consist of the knowledge for business format, store layout, site selection, procurement, product or service development, system marketing and advertising (Gorovaia and Windsperger, 2013). However, according to Fladmoe-Lindquis and Jacque (1995), the brand name is the most important intangible resource hardly impacted by potential hazards. To build brands, the franchisor invests in marketing and promotion that reduce information asymmetry between the firm and the customers (Norton,
Similarly, Amit and Schoemaker (1993) have highlighted that intangible brand name assets are less vulnerable to competition as they cannot be easily imitated by potential competitors. This follows the previous implication that intangible resources in general and a strong brand name in particular lead to higher performance and competitive advantage (Sharma and Erramilli, 2004; Watson et al., 2005; Blomstermo et al., 2006). Hence, we formulate the following hypothesis:

H1: Intangible resources of the franchisors will positively impact franchisors’ performance.

Franchisees’ intangible resources have shown to positively impact the franchise network performance (Gorovaia and Windsperger, 2013). Intangible resources of the franchisee include local market know-how, HRM, innovation, quality control and administrative capabilities. The franchisee will continuously seek to maximize performance as this increases his quasi rents, although this will depend on his past and current intangible resources. Based on the RBV, activities will be franchised (outsourced) when franchisees (suppliers) possess superior knowledge (Kogut and Zander, 1992, 1993). By applying the same logic, we expect that regardless which side possesses intangible resources, including here the franchisee as an important contractual partner, the impact of such resources will increase the overall performance of the franchise network and more particularly that of the franchisor. Hence, we formulate the next hypothesis:

H2: Intangible resources of the franchisee will positively impact franchisors’ performance.

2.2. Transaction Cost Economics Perspective

In franchising context transaction cost theory can be applied to determine whether a transaction is more efficiently performed within the franchisor chain or franchisee contractors. Within transaction activities it is assumed that at least some actors will act opportunistically suggesting focus on how much effort and cost is required for the partners to complete an economic exchange (Williamson, 1981). According to this view, transactions would have been exercised between partners in market more efficiently. The contrary, vertical integration is usually the result of uncertainty from competition pressures and bureaucracies (Geyskens et al., 2006). Uncertainty is shown to heavily impact the organizational structure of companies (Williamson, 1975, 1985). Environmental uncertainty refers to the unanticipated change surrounding transactions that require firm adoption (Williamson, 2008). This usually has referred to unpredictability of the business environment, demand volumes, technologies etc. In such circumstances, the context of economic exchange becomes difficult to predict and cannot be pre-specified in contracts (Geyskens et al., 2006). Uncertainty may also increase due to the potential emergence of opportunistic behavior (Rigatto et al., 2004) that may damage future performance. This certainly can happen also in hybrid forms of cooperation like franchising (licensing, equity joint ventures etc.) that are often preferred options to vertical integration. Proponents of TCE predict that any form of uncertainty causes transaction costs to increase due to incomplete contracting or high monitoring costs (Kamyabi and Devi, 2011) negatively affecting franchisors’ performance. Thereof we raise the hypothesis that:

3. The Moderating Role of Control

3.1.1. Interaction between control and intangible assets
In the areas of the value chain where partners own more intangible assets they tend to exercise more control (Choi and Beamish, 2004). Franchisees are expected to have more specific know-how of the local market. Yin and Zajac (2004) found that franchised stores permit more flexibility compared to owned chains. As a result, it is expected that they bring more innovation to the chain (Bradach, 1997). Under such circumstances more autonomy is expected to strengthen the impact of franchisee intangible resources in the overall chain performance. However, this could not be the case under high intangible assets of the franchisor. Control is exercised more intensively when franchisors’ intangible resources such as the brand name are in question. Certain control has been argued to minimize horizontal and vertical agency hazards that would therefore help to protect intangible assets like the brand name of the franchisor (Combs, 2004). It is important therefore to consider the nature of franchisor’s knowledge first, which interacts with the extent of control exercised with respect to franchised chains. As previously emphasized, if the knowledge of one of the partner is more tacit and less codified in contracts more residual control rights should be given to that partner (Demsetz, 1998). Hence, the franchise partner that possesses knowledge assets with high idiosyncratic and tacit characteristics should enjoy higher control rights (Contractor and Ra, 2002) in order to increase the performance of the franchised chains. Thereof, we advance the following hypothesis:

H1a: In presence of franchisors’ high intangible knowledge assets, more control will strengthen the positive performance effect of highly intangible franchisor’s assets.

H2a: In presence of franchisees’ high intangible knowledge assets, more control will weaken the positive performance effect of highly intangible franchisees’ assets.

Brand development, store layout, or site selection, are some examples of intangible knowledge where usually the franchisor has reserved rights. The extent of rights delegated to the franchisee include quality control, customer service or product management, for instance. Since it is difficult to specify intangible know-how in contracts, consistent with the literature, we advise that the franchise partner who has higher tacit assets that generates the residual surplus should have more residual decision rights (Windsperger, 2004b). Nonetheless, according to TCE, other determinants should be considered in the way to finding the right allocation of control in franchise networks.

3.1.2. Interaction between control and environmental uncertainty
There are mainly two theoretical views that oppose each other with regard to the appropriate governance form in presence of uncertainty. First, the control view of governance highlights that firms could respond more effectively to environmental uncertainty by increasing their level of information processing capacity with more hierarchical integration (Williamson, 1975). This view has been supported theoretically and empirically (Geyskens et al., 2006; John and Weitz, 1988; Noordewier et al., 1990; Stinchcombe, 1990). They have shown that organizations show tendencies to integrate vertically under environmental uncertainties. The relationship between control and uncertainty is shown to positively co-vary (ibid). Although franchising is more relaxed method of organizational structure based on cooperation, TCE reasoning would predict higher control by the franchisor in uncertain business environments. A qualitative study regarding six UK-based fashion retailers and their international franchise operations conducted by Doherty and Alexander (2006) shows how franchisee managers asked for more franchisors’ control as this helped to keep pace with fast uncertain business developments. Faced with unpredictability, franchisors launch more vertical government structures that
enable faster reaction and adoption. Applied in the context of franchising, more control is expected to decrease the negative performance effect of environmental uncertainty. Hence, we formulate:

H3a: In presence of high environmental uncertainty, more control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty.

Second, the adaptation view of governance (e.g. Simon, 1947; Williamson, 1991; Gulati et al. 2005) would not agree with the above moderating impact of control on the relationship between uncertainty and franchisor’s performance. In contrary, high environmental uncertainty would require more local information processing capacity that is achieved by delegating more coordination tasks to the franchisees. Accordingly, lower levels of control are preferred if environmental uncertainty is high. This would allow for more flexibility in order to react to environmental changes (Erramilli and Rao, 1993; Klein et al., 1990). Consistent with this reasoning, we expect that less control is expected to decrease the negative performance effect of environmental uncertainty while allowing more space for local know-how of the franchisee. Hence we raise our final hypothesis that:

H3b: In presence of high environmental uncertainty, less control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty.

4. **Research Model Summary**

To summarize, our stated hypotheses are in line with our belief that it is important to use control as a moderator variable in the relationship between RBV and TCE variables and franchisor performance. The need for an appropriate extent of control is more sever under highly intangible assets and environmental uncertainty. The research model summary is depicted in Figure 1.

![Figure 1: Model Summary.](image-url)
5. Empirical analysis

5.1. Data collection
To empirically test the hypothesis we collected data from the franchising sector in Germany. In-depth interviews with franchise professionals from the Austrian and German franchise associations guided to several preliminary steps in questionnaire development and refinement. Moreover, a pre-test with 20 franchisors in Austria were part of the final modification process. According to the key informant approach for data collection (McKendall & Wagner III, 1997) interviews were conducted with senior managers that were mainly considered responsible for franchise expansion. The revised questionnaire, which incorporated the alterations suggested by the pretest, was mailed to 491 relevant franchise systems in Germany. This number was derived from the directory of the German Franchise Federation (DFV) and “Franchise Wirtschaft”, which lists all franchise systems operating in the country. Although, these directories list 837 franchise systems operating in Germany, we employed a reduced judgmental sampling on the basis of two-point criteria. The system should have started franchising at least two years previous to our selection, and it should have at least five operating outlets to be considered as a valuable observation. As a result, we were left with 491 relevant franchise systems to mail the questionnaires. We received back 137 filled questionnaires with a response rate of 28%. However, due to missing value, only 110 responses could be used for the regression analysis.

To trace non-response bias we examined whether the results obtained from analysis are driven by early versus late respondents (Armstrong and Overton, 1977). The late respondents serve as proxies for the group of non-respondents, which includes the firms that completed the questionnaire four weeks after the first group of respondents. Second, the respondents were compared to non-respondents in terms of age, size, advertising fee, and royalties to determine whether non-response was a serious problem for the data. These variables are available in the Franchise Wirtschaft for the entire listed systems. We used these data to run independent sample t-test in order to check whether the sample is representative. No significant differences emerged between the two respondent groups. In addition, Harman’s single-factor test has been used to examine whether a significant amount of common method variance exists in the data (Podsakoff et al. (2003). Factor analysis conducted on all items as well as extracting more than one factor with eigenvalues greater than 1 revealed that common method variance is not a serious problem in our study.

5.2. Measures
In addition to the following explanations of construct measures, we report indexes used for assessment, construct validity and all items of constructs in more details in the appendix.

5.2.1. Dependent Variable
*Performance of the franchisor network variable* reflects the franchisor’s opinion assessed on five-items. Franchisor system growth, reduction in costs, increase in revenues, in innovations, as well as increase in savings on coordination and control costs, were evaluated. The franchisors were asked to rate their respective franchise performance on seven-point Likert scale. There are several reasons to use subjective measures aiming to capture the multi-faceted nature of the performance construct. The singularity nature of the objective indicators and the lack of financial data disclosure in franchise networks have encouraged authors to more often use subjective measures (Gorovaia and Windsperger, 2013). Reliability of the summated scale was assessed by Cronbach’s alpha. The alpha value of 0.764 was well above the lower limit of 0.70 (Cronbach, 1951).

5.2.2. Independent variables
*Franchisors intangible assets* refer to system specific resources and brand name assets. The later is hardly impacted by potential hazards. It has been considered more important due to the difficulty of imitation by competitors (Amit and Schoemaker, 1993;
Hence, the franchisors were asked to rate their franchise chains’ brand name advantage compared to their competitors. The index of four items questions about brand strength, brand recognition and reputation for quality all compared to the competitors as well as the importance of brand name to achieving competitive advantage. The franchisors rated every item on a seven-point Likert scale. Reliability measure for this construct with Cronbach alpha of 0.773, show again values above the recommended cut-off point (Cronbach, 1951).

**Franchisees intangible assets** refer to local market know-how. The five items used to measure this construct reveal franchisors' opinion about the advantage of franchised as opposed to those of owned chains. Franchisors were asked to rate on seven-point Likert scale whether franchised chains have advantages on quality control, administrative skills, innovation, human resources and local market know-how. Formative indicators to measure the same construct have most recently been used by Gorovaia and Windsperger (2013). Such indicators are defined by theoretical judgments and formed by the indicators representing the domain of the content (Diamantopoulos and Winkelhofer, 2001). Although, it is suggested that items of formative measures may show no co-variation and that regular consistency measures are not applicable, Cronbach alpha of 0.846 for this measure is surprisingly high.

**Environmental uncertainty** is measured on a seven-point Likert scale asking respondents to assess three items regarding their possibility to forecast development and fluctuations of outlet sales at the local market, unpredictability of the market and volatility of the local economic situation. These measures follow Celly and Frazier (1996), and John and Weitz (1988) proxies. The Cronbach’s alpha of 0.747 is above the threshold level.

**Control** as the independent moderating variable represents the residual decision rights of the franchisor influenced by the franchisees. The variable assessed on a seven-point scale (1= very high influence, 7 = no influence) captures the extent of franchisees’ influence on franchisors decisions regarding the selection of suppliers, price decision, product/service offering, advertising decision, recruitment and training, choice of investment projects and financing of investment projects, application of accounting and controlling systems. Windsperger (2004b) has previously used decision rights proxy to capture franchisees impact on the same decisions. By averaging the scale values, we constructed a control index varying between 1 and 7. The lower is the control index, the lower is the franchisees influence on franchisors residual decision making. The internal consistency measure, Cronbach alpha of 0.870 is satisfactory high.

### 5.2.3. Control variables

**Number of employees:** human capital is an important aspect of the RBV that focuses attention on the knowledge and skills of employees. They contribute to higher performance and competitive advantage (Barney & Clark, 2007; Davidsson & Honig, 2003). A franchise network with higher number of employees reflects its investment potential, its ability to respond to customers’ wants or the nature of the sector in which the network operates. Costs for knowledge transfer as well as monitoring costs shall co-vary with the number of employees in franchise networks. Hence, in order to find the real impact of the hypothesis, we control for the differences in the number of employees present in our observations.

**Age** of the franchising system is measured by the number of years since the system is established. Age may be a proxy for interorganizational learning and management autonomy. With higher age maturity in networks, existing franchises are supposed to increase interorganizational learning and trust. Moreover, market-specific knowledge widens. More trust, that is expected to come with more maturity, might lead to decreasing monitoring costs (Dyer and Chu, 2000; Gulati, 1995). Since our data reveal substantial differences in years franchise chains have operated, we insert this variable aiming to isolate such differences.
Size that represents the number of outlets of a franchise system impacts the overall productivity in several ways. The size of a franchise system correlates with monitoring and coordination costs (Shane 1998). The larger the system the higher the costs for monitoring might be. Large number of outlets and large outlets require higher standardization that increases economies of scale. This similarly decreases monitoring and average contractual set-up costs (Lafontaine, 1992; Windsperger and Hendrikse, 2010; Windsperger, 2004). We use natural logarithms to linearize the non-linear number of several franchise outlets that have a very high number compared to others coefficients.

Sectors affect the overall productivity of the franchising system in different ways. Intangible assets (e.g. know-how, knowledge transfer, monitoring capabilities) vary between different industry sectors. Service franchising firms will need more intangible assets compared with the production and distribution industry (Zeithaml et al, 1985; Hussain and Windsperger, 2013). We include a sectorial variable to control for sectoral effects (0 for service sector, 1 for production sector).

6. Regression Analysis
We use the OLS regression method to test the proposed model (Figure 1). Descriptive statistics and Pearson correlations are reported in Table 1.

<table>
<thead>
<tr>
<th>Table 1: Descriptive Statistics and Correlations</th>
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<tbody>
<tr>
<td>Mean</td>
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<tr>
<td>-------</td>
</tr>
<tr>
<td>PERFORM</td>
</tr>
<tr>
<td>FrIA</td>
</tr>
<tr>
<td>FeIA</td>
</tr>
<tr>
<td>ENVU</td>
</tr>
<tr>
<td>CON</td>
</tr>
<tr>
<td>NrE</td>
</tr>
<tr>
<td>SIZE</td>
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<tr>
<td>SEC</td>
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<td>AGE</td>
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</tbody>
</table>

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

The dependent variable represents the performance of the franchise network (PERFORM). Franchisors intangible assets (FrIA), franchisees intangible assets (FeIA), and environmental uncertainty (ENVU) are used as explanatory variables while control (CON) is used as a moderator variable. The number of employees (NrE), size (SIZE), sector (SEC) and age of the firm in the network (AGE) are included as control variables. Logarithmic transformations were applied to NrE, SIZE and AGE to normalize the skewed distribution. Therefore, we estimate the following regression equation:

\[
\text{PERFORM} = \alpha_0 + \alpha_1 \text{FrIA} + \alpha_2 \text{FeIA} + \alpha_3 \text{ENVU} + \alpha_4 \text{CON} \\
+ \alpha_5 \ln \text{NrE} + \alpha_6 \ln \text{SIZE} + \alpha_7 \text{SEC} + \alpha_8 \ln \text{AGE} + \varepsilon
\]

According to the resource-based view, we hypothesize positive effects of intangible resources of the franchisor (FrIA) and of the franchisees (FeIA) on franchisors’ performance. Further, under the realm of transaction cost economics, environmental uncertainty (ENVU) is hypothesized to negatively impact the franchisors' performance (PERFORM). The results of the OLS regression
analysis are presented in Table 2. First, we conduct regression analysis with only control variables (Model 1). Even after we add the RBV and TCE variables to Model 1 we find that control variables are not significant. However, the regression results presented in Model 2 show significant support for the hypotheses (2 and 3) that intangible resource of the franchisee and environmental uncertainty impact franchise performance. Corresponding to the expectations, the coefficient of system-specific know-how of the franchisee is positive and that of environmental uncertainty negative. Surprisingly, hypothesis 1 is not supported in any of the following models. Though not significant, results actually reveal a negative sign in three out of five models (M2, 3, 6). This implies that the performance of the franchisor is not improved by higher intangible assets of the franchisor. One possible explanation is that under such circumstance franchisors employ lateral organizational structures or exercise decentralized managerial control, which in turn could lead to lost opportunities to access in franchisees complementary resources or minimize the cost of opportunism.

<table>
<thead>
<tr>
<th>Table 2: OLS Regressions</th>
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<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>lnNrE</td>
</tr>
<tr>
<td>lnAGE</td>
</tr>
<tr>
<td>lnSIZE</td>
</tr>
<tr>
<td>SEC</td>
</tr>
<tr>
<td>FrIA</td>
</tr>
<tr>
<td>FeIA</td>
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<tr>
<td>ENVU</td>
</tr>
<tr>
<td>CON</td>
</tr>
<tr>
<td>CON*FrIA</td>
</tr>
<tr>
<td>CON*FeIA</td>
</tr>
<tr>
<td>CON*ENVU</td>
</tr>
</tbody>
</table>

| Values in parentheses represent standard errors. ***p<0.01, **p<0.05, *p<0.1. |

| N | 110 | 110 | 110 | 110 | 110 | 110 |
| Model F | 2.357** | 4.59*** | 6.97*** | 7.62*** | 7.24*** | 7.14*** |
| R2 | 0.082 | 0.239 | 0.356 | 0.407 | 0.422 | 0.445 |
| Adjusted R2 | 0.047 | 0.187 | 0.305 | 0.354 | 0.364 | 0.382 |

11
In Model 3, we add the control variable to the regression equation, which as the main effect continues to be negative and highly significant in all the following models. We proceed to test the interaction effects (see Models 4–6). We add the interaction terms CON*FrIA, CON*FeIA, and CON*ENVU to the regression equation:

\[
\text{PERFORM} = \alpha_0 + \alpha_1 FrIA + \alpha_2 FeIA + \alpha_3 ENVU + \alpha_4 CON + \alpha_5 CON * FrIA + \alpha_6 CON * FeIA + \alpha_7 CON * ENVU + \alpha_8 \ln NrE + \alpha_9 \ln SIZE + \alpha_{10} SEC + \alpha_{11} \ln AGE + \epsilon
\]

The moderation role of control in the relationship between franchises’ intangible knowledge assets and performance results to be highly important. This variable shows to have switched the direction and significance of important hypothesized variables. In line with H1a, the OLS regressions reveal that control has its significant importance in strengthening the positive performance effect of highly intangible franchisor’s assets. All three models (M4, M5, M6) reflect the positive sign and significance of interaction implying that control should be higher in presence of intangible resources of the franchisor. This significantly co-varies with higher franchisor system performance. The next hypothesis (H2a) that in presence of franchisees’ high intangible knowledge assets, more control will weaken the positive performance effect of highly intangible franchisees’ assets is supported. The sign in Model 5, although not significant, is in the expected direction. Model 6 significantly supports hypothesis H2a corresponding with the fact that more autonomy would lead to higher franchisors system performance in presence of high franchisee intangible resources. Finally, in existence of environmental uncertainty more control results to weaken the franchisors’ system performance (Model 6) supporting the expectations of the control view of governance and the raised hypothesis H3a. To summarize, the results of the hypotheses test are presented in Table 3.

### Table 3: Summary of Supported Hypotheses

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis 1</td>
<td>Intangible resources of the franchisor will positively impact franchisors’ performance.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>Intangible resources of the franchisee will positively impact franchisors’ performance.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>Environmental uncertainty negatively affects franchisors’ performance.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 1a</td>
<td>In presence of franchisors’ high intangible knowledge assets, more control will strengthen the positive performance effect of highly intangible franchisors’ assets.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 2a</td>
<td>In presence of franchisees’ high intangible knowledge assets, more control will weaken the positive performance effect of highly intangible franchisees’ assets.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 3a</td>
<td>In presence of high environmental uncertainty, more control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty.</td>
<td>Supported</td>
</tr>
<tr>
<td>Hypothesis 3b</td>
<td>In presence of high environmental uncertainty, less control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty.</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

### 7. Discussions and Implications

This paper extents the combined implication of resource based view and transaction cost economics to better explain the determinants of franchisors’ network performance. The inclusion of control as a moderator variable in the model extends the explanatory power of both theories. The empirical results from the German franchise sector provide satisfactory support of the RBV and TCE hypothesis. Using data from 110 franchise companies in Germany, the results show that both the franchisor’s and franchisees’ intangible resources, if used in accordance with the extent of appropriate control, will positively impact the...
performance of franchisors’ network. Firstly, consistent with the RBV prediction, the relation between intangible assets of the franchisee assets and franchisors’ system performance is positive. Although the first hypothesis has not been supported, the inclusion of control increases the explanatory power of the model, and in line with RBV, significantly shows the positive impact of franchisors intangible assets on performance of the system. It actually shows that in presence of franchisors’ high intangible knowledge assets, more control will strengthen the positive performance effect of highly intangible franchisor’s assets. However, if the franchisor is convinced of the higher value that franchisees high intangible asset as compared to its own, more control will weaken the positive performance effect of highly intangible franchisees’ assets. In short, it is suggested that under such circumstances less control increases overall performance of the system.

Second, to the best of our knowledge, this study is the first one that applies the RBV and TCE combined as well as controls’ moderation impact in franchise performance. Consistent with the transaction cost theory prediction, environmental uncertainty resulted to negatively influence franchisors’ performance. Specifically, when franchisors perceive higher market and demand uncertainty, they confront themselves with dilemmas regarding the appropriate extent of control that should be imposed over franchisees. According to our results, in presence of high environmental uncertainty, more control exercised by the franchisor will weaken the negative performance effect of environmental uncertainty. Consistently, governance view of control is found to give the answer similar to what Doherty and Alexander (2006) found. They show how franchisee managers asked for more franchisors’ control as this helped to keep pace with fast uncertain business developments.

Incremental improvements in social sciences are encouraged as it is highly difficult to encounter no method or theoretical limitations. We believe that the franchisor opinion, although highly relevant, is not sufficient to place the entire wait in the generalization of recommendations. Franchisee opinions could have increased the external validity of the study. Financial and time constrains limit the possibility to derive both parties opinions. The nature of constructs may pose another challenge as a combination of subjective and objective measures could have yielded more representative findings. Hence, to increase the validity of such findings future avenues in the field that include franchisees opinions would enrich findings. In addition, future research could strive to model the optimal amount of control under the presence of both parties’ intangible assets. However, attention should be drawn to the fact that depending on differences of internal factors (organizational structure, international presence, industries, sectors, sizes, age) and of external once (culture, religion, political situation etc.) it is highly inconvenient to suggest a clear cut between the amount of autonomy and control aiming to generalize the results.

The empirical observation of 110 franchise German firms enhances the value of our theoretical findings and of our recommendation implications for managerial use. Managerial implications reveal that more franchisor effort should be guided in the direction of brand name and other system-specific know-how investment as this would not only give higher competitive advantage to competitors, but also more decision rights within the franchise chain. Likewise, franchisees should attempt to raise their intangible resources like innovation capabilities and local market knowledge to generate more income and decision right residuals. These findings extend franchise literature by showing that the main determinants of franchisor performance are derived from resource-based view and transaction cost economics while using control as curtail moderating factor.
8. **APPENDIX MEASURES OF THE VARIABLES**

All the following construct items were measured on seven-point Likert scale (1-highly disagree to 7-highly agree).

**Performance of the franchisor system (PERFORM)**

The following five items were evaluated by the franchisor. The question asked to which extent the franchisor system achieved the following goals last year:

1. System growth
2. Reduction of costs
3. Increase of revenues
4. More innovation
5. Savings on coordination and control costs

Cronbach alpha = 0.764.

**Franchisors’ intangible resources (FrIA):** The four following items measured how the franchisors evaluate their brands:

1. Our brand name is very strong compared with that of our competitors.
2. The quality of our franchise system has a very good reputation.
3. Our franchise system is well recognized compared with that of our competitors.
4. Our brand name is very important to achieve a competitive advantage.

Cronbach alpha = 0.773.

**Franchisees’ intangible resources (FeIA):** The five items evaluated by franchisors show their opinion about the advantage of franchised chains as opposed to those of owned chains:

1. Innovation capabilities
2. Local market knowledge
3. Quality Control
4. Administrative Skills
5. Human Resource Capabilities

**Environmental uncertainty (ENVU):** Three items show franchisors’ opinion on:

1. Sales at the local markets are very unpredictable
2. It is very difficult to forecast the market development in the local markets
3. Economic environment is changing quickly in the local markets.

Cronbach’s alpha = 0.747.

**Control (CON):** The franchisors were asked to evaluate to what extent franchisees have influence on the following decisions on their franchise systems (1 = to a very high extent; 7 = no influence at all):

1. Supplier decisions
2. Price resale decision
3. Product/service offering
4. Advertising decision
5. Recruitment decision
6. Training of employee decisions
7. Investment decisions
8. Financing decisions
9. Accounting system decisions.

Cronbach’s alpha = 0.870
**Sector (SEC):** Sectoral variable: 0 = product franchising; 1 = services

**References**


