Real Options, Intangible Resources and Performance of Franchise Networks

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Abstract
This study presents a model of franchise network’s performance by deriving hypotheses from the resource-based and the real options perspectives. According to the resource-based view, difficult to imitate resources create sustainable competitive advantage and contribute to superior performance of the franchise system. We test the following hypotheses: Intangible resources of the franchisor (system-specific know-how and strength of the brand name), have a positive impact on the performance of the franchise system. Second, intangible outlet-specific resources of the franchisee (exploration and exploitation capabilities) positively impact the performance of the franchise system. Due to their higher degree of intangibility, exploration capabilities have a stronger impact on performance than exploitation capabilities. Third, based on the real option perspective, we hypothesize that including a real option clause in the franchise contract (as franchisor’s option to acquire franchised units) increases the franchisor’s incentives for intangible relationship-specific investments and hence the performance of the franchise system. We test these hypotheses with cross-sectional data from franchising networks in Germany. The data provide some support for the hypotheses.

Keywords: performance of the franchise networks, intangible resources, real options, resource-based view.
**Introduction**

According to the resource-based view, intangible resources of the franchisor and franchisees are the most important factors that contribute to the competitive advantage of franchise networks. In spite of their importance, they received relatively little attention in previous research. Most of the previous studies concentrated on the “governance-strategy fit” explanations of performance (Bradach, 1997, Shane, 1998, Sorenson and Sorensen, 2001; Yin and Zajac, 2004, Mitsuhashi, et al, 2008, Barthélemy, 2008) without directly addressing the question of the performance impact of intangible resources. While these studies contribute to our understanding of how governance choices affect performance, they underestimate the importance of other performance drivers, such as intangible resources that are necessary for the creation of sustainable competitive advantage. First, this study aims to fill this gap by providing a resource-based explanation of performance of franchise networks. The resource-based view posits that the sources of value creation are the resources and capabilities of the firms. In case of franchising intangible resources and capabilities of both the franchisor and franchisees are necessary to achieve superior performance.

In addition, the existing literature on franchising also lacks a real option explanation of governance choice and performance. Franchising as an organizational form has long been viewed as an attractive growth strategy for retail chains. Previous research has shown that an important motive to engage in franchising is the franchisor’s easier and less costly access to the outlet-specific resources. For example, according to the resource scarcity theory, franchisors have constraints on information, managerial and financial resources concerning the local outlets and hence expanding through franchising is a way to get access to these resources without asset ownership (Oxenfelt and Kelley, 1968-1969). By expanding through franchising the company can rely upon local partners to manage risk and create and share
knowledge of the local market. On the other hand, the dilution of franchisor’s ownership rights due to franchisees’ residual income rights can be compensated by including a real option clause (option-to acquire the franchised outlet) in the franchise contract (Windsperger 2002). This clause provides the franchisor the possibilities to exercise residual control rights at the end of the franchise relationship. Thereby, it increases the franchisor’s incentive to undertake investments in intangible system-specific and brand name assets during the contract period and consequently the performance of the franchise system.

Overall, applying a real option perspective to franchising is a promising research strategy. The real option view considers the franchise relationship as a “call option” for the franchisor who has the right, but not the obligation, to acquire the franchise outlet from the franchisee at the end of the franchise agreement. The real option clause is a source of value creation for the franchisor, because he/she can defer investment at the initial stages of the expansion and make a decision to invest later depending on positive developments in the environment (e.g., unexpected demand growth). Hence, the real option perspective can help the franchise systems to expand gradually into the new markets under conditions of uncertainty (Chi and McGuire, 1996) and provide a valuable tool to manage uncertainty proactively (Kogut, 1991). This managerial flexibility may positively influence the overall performance of the system.

The paper is organized as follows: First, in the next section we review the relevant literature on performance of franchise networks. Second, section three develops a theoretical model and formulates the hypotheses. Finally, we test the hypotheses by using the data of German franchise networks.
Relevant Literature

Performance of the franchise networks

Compared to governance issues, performance issues have received little attention in the franchising context. A few studies have investigated the performance of franchise chains in terms of survival (Shane, 1996, 1998; Shane and Foo, 1999), sales growth (Sorenson and Sorensen, 2001; Yin and Zajac, 2004), financial performance (Barthelemy, 2008). The level of analysis of these studies is also different: while Yin and Zajac (2004), Kosová et al. (2008) investigate the performance of the franchised and corporate stores within one chain, Sorenson and Sorensen (2001) focus on chain wide revenue growth. Most studies primarily concentrated on the impact of governance structures on performance of franchise networks. Sorenson and Sørensen (2001) argue that the existence of company-owned and franchised outlets in a network (a plural form) creates different incentives for company managers and the franchisees that encourage distinct patterns of organizational learning that in turn contributes to superior performance. Bradach (1997) identifies four processes in which franchisees and firm-owned outlets strengthen one another. Kosová et al. (2008) examine the impact of organizational form, specifically franchising vs. company ownership, on hotel performance outcomes and find no performance or price differences between hotels operated under the two modes of organization. In sum, the performance explanations are linked to the governance/strategy fit (Yin and Zajac, 2004, Mitsuhashi, et al, 2008).
**Intangible Resources and performance of the franchise networks**

According to the resource-based view of the firm, only unique and difficult to imitate resources lead to superior performance (Barney, 1991; Wernerfelt, 1984). To have a potential for sustained competitive advantage the resources have to have four attributes: (a) they must be valuable, exploit opportunities and/or neutralize threats in the firm’s environment, (b) they must be rare among current and potential competitors, (c) they must be imperfectly imitable, (d) they have no strategically equivalent substitutes (Barney, 1991). Given these insights, what are the unique and difficult to imitate resources in franchising that can lead to sustainable competitive advantage and superior performance?

In franchising like in other businesses in the service sector, intangible resources play a very important role. Much of the success of the franchise networks relates to the ability to effectively manage and maximize the value of the intangible resources (Watson et al, 2005). What are the intangible resources in franchising? The franchisor’s intangible resources refer primarily to the system-specific know-how and brand name assets (Klein and Leffler 1981; Norton 1988). According to Fladmoe-Lindquis and Jacque (1995), the brand name is the most important intangible resource to protect against potential hazard since service companies cannot depend upon patented proprietary technology or processes as a protection against close substitutes. The franchisor’s system specific know-how is also very important to the market success of the product or service. The franchisee’s intangible resources refer to the outlet-specific local market know-how that contributes to better performance of the franchise outlet and also to better performance of the whole franchise system. Consequently, both franchisor’s and franchisees’ intangible resources are crucial for the success of the franchise system requiring close cooperation to create strategically valuable resources that neither could build independently (e.g., Dyer, 1996).
Real options perspective in franchising

The real options perspective has been used recently to evaluate the strategic investment opportunities in uncertain environments (Leiblein, 2003). In the management literature, real options were applied in studies that examine the strategic value of joint ventures (Chi and McGuire, 1996; Folta, 1998; Folta and Leiblein, 1994; Kogut, 1991; Reuer and Leiblein, 2000), market entry (Miller and Folta, 2002), and organizational governance (Leiblein and Miller, 2003). To the best of our knowledge no studies tested empirically the real options perspective in the context of franchising.

The real options perspective can be used to explain the choice of the governance form and contract design in franchising. It recognizes that opportunity costs are associated with irreversible investments under uncertainty (Leiblein, 2003). Franchisor’s strategy to expand the network through franchisee-owned outlets, and not through company-owned outlets, defers committing resources which is valuable under uncertainty (McDonald and Siegel, 1986). Specifically, a real option perspective focuses on investments that create valuable follow-on investment opportunities, or growth options (Bowman and Hurry, 1993). Beginning an expansion strategy by using franchising is an opportunity for the franchisor to learn new knowledge in “manageable installments” (Bowman and Hurry, 1993). Knowledge sharing between franchisor and franchisees creates a favorable situation for the franchisor to learn and develop capabilities about the new markets and new technologies. Later on the franchisor can gain competitive advantage by acquiring the most successful franchised outlets in order to deploy these capabilities. The franchisor’s acquisition of franchised outlets proceeds incrementally as a result of accumulated learning. Thus, the franchisor can capitalize on favorable opportunities and mitigate negative shocks in a flexible way, acting proactively towards uncertainty (Kogut, 1991). The franchisor holding an option may expand
into attractive markets though company-owned outlets, and defer investment, abandon operations or expand through franchise outlets if the market conditions are less attractive.

Overall, we can conclude that although some studies investigate the performance of the franchising networks, no studies have tested how the intangible resources of the franchisor and franchisee contribute to franchise network’s performance. Starting from this deficit, first the objective of the paper is to develop a resource-based view on performance of the franchise networks, since the firm’s specific resources and capabilities are crucial in explaining the firm's performance. Second, we examine the performance impact of the franchisor’s option to acquire the outlet. While many franchise contracts use real option clauses to compensate the franchisor for the diluted residual income and ownership rights, the effect of this option clause on performance of the franchise networks has not been analyzed.

Theory and Hypotheses

Overview of the Empirical Model

First, in this section we describe our model (see figure 1). First, according to the resource-based view, intangible system-specific and local market resources strengthen the competitive position of the franchise system and hence they have a positive impact on performance. In addition, we hypothesize that the more intangible exploration assets have a stronger impact on performance than the less intangible exploitation assets. Second, real option clause in franchise contracts (such as the franchisor’s buy option) increases the franchisor incentive to invest in relationship-specific resources and consequently they positively influence the performance of the franchise system.

Insert Figure 1
Hypotheses

**Franchisors’ intangible resources**

They refer to system-specific know how (Hall, 1993) and brand name assets. System-specific know-how includes knowledge of the business concept: site selection, store layout, product or service development, procurement, delivery of the service. Each element of the business concept must be optimized so that each franchisee should be able to reproduce the prototype. This is not only necessary for the success of the whole franchise system, but also it represents an important source of risk reduction for the franchisee. The transfer of system specific know how requires personal and face-to-face contact between the franchisor and franchisees. Based on previous studies (Darr et al, 1995; Fladmoe-Lindquist and Jacque, 1995; Simonin, 1999), we use annual training days as indicators of franchisors’ intangible system-specific resources. An increase in franchisors’ intangible system-specific resources requires higher number of face-to-face interactions (annual training days and local visits). The higher is the degree of intangibility, the more tacit is the knowledge of the franchisor, and the more difficult it is to transfer it to the franchisees. According to the resource-based view only difficult to imitate resources lead to sustainable competitive advantage and superior performance. Hence, we expect that the franchisor’s intangible system-specific resources vary positively with the performance of the franchise system.

\[ H1: \text{The intangible system-specific resources of the franchisor positively vary with performance of the franchise system.} \]

Creating a strong brand name involves high transaction-specific investments by the franchisor to signal a high quality of the branded product to the consumers. From a strategic perspective a strong brand name is less vulnerable to the competition and cannot be easily imitated by potential competitors. Brand name strength results in high residual income and
increased competitive advantage for the franchise system, which in turn leads to superior performance. Hence, we formulate the following hypothesis:

\[ H2: \text{The brand name assets of the franchisor vary positively with the performance of the franchise system.} \]

**Franchisee’s intangible local market resources**

They are the outlet-specific know how referring to innovation and operations capabilities. Innovation capabilities are more explorative in nature and operation capabilities are more exploitative (Levinthal and March, 1993; March, 1991). Innovation capabilities refer to innovation and local market know-how, and operation capabilities refer to quality control and administrative capabilities (Windsperger and Dant, 2006). Because innovation (or exploration) capabilities are characterized by a higher explorative component than operation (or exploitation) capabilities, innovation capabilities are expected to show a higher degree of tacitness than operation capabilities. By applying the resource-based perspective, we expect that both the exploration and exploitation capabilities of the franchisees have a positive impact on performance of the franchise system. Furthermore, the impact of more intangible exploration capabilities on performance is stronger. We summarize these expectations in the following hypotheses:

\[ H3: \text{Exploration capabilities of the franchisees vary positively with performance of the franchise system.} \]

\[ H4: \text{Exploitation capabilities of the franchisees vary positively with performance of the franchise system.} \]

\[ H5: \text{The impact of more intangible assets of the franchisee (exploration assets) on performance is stronger.} \]
**Real option clause**

According to the real options perspective, the presence of a real option clause as ownership surrogate in the franchise contract offers flexibility to the franchisor to acquire the best performing franchise outlets, once the environmental situation is favorable, and thereby contributes to superior performance of the franchise system (Kogut, 1991). According to Windsperger (2002), ownership rights in the franchise system refer both to residual rights and complementary ownership surrogates. The franchisor’s incentive to invest in intangible resources (system-specific know-how and brand name) will be higher, the more the diluted residual income and ownership rights are compensated by ownership surrogates, such as the real option clause in the franchise contract. Therefore, the real option clause increases the franchisor’s investment incentives during the contract period by compensating for the dilution of residual income and ownership rights under franchise contracting. Hence, we formulate the following hypothesis:

\[ H6: \text{Real option clause (franchisor’s option to acquire the outlet) increases performance due to the franchisor’s higher incentive for intangible relationship-specific investments.} \]
Empirical Analysis

Data collection

Empirical data to test the hypotheses were collected from the German franchise sector. The questionnaires were mailed to the senior managers as key informants of 491 franchise systems in Germany. We received 137 questionnaires. The possibility of non-response bias was assessed by comparing early respondents with late respondents (Armstrong and Overton 1977). T-test comparisons of early and late respondents on the key constructs did not reveal statistically significant differences. Therefore, non-response bias is not likely to be a concern in the interpretation of the findings from this study.

Measurement

The measurement of the relevant variables for this study is summarized in the Appendix. To test the hypotheses we use the following variables: performance of the franchise system as dependent variable, intangible resources of franchisor (brand name assets and system-specific resources), intangible resources of franchisees (exploration and exploitation capabilities) and the real option clause as explanatory variable. Additionally we used environmental uncertainty and sector as control variables.

Dependent Variable

As far as performance measurement is concerned, there is no consensus in the literature about the most appropriate way to measure the performance of franchise systems. The measurement of the performance can be based on objective or subjective indicators. While objective measures have greater validity, most of the franchise systems in this survey are private companies that do not disclose financial data. The literature has demonstrated that there is a strong correlation between objective and subjective performance indicators. Furthermore,
performance is a multi-faceted construct that cannot be restricted to one indicator only (Elango and Fried, 1997). Apart from the financial data performance should also include such dimensions as innovation and growth of the system. In this study, performance of the franchise networks (PERFORM) was measured as an average of six items: system growth, reduction in costs, increase in yields, increase in innovation, saving in coordination and control costs and profit growth. Franchisors were asked to rate the performance of their franchise system on a seven-point scale starting from much worse than planned to much better than planned.

Independent Variables

Intangible resources of the franchisor. These are measured by two variables: system-specific know-how and brand name. Consistent with the measurement applied in previous studies (e.g., Fladmoe-Lindquist and Jaque 1995; Darr et al. 1995, Windsperger and Dant, 2006) we use “annual training days” (TDAYS) as a proxy for intangible system-specific resources of the franchisor. The more intangible and tacit the know-how of the franchisor, the more training days are required to transfer it to the franchisees. As argued by Simonin (1999), the higher the degree of intangibility, the more personal (face-to-face) knowledge transfer mechanisms are needed for the knowledge transfer. The strength of the brand name (BRAND) is measured by an index of four items on a seven-point Likert scale, consistent with Combs and Ketchen (2004) and Barthélémy (2008). Franchisors were asked to rate their systems on brand strength compared to competitors, brand recognition compared to competitors, reputation for quality, and importance of brand name for achieving competitive advantage.

Intangible resources of the franchisee. We distinguish between exploration and exploitation capabilities of the franchisee (March, 1991). Consistent with Windsperger and
Dant (2006), we measure exploration capabilities (EXPLORE) as a formative indicator consisting of two items: innovation capabilities and the local market knowledge. Exploitation capabilities of the franchisee (EXPLOIT) are also measured as a formative indicator consisting of two items: quality control and administrative capabilities of the franchisee. Since formative indicators influence the construct, “internal consistency reliability is not an appropriate standard for evaluating the adequacy of the measures” (Jarvis et al 2003: 202).

**Real Options Clause (RO).** It is a binary variable. Franchisors were asked to indicate whether the franchise contract contains a real option clause (as option to acquire the outlet) (0=no real option clause, 1=real option clause).

**Control Variables**

**Environmental uncertainty** (ENV). According to the transaction cost perspective, environmental uncertainty increases the transaction costs as the costs of the exchange relationship (Williamson, 1975). Market exchange is hazardous and contracts are costly to specify in uncertain business environments. Uncertain environments may facilitate subsequent contractual renegotiation and adjustments that are especially costly in the presence of specific investments. Hence, high environmental uncertainty may negatively impact the performance of the franchise chain.

To measure environmental uncertainty the franchisors were asked to provide their perceptions regarding fluctuations in the outlet level sales, unpredictability of the market, and volatility of the local economic situation. The fourth item regarding the accuracy of sales forecasts was dropped due to low item-total correlation and scale reliability concerns.

**Sector (SEC):** We include a sectoral variable to control for sectoral effects because the know-how intensity of franchise firms varies between product/distribution and service firms.
(Zeithaml et al. 1985). Services franchising firms are characterized by more intangible resources compared to product franchising firms. 0 refers to product and distribution franchising and 1 to the service sector.

**Construct validity and reliability.**

We use multi-item scales for measuring performance of the franchise systems, brand name, and environmental uncertainty. To check convergent and discriminant validity of the constructs we estimated the average intraconstruct correlation as a “within measure” and the average correlation of each construct’s items with each other construct’s items as a “between measure”. The results are presented in the Table 1. The “within” average correlations presented on a diagonal line are higher than the “between” average correlations, proving the discriminant validity of these constructs. Cronbach alpha has also been calculated to test the scale reliability; all three factors have values well above the recommended cut-off value of 0.70 (Cronbach, 1951): PERFORM =0.836, BRAND=0.815, ENV=0.748

<INSERT TABLE 1 HERE>
Regression analysis

Descriptive statistics and correlations are reported in Table 2.

<INSERT TABLE 2 HERE>

We use OLS regression analysis to test the proposed model (see Figure 1). The dependent variable is the performance of the franchise system (PERFORM). System-specific resources of the franchisor (TDAYS), brand name of the franchisor (BRAND), exploration (EXPLORE) and exploitation (EXPLOIT) capabilities of the franchisees and the real option clause (RO) are used as explanatory variables. Sector (SEC) and environmental uncertainty (ENV) are included in the model as control variables. Hence, we estimate the following regression equation:

\[
\text{PERFORM} = \alpha_0 + \alpha_1 \log_{10} \text{TDAYS} + \alpha_2 \text{BRAND} + \alpha_3 \text{EXPLORE} + \alpha_4 \text{EXPLOIT} + \alpha_5 \text{RO} + \alpha_6 \text{ENV} + \alpha_7 \text{SEC} + \epsilon
\]

According to the resource-based view, we hypothesize positive effects of system-specific resources (TDAYS), brand name (BRAND), exploration (EXPLORE) and exploitation (EXPLOIT) capabilities of the franchisee on performance of the franchise networks. In addition, we hypothesize that the more intangible exploration assets have a stronger impact on performance than the less intangible exploitation assets. Based on the real options perspective, we expect a positive effect of the real option clause (RO) on performance of the franchise systems.

First, we conduct an OLS regression analysis with only control variables (Model 1). Both environmental uncertainty and sector vary negatively with performance. The coefficient of environmental uncertainty is highly significant supporting the negative performance effect of high transaction costs due to higher uncertainty.
Second, we add the resource-based variables to the (Model 1): system-specific resources and brand name of the franchisor, as well as exploration and exploitation capabilities of the franchisees (Model 2). The results of the regression analysis are presented in the Table 3.

The coefficients of system-specific resources and brand name are positive and highly significant. This result confirms hypotheses 1 and 2. The coefficient of the exploration capabilities of the franchisee is also positive and significant, providing strong support for hypothesis 3. The coefficient of the exploitation capabilities is negative and significant, not providing support for the hypothesis 4. Hypothesis 5 states that the impact of the more intangible local market resources of the franchisee (exploration capabilities) on performance is stronger compared to the less intangible resources (exploitation capabilities). Our data provide support for this hypothesis. Finally, we add the real option variable to the regression model, see Model 3. The coefficients of system-specific resources and brand name assets of the franchisor as well as exploration assets of the franchisee are consistent with the results in Model 2. The coefficient of the real options variable is positive and significant, supporting hypothesis 6.

**DISCUSSION**

The aim of this study is to contribute to the literature on performance of franchising networks by applying a resource-based and real option perspective. Compared to previous studies that linked performance to governance/strategy fit (Sorenson, and Sørensen, 2001; Yin and Zajac, 2004, Barthélemy, 2008), we present a resource-based and real option explanation of the performance of franchise networks. According to the resource-based theory only resources, which are difficult to imitate, lead to competitive advantage and superior performance. In the
case of franchise networks, resources with low a low degree immitability are the franchisor’s intangible systems-specific know-how and brand name assets and the franchisees’ intangible local market resources (exploration and exploitation capabilities). Our study extends the knowledge-based view used in Barthelemy (2008) by investigating the impact of franchisee’s intangible resources (exploration and exploitation capabilities), additionally to brand name and system-specific resources of the franchisor. Using a cross-sectional sample of the franchising companies from Germany, we find significant support that intangible assets of both franchisor and franchisee are necessary to achieve competitive advantage and superior performance.

Furthermore, responding to the call for greater theoretical diversity in the study of franchising (Combs et al, 2004) our study adopted a real option perspective to generate hypotheses about performance of the franchise networks. Our data show that the inclusion of the real option clause in the franchise contract strongly increases the franchise network performance due to the franchisor’s higher incentive for intangible relationship-specific investments.

The study has important implications for the franchisors: First, the intangible resources in the network are the main performance drivers! The franchisors have to invest in the development of the brand name and system-specific resources to create competitive advantage. In addition, it is important for the success of the system that they make use of franchisees’ innovation capabilities and their intangible local market knowledge. Second, the inclusion of the real option clause in the franchise contract increases the system performance, because it gives the franchisor more managerial flexibility to acquire the best performing franchise outlets and strengthens his/her incentives for relation-specific investments.
References


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Figure 1: Theoretical Model

- Intangible system-specific know-how
- Brand name
- Exploration capabilities
- Exploitation capabilities
- Real option clause
- Control Variables:
  - Sector
  - Trust
  - Environmental uncertainty

Performance of the franchise system
Table 1: Average within/between correlations

<table>
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<th></th>
<th>BRAND</th>
<th>PERFORM</th>
<th>ENV</th>
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<tr>
<td>BRAND</td>
<td>0.62339</td>
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<tr>
<td>PERFORM</td>
<td>0.264735</td>
<td>0.402562</td>
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<tr>
<td>ENV</td>
<td>-0.06704</td>
<td>-0.15245</td>
<td>0.539696</td>
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**Table 2: Descriptive Statistics**

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<tr>
<th></th>
<th>Mean</th>
<th>S.D</th>
<th>PERFORM</th>
<th>TDAYS</th>
<th>BRAND</th>
<th>EXPLORE</th>
<th>EXPLOIT</th>
<th>RO</th>
<th>ENV</th>
<th>SEC</th>
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<tr>
<td>PERFORM</td>
<td>4.323</td>
<td>1.034</td>
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<tr>
<td>TDAYS</td>
<td>1.408</td>
<td>.768</td>
<td>.321**</td>
<td>1</td>
<td></td>
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<td></td>
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<tr>
<td>BRAND</td>
<td>5.633</td>
<td>1.098</td>
<td>.406**</td>
<td>0.039</td>
<td>1</td>
<td></td>
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<tr>
<td>EXPLORE</td>
<td>3.021</td>
<td>1.319</td>
<td>0.090</td>
<td>-0.130</td>
<td>0.006</td>
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<td></td>
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<tr>
<td>EXPLOIT</td>
<td>4.000</td>
<td>1.485</td>
<td>-0.166*</td>
<td>-0.177</td>
<td>-0.031</td>
<td>0.480**</td>
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<tr>
<td>RO</td>
<td>.63</td>
<td>.485</td>
<td>.285**</td>
<td>0.077</td>
<td>0.145</td>
<td>-0.040</td>
<td>-0.221**</td>
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<td>ENV</td>
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<td>0.301**</td>
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<td>0.159*</td>
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<td>0.113</td>
<td>0.244**</td>
<td>-0.011</td>
<td>0.012</td>
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**. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).
### Table 3: OLS Regression

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<th>Variable</th>
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<th>Model 2</th>
<th>Model 3</th>
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<tr>
<td></td>
<td>Constant</td>
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<td></td>
<td>5.141***</td>
<td>2.592***</td>
<td>2.011***</td>
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<td></td>
<td>(0.252)</td>
<td>(0.621)</td>
<td>(0.659)</td>
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<td>-0.138</td>
<td>-0.147</td>
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<tr>
<td></td>
<td>(0.170)</td>
<td>(0.168)</td>
<td>(0.167)</td>
</tr>
<tr>
<td>ENV</td>
<td>-0.188***</td>
<td>-0.134**</td>
<td>-0.091</td>
</tr>
<tr>
<td></td>
<td>(0.059)</td>
<td>(0.058)</td>
<td>(0.061)</td>
</tr>
<tr>
<td>T DAYS</td>
<td>---</td>
<td>0.316**</td>
<td>0.322**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.106)</td>
<td>(0.105)</td>
</tr>
<tr>
<td>BRAND</td>
<td>---</td>
<td>0.354***</td>
<td>0.355***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.077)</td>
<td>(0.076)</td>
</tr>
<tr>
<td>EXPLORE</td>
<td>---</td>
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<td>0.135**</td>
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<tr>
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<td></td>
<td>(0.066)</td>
<td>(0.066)</td>
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<td>EXPLOIT</td>
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<td>(0.060)</td>
<td>(0.064)</td>
</tr>
<tr>
<td>RO</td>
<td>---</td>
<td>---</td>
<td>0.438**</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.174)</td>
</tr>
</tbody>
</table>

### Model Summary

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>152</td>
<td>119</td>
<td>117</td>
</tr>
<tr>
<td>Model F</td>
<td>6.044***</td>
<td>9.599***</td>
<td>8.923***</td>
</tr>
<tr>
<td>(R^2)</td>
<td>0.075</td>
<td>0.338</td>
<td>0.362</td>
</tr>
<tr>
<td>Adjusted (R^2)</td>
<td>0.062</td>
<td>0.302</td>
<td>0.322</td>
</tr>
</tbody>
</table>

Dependent Variable = PERFORM  
*** p < 0.01; ** p < 0.05; *p < 0.1; Values in parentheses represent Standard Errors
APPENDIX: MEASURES OF THE VARIABLES

Performance of the franchise system (PERFORM):
Six items measured on a seven point scale, Cronbach alpha = 0.836
To which extent did the franchise system achieve 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
   6. Profit growth

Franchisor’s intangible resources:
Annual Training Days (T DAYS): Number of franchisee’s training days per year

Brand name (BRAND):
Four items measured on a seven point scale, Cronbach alpha = 0.815
   1. Our brand name is very strong compared to our competitors
   2. The quality of our franchise system has a very good reputation
   3. Our franchise system is well recognized compared to our competitors
   4. Our brand name is very important to achieve a competitive advantage

Franchisees’ intangible resources:
Exploration capabilities (EXPLORE)
Two items measured on a seven point scale
Franchisee’s know-how advantage compared to company owned outlets evaluated by the franchisor regarding:
   1. Innovation capabilities
   2. Local market knowledge

Exploitation assets (EXPLOIT)
Two items measured on a seven point scale
Franchisee’s know-how advantage compared to company owned outlets evaluated by the franchisor regarding:
   1. Quality control
   2. Administrative capabilities
Real option clause (RO):
A dichotomous variable indicating the presence of the real option clause (as option to acquire the outlet) in the franchise contract (0= no real option clause, 1= real option clause)

Trust (TRUST)
Four items measured on a seven point scale, Cronbach alpha = 0.876
The franchisor has to evaluate trust between him and franchisees:
1. There is great trust between us and franchisees.
2. There is an atmosphere of openness and sincerity.
3. The mutual cooperation is on a partnership basis.
4. Information exchange is more than agreed.

Environmental uncertainty (ENV)
Four items on a seven point scale, Cronbach alpha =0.748
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

Sector (SEC)
Sectoral variable: 0 = Product distribution, 1 = Services.