The Relationship between Initial and Ongoing Fees in Franchising: A Meta-Analysis

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Abstract

Franchisors typically create and appropriate value through the growth of agent (franchisee) networks and extraction of economic profits (for the rights granted to franchisees) through revenue sharing contracts. Mechanisms and rationales for revenue sharing have been the subject of many theoretical and empirical studies on contracting. Franchising is a popular form of retailing in a wide range of product and service markets, plays a significant role in many developed economies and is a rapidly growing form of retailing in a number of emerging markets – therefore it is a suitable context for research on revenue sharing contracts. There is an extensive body of research that examines factors influencing the fee structure of franchise contracts and the relationship between the different components (fixed initial fees and ongoing fees that are typically expressed as a percentage of franchisee revenues) of this fee structure. There are two competing perspectives on the latter – one school of thought views the fixed and ongoing fees as being negatively related, since they are considered as twin parts of a mechanism deployed by a franchisor to share risk and extract franchisee profits, ensuring that franchisees just receive a normal profit on their investment; the other school of thought (based on arguments drawn from property rights theory, a combination of signaling, screening and transaction cost theory, brand effects rationales, allocation of channel functions and the implementation of the equity principle,and the existence of positive franchisee rents) posits that the two components are not related or are positively related. The divergence in these perspectives calls for a comprehensive empirical examination of the relationship between initial and ongoing fees in franchise contracts. However, to the best of our knowledge, there is no integrative quantitative review or meta-analysis on this topic. In this study, we conduct a meta-analysis to aggregate results from empirical studies, synthesize insights from prior research and test our hypotheses. Results from our meta-analysis (based on 26 studies with different samples and a total sample size of 22,676) reveal a small but significant positive correlation between royalty rates and franchise fees.

Key words: Franchising, Contracting, Revenue Sharing, Royalty Rates, Franchise Fees, Meta-analysis, Agency Theory, Property Rights Theory.

Introduction

Revenue sharing is a key element of contracts in vertical exchange relationships in many business contexts (including franchising). In franchise contracts, a franchisee typically pays a portion (the royalty rate) of its revenue to the franchisor on an ongoing basis as well as an initial lump-sum fee (the franchise fee). In practice, the setting of these fees is an important decision for franchisors as they impact its profitability and the performance of the franchise system. The rationale and mechanisms for revenue sharing and determinants of the fee structure of franchise contracts have been the subject of a number of theoretical (e.g. Bhattacharyya & Lafontaine, 1995; Blair & Kaserman, 1982; Dnes, 1992; Gallini & Lutz, 1992; Lal, 1990; Mathewson & Winter, 1985; Rubin, 1978) and empirical studies (e.g. Brickley, 2002; Kaufmann & Dant, 2001; Lafontaine, 1992; Lafontaine & Shaw, 1999; Rao & Srinivasan, 1995; Sen, 1993; Vázquez, 2005; Windsperger, 2001) in franchising that use a wide range of theoretical lenses (including agency theory, risk sharing, signaling, screening, transaction cost theory, property rights theory, brand effects and functional efficiency theories). In this chapter, we conduct a meta-analysis to quantitatively synthesize empirical research findings on the fee structure of franchise contracts. In particular, we focus on the relationship between initial fees (e.g., franchise fees) and ongoing fees (e.g., royalty rates) and address two competing perspectives on the relationship between them.

Franchising is a prominent form of retailing for a wide range of products and services and is, therefore, a suitable context for research on revenue sharing contracts. It is the most popular manifestation among different types of partner-based retailing and has had a significant effect on retailing all over the world since its inception in the early 20th century (Kacker, Dant, Emerson, & Coughlan, 2016). IFA[1] (International Franchise Association) reports 782,573 franchised

business establishments in the US in 2015, which contribute 9,112,000 jobs to the U.S. economy and 552 billion dollars (3 per cent) of the US GDP (in nominal dollars). Franchising is growing globally by 10 percent annually over the last five years, with emerging economies experiencing high rates of growth of this form of retailing.

Despite the substantial role and growth of franchising, franchisors' strategies to derive economic profits from the rights they grant their agents (franchisees) remain to be fully explored and understood. The relationship between a franchisor and a franchisee is governed by a franchise contract. In this arrangement, a franchisor charges the franchisee for the right to sell the franchisor's product and/or services. In business format franchising, a franchisor licenses rights to "not only the product, service, and trademark but also the entire business format itself—a marketing strategy and plan, operating manuals and standards, quality control, and continuing two-way communication" (Kostecka, 1987, p. 3). In return, a franchisee pays for these rights primarily through an ongoing royalty rate and a one-time, upfront fixed franchise fee. According to Kaufmann and Dant (2001), the franchisor's rationale for setting these two components and the association between them is a fundamental theoretical and empirical topic in this field.

There are two competing theoretical approaches to explain the rationale behind the setting of the ongoing and initial fees (Kaufmann & Dant, 2001). The first approach sees both components as part of a dual mechanism for the franchisor to extract a franchisee's profits and limit her from acquiring more than a normal profit gain on their investment (e.g. Blair & Kaserman, 1982). Therefore, ceteris paribus, the two fee components are expected to be negatively correlated since they are the two components of the business's total profit and when one increases, the other decreases. In contrast, a second group of researchers expects a positive correlation between royalty rates and franchise fees. They argue that both payments reflect the

level of franchisor investment in training and providing services to franchisees and in building its brand and business (Kaufmann & Dant, 2001). Therefore, a comprehensive empirical investigation of the franchising literature is needed to address these competing perspectives and show the pattern of fees used by franchisors.

Considerable research has been done to investigate the two views of the fee structure of franchise contracts. Dnes (1996) provides a qualitative review of the economics literature on franchising contracts, primarily based on transaction cost theory and agency theory. However, to the best of our knowledge, there is no comprehensive quantitative review or meta-analysis on this topic (although there are two meta-analyses on other franchising research questions). Dant, Paswan, and Kaufman (1997) undertook the first meta-analysis in the franchising literature to investigate ownership redirection. This study is extended by Combs and Ketchen (2003), who conduct a meta-analysis of empirical studies on resource scarcity and agency theory-based explanations of franchising.

In this study, we apply meta-analytic methods to quantitatively synthesize insights from prior studies and test our hypotheses about pricing mechanisms for franchise rights. In the next section, we present the theoretical background from the franchising literature. Subsequently, we explain our methodology and present our results, conclusions, limitations, and directions for future research.

Background and Theory

Fee Structure of Franchise Contracts

As noted in the previous section, the fee structure of a franchise contract includes the royalty rate (an ongoing fee that is usually a proportion of sales) and a franchise fee (a fixed fee that is a lump-sum, initial payment at the beginning of the contract). These fees are normally uniform for all franchisees that join a chain at the same time.

According to Blair and Lafontaine (2005), there are three major types of royalty rates. First, the most popular type is expressed as a proportion of sales. Second is royalty as a proportion of net profit – this is less popular because of difficulty in the monitoring and accurate calculation of profits. The third type of royalty is an annual fixed fee that is used in some particular business types. In this study, we consider the first type as it is the most prevalent type of royalty in business format franchising. Although the third type is obviously different, it is very important to distinguish between sales and profit-based royalty rates as the latter are typically considerably higher than the former. Blair and Lafontaine (2005) also describe three sources of franchise fee variation for the same franchisor – the size of the territory and its market potential, the franchised unit type, and the number of units, expansion or conversion of an existing franchisee.

The Relationship between Royalty Rates and Franchise Fees

Sen (1993), Dant and Kaufmann (2001) and Vazquez (2005) note that there are multiple theoretical perspectives that can be used to explain royalty rates and franchise fees (and the underlying relationship between them). These theoretical lenses include institutional economic theories such as agency theory (e.g., Rubin 1978; Mathewson and Winter 1985; Lal 1990; Lafontaine, 1992; Bhattacharyya and Lafontaine, 1995), risk sharing (Rubin, 1978; Blair and Kaserman, 1982; Lafontaine, 1992), signaling (Gallini & Lutz, 1992), screening (Dnes, 1992),

transaction cost theory (e.g. Klein, 1980; Klein, 1995) and property rights theory (Windsperger, 2001) as well as perspectives drawn from research in marketing – e.g., brand effects (Dant and Kaufmann 2001) and functional efficiency (Coughlan, Anderson, Stern, & El-Ansary, 2006) theories.

Agency theory views royalty rates and franchise fees primarily as substitutable mechanisms for extracting the maximum rent from a franchisee. Rubin (1978) indicates that the extent of franchisee profits extracted through the royalty rate (as opposed to the franchise fee) depends on the potential for franchisee and franchisor moral hazard (as reflected in the degree of managerial discretion available to franchisees and the value of the franchisor's trademark respectively). Some of the more formal mathematical models of franchise contracting (e.g., Lal, 1990 and Bhattacharyya and Lafontaine, 1995) echo the rationale advanced by Rubin (1978). Lal (1990) finds that all franchisee rents are extracted through the franchise fee except when both the franchisee and the franchisor control unobservable factors that affect demand at the retail level. Similarly, Bhattacharyya and Lafontaine (1995) develop a double-sided moral hazard model to show that simple linear fee structures can be optimal. Rubin (1978) suggests that, ceteris paribus, royalty rates and franchise fees are negatively related. Vazquez (2005) summarizes the implications of franchisor and franchisee moral hazard for the fee structure of the franchise contract by positing that the more important and harder to monitor the franchisee (franchisor) effort, the lower (higher) is the ongoing fee and the higher (lower) is the initial fee.

Rubin (1978) also recognizes the role that risk-sharing plays in the determination of the fee structure of franchise contracts. The implications of uncertainty and differing risk preferences play an important role in the formal contracting model developed by Blair and Kaserman (1982). They view ‘output royalties’ and ‘lump-sum entry fees’ as two of the five generic forms of

vertical control that provide equivalent economic results under certain conditions. Hence, the initial and ongoing fees can be seen as substitutes. Blair and Kaserman (1982) propose that, in the absence of certainty about the future demand, franchisors will employ both royalty and fixed fees. This proposition is grounded in the Caves and Murphy (1976) rationale that, with perfect information, the franchisor can extract maximum lump-sum profit by putting franchisees up for bid. However, future demand uncertainties, franchisee risk aversion and the need for continuous policing by the franchisor lead to differences between a franchisor's and a franchisee's present value of the future profit. This difference rules out the auctioning mechanism from being the best means for profit maximization. Therefore, royalty – reflecting taxation of future income – comes in as the second best tool for the franchisor to capture these future rents. Different expectations of the parties about the future outcome of the business result in the diverse discount rates when they are negotiating the contract. It leads Blair and Kaserman (1982) to propose that the optimal level of initial fee (royalty) has a positive (negative) relationship with the franchisor's implicit discount rate; and the optimal level of initial fee (royalty) has a negative (positive) relationship with franchisees' implicit discount rates. The related stream of research that examines risk-based explanations for the fee structure of franchise contracts (e.g., Lafontaine, 1992) posits that ceteris paribus, given the relatively greater risk aversion of the franchisee, an increase in uncertainty and risk should lead to a lower franchise fee and a higher royalty rate.

Lafontaine and Shaw (1999) note that economic theory predicts, ceteris paribus, a negative correlation between the two focal components of the fee structure of franchise contracts. In line with this view, franchisors use the dual payment mechanism to exploit all values of the business except a normal profit for the franchisee's investment. Therefore the royalty rate is a means to give the both parties a true incentive to grow under environmental uncertainty,

differing risk preferences and moral hazard; the franchise fee is a complementary fee to extract the residual excess value (Blair & Kaserman, 1982; Kaufmann & Dant, 2001; Lal, 1990). Assuming a certain value that should be extracted by the franchisor, the greater proportion of the value obtained by the royalty, the smaller the portion of the franchise fee (Blair & Kaserman, 1982; Rubin, 1978). Therefore, we posit:

H1a: *Royalty rate and franchise fee are negatively correlated.*

In keeping with the predictions of agency and risk sharing theory, Sen (1993) found a number of variables that had opposing effects on the franchise fee and royalty rate. Similarly, Vazquez (2005) found a significant negative association between initial franchise fees and ongoing variable payments. However, a number of empirical studies do not support the negative relationship between royalty rates and franchise fees – these studies have shown that these two variables do not share a significant statistical association with each other (Dnes, 1992; Lafontaine, 1992, 1993) or are positively associated with each other (Baucus, Baucus, & Human, 1993; Kaufmann & Dant, 2001; Rao & Srinivasan, 1995; Wimmer & Garen, 1997; Windsperger, 2001).

Lafontaine (1992) examined the relationship between royalty rates and franchise fees, after controlling for input sales that may contribute to franchisor income, the proportion of franchised outlets and total sales. She did not find the expected negative relationship. Although Lafontaine and Shaw (1999) found a strong negative correlation between royalty rates and franchise fees, the relationship became positive when they removed chains with fixed royalties from their sample. In a more recent study, Kaufmann and Dant (2001) discounted summed royalty rate over the life of the franchisee to study the relationship between the net present value

of summed royalty and the initial fee. They found a significant positive relationship between the royalty rate and franchise fee.

A number of potential theoretical explanations exist for a positive (or non-negative) relationship between initial and ongoing fees in franchising. These include explanations based on a combination of signaling, screening and transaction cost theory logic as well as those based on property rights theory, the existence of positive franchisee rents, brand effects and fees based on the allocation of functions between (and performance of functions by) the franchisor and franchisee.

There may be heterogeneity in the quality of franchisors in any sector or industry. High quality franchisors may use a combination of signaling, screening, and hostage taking in a manner that suggests a positive correlation between royalty rates and franchise fees. Gallini and Lutz (1992) develop a theoretical signaling model to show a positive relationship between franchisor quality and royalty rates. In their model, a franchisor has superior private information about the quality of its franchise concept (relative to information available to potential franchisees). A franchisor with a superior business format signals this private information to prospective franchisees by taking a larger stake (through a higher royalty rate) in the future performance of the franchise system. Dnes (1992) shows that a high quality franchisor is also likely to take more stringent measures (such as a relatively higher franchise fee) to screen out low quality prospective franchisees. Transaction cost theory-based reasoning (Klein 1980, Klein 1995) also suggests a positive relationship between franchisor quality and franchise fees – a high quality franchisor may have more to lose in the wake of ex-post opportunism by a franchisee and is likely to seek more substantial hostages or bonds (in the form of higher franchise fees) from prospective franchisees. Thus, there is a theoretical basis for a positive relationship between

franchisor quality and royalty rates, between franchisor quality and franchise fees and, therefore, between royalty rates and franchise fees.

Windsperger (2001) predicts a positive correlation between royalty rate and franchise fee, based on property rights theory. Building on this theory, he argues that residual rights should be transferred to the party that has more contribution in terms of intangible assets, in order to encourage this type of investment. Therefore, in the presence of highly system-specific investments by the franchisor, a relatively higher royalty and franchise fee should be expected. Conversely, lower fees are likely when the franchisee's local market knowledge is more valuable for the business.

Dant and Kaufmann (2001) offer a brand effects-based rationale for the positive association between royalty rates and franchise fees. Drawing on Mathewson and Winter (1985), they indicate that both royalty rates and franchise fees are relatively lower for a new franchisor with low brand equity. As brand equity increases over time, both types of fees should rise. Evidence from Lafontaine and Kaufmann (1994) – that adjustments in royalty rates and franchise fees move in the same direction over time – support this theoretical logic.

The equity principle, advanced by Coughlan et al. (2006), suggests that the division of profits in a franchise system should be based on the efficient allocation of channel functions and the value added by members of the franchise system. Thus, royalty rates and franchise fees are determined by the levels of initial and continuing services provided by the franchisor to franchisees. This view argues that franchisors price their business rights based on the level of the investment in building and safeguarding their brand (Lafontaine & Shaw, 1999). Assuming different levels of investment, support, and services by franchisors, one can posit that franchisors

with a higher level of initial support and brand value are more likely to offer higher levels of ongoing support. Therefore, if the initial fee is seen as compensation for initial services and training, and ongoing fees are seen as a means to recover brand investment and ongoing support by the franchisor, we can expect a positive correlation between the two fees (Kaufmann & Dant, 2001; Lafontaine & Shaw, 1999).

Lafontaine (1992) argues that franchisors use initial fee to compensate for their initial services (such as recruiting and training) and not to extract all surplus downstream values. The work of Mathewson and Winter (1984) on optimal franchise contracts supports the idea that, for a franchisee with limited wealth, there is a positive downstream rent. The existence of a queue of prospective franchisees for major franchisors is evidence of that downstream rent. Kaufmann and Lafontaine (1994) show positive ex-ante downstream rent left for franchisees at McDonald's.

Given the above-mentioned theoretical rationales, we posit:

H1b: *Royalty rate and franchise fee are positively correlated.*

Method

Meta-analysis Technique

For a long period of time, null hypothesis significance testing has been used for making inferences about populations based on data from a sample. Meta-analysis has emerged in recent decades as another approach for analyzing social science data. Meta-analysis is used to make inferences about population characteristics and relationships using sample data, like the traditional hypothesis testing method (Huffcutt, 2004). According to Hunter and Schmidt (2004), while small sample studies produce seemingly contradictory and sometimes conflicting results,

meta-analysis integrates several sets of research results to present an aggregate pattern of the relationships and provides a basis for theory development. In addition, meta-analysis can remedy effects of sampling and measurement errors and other artifacts that cause the illusion of contradictory or conflicting results. In this study, we begin by estimating the main effect size that is the correlation between ongoing and initial fees in franchising studies. Then, we examine whether there is heterogeneity in the effect size among studies. If so, we need to find out whether some potential factors cause that variability between the studies or whether it is just due to sampling error.

Compilation of studies

In this study, we reviewed empirical studies in the franchising context in marketing, management, and economic journals from 1990 through August 2016. Among these papers, we have collected those that report a correlation between ongoing fees and initial lump-sum fees at the franchisor level of analysis. In collecting these papers, we included papers that measured ongoing fees as royalty rates or the sum of royalty rates and advertising fees (also typically defined as a proportion of franchisee revenues) and initial fees as franchise fees or the sum of franchise fees and initial franchisee investments. To facilitate the process of collecting these papers, 'royalty rate' and 'franchising' were used as search keywords in Google Scholar. We also posted announcements to ELMAR[2], ISoF[3], and EMNet[4] email lists and sought relevant unpublished studies. This process resulted in 59 papers, with 24 of them reporting our correlation of interest. Since two of them included more than one study (e.g. data collected in two different countries), we could access 26 studies with different samples. Also, in cases that the same data set is used in more than one paper, we considered them as one observation. Using these studies,

we obtained a total sample size of 22,676. Table 1 shows the list of the studies included in our analysis.

Insert Table 1 around here.

Effect Size Estimation

In this study, the correlation between the ongoing fee and the initial lump-sum fee is the main effect that we are going to determine. According to Borenstein, Hedges, Higgins, and Rothstein (2009), fixed effects and random effects models are the two basic models for meta-analysis. Under the basic assumption of the fixed-effects model, there is a true effect size within all studies and the variations among observed effects are caused by sampling error. In contrast, the random effects model allows for variation of the effect size across different studies. This method assumes there are different effect sizes for different studies, distributed around a mean. Those differences are caused by differences in the mixes of the samples and implementation.

In this study, we apply the random effects model to see whether, in various studies, the relation between royalty rate and initial fee is different. This method, which parallels regression, can test the significance of heterogeneity in the parameter of interest and hence use the whole data set to test for significance of a potential moderator (LePine, Erez, & Johnson, 2002). In the random effect meta-analysis, for any study, the observed effect Y_i is given by weighted mean effect size μ (grand mean), the deviation of the study's true (between study differences) effect from the grand mean ξ_i and within study error ε_i.

$$Y_i = \mu + \xi_{i+} \varepsilon_i$$

Therefore, three parameters are estimated including the grand mean μ, between and within studies errors variance ξi and εi. In this process, we calculate weighted grand mean to minimize its variance. We use the inverse of the study's variance as weight following the procedure in Lipsey and Wilson (2001), like other calculations in this study. In the random effects approach to calculating a study's variance, we need to sum up the variance of the distribution of the true effects across studies τ^2 and the within-study variance.

The weighted mean effect size should be calculated using equation 1 but, according to Alexander, Scozzaro, and Borodkin (1989), we need to transform effect sizes using equation 2 to correct for problematic standard error formulation and, after calculating the mean effect size, we transform the overall average back using the equation 3.

$$\overline{ES} = \frac{\sum(w_i \times ES)}{\sum w_i} \quad (1)$$

$$ES_Z = 0.5 \ln[{}^{1+r}/_{1-r}] \quad (2)$$

$$r = \frac{e^{ES_Z}-1}{e^{ES_Z}+1} \quad (3)$$

Confidence Intervals

Calculating and using confidence intervals is a useful way to show the precision of the results. They show the range within which the population mean is likely to be. Moreover, if the confidence interval does not include zero, then we can conclude that the mean effect size is significant at the specified level. The confidence interval is calculated based on the standard error of the mean effect size and the critical value from the z-distribution. Equations 4 and 5 show how we calculate the standard error of the mean effect size and confidence interval

(including upper and lower limits) respectively based on the suggestions of Lipsey and Wilson (2001).

$$SE_{\overline{ES}} = \sqrt{1/\sum w_i} \quad (4)$$

$$\overline{ES_L} = \overline{ES} - z_{(1-\alpha)}(SE_{\overline{ES}}), \quad \overline{ES_U} = \overline{ES} + z_{(1-\alpha)}(SE_{\overline{ES}}) \quad (5)$$

In these equations, $SE_{\overline{SE}}$ is the standard error of the effect size, w_i is the inverse variance weight associated with effect size i, $\overline{ES_L}$ and $\overline{ES_U}$ are the upper and lower limits of the confidence interval, $\overline{ES}$ is the mean effect size, $z_{(1-\alpha)}$ is the critical value for the z-distribution, and $SE_{\overline{ES}}$ is the standard error of the mean effect size.

We can also compute an exact significance level of the effect size directly by computing a z-test using the equation 6 where $|\overline{ES}|$ is the absolute value of the mean effect size and $SE_{\overline{ES}}$ is the standard error of the mean effect size.

$$z = \frac{|\overline{ES}|}{SE_{\overline{ES}}} \quad (6)$$

The result of equation 6 is distributed as a standard normal statistic and is statistically significant if it exceeds the critical level.

Testing for Homogeneity

After calculating the mean effect size in the meta-analysis, an important question is whether the assumption that all of the effect sizes are estimating the same population mean is a reasonable one. To answer this question of the homogeneity of the effect size distribution, we use the Q statistic that is distributed as a Chi-square with k-1 degrees of freedom where k is the number of

studies including the effect size. In this process, we test whether the variability of the effect sizes is larger than would be expected from sampling error. Therefore, if the test rejects the null hypothesis of homogeneity, we can conclude that there are sources of heterogeneity other than sampling errors. These sources could be associated with different study characteristics. We used the formula in equation 7 for calculating Q statistics.

$$Q = \sum(w_i ES_i^2) - \frac{(\sum w_i ES_i)^2}{\sum w_i} \qquad (7)$$

The null hypothesis of homogeneity is rejected if Q exceeds the critical value for a Chi-square with k-1 degrees of freedom. Then, we have to look for the sources of the heterogeneity in the studies. This Q is achieved from a fixed effects approach. Hence, we need it to calculate the mean effect size and Q* for the random effects approach. Following Lipsey and Wilson (2001), we calculate the random effect variance component, $\hat{\upsilon}_\theta$ using equation 8 thus use it to correct the weight via equation 9, using modified weight, W_i* we compute effect size and Q statistic for random effect approach.

$$\hat{\upsilon}_\theta = \frac{Q-(k-1)}{\sum w_i - (\sum w_i^2 / \sum w_i)} \qquad (8) \qquad\qquad w_i = \frac{1}{se_i^2 + \hat{\upsilon}_\theta} \qquad (9)$$

Moderators

After the homogeneity test of the effect size, if heterogeneity exists, investigating the sources of it would be the next step. Hence, we are going to test if there is a significant moderation effect on the mean effect size in the studies. For this step, we estimate our moderation effect via random effects meta-regression using the maximum likelihood estimator. We test the moderation effect of the variables that can be a source of differentiation of the correlations between studies

according to the extant franchising literature. Because of the small number of observations and missing data, we have to test each moderation effect separately.

Results

All calculations are done using the presented formulas, in keeping with the Lipsey and Wilson (2001) procedures and using their macro for Stata software. Table 2 illustrates the results of the main analysis. It shows that, for the studies in our analysis, the mean correlation between the two fees that franchisors charge their franchisees is +0.046 and +0.072 for fixed effects and random effects respectively. Calculated 95 per cent confidence intervals for the correlations are [0.03393, 0.05996] and [0.01187, 0.13244] respectively. As zero is not in the confidence intervals, we can conclude that the mean effect size is significant at the 0.05 level. Moreover, the exact significance level of the effect size is directly computed by computing a z-test statistic. These results reject H1a and support H1b (that posits a positive correlation between the two focal components of the fee structure of franchise contracts).

In the homogeneity test, the calculated Q (422.56) is higher than 37.65 (critical chi-square value with 25 degrees of freedom at 0.05 level) for the fixed effects model. Therefore the null hypothesis of homogeneity is rejected, and we can conclude that the mean effect size is heterogeneous across whole samples.

Insert Table 2 around here.

Regarding the heterogeneity of the correlation across studies, we now test for moderation effects. In fact, we test for potential variables that can cause the variation of the main effect and

are selected based on a theoretical background in the extant literature and availability of data. These variables are 'average business age', average chain size, the average percent of owned outlets, the year of the study, the geographic scope of the study, the weeks of training offered by the franchisor and the operationalization of the royalty rate and franchise fee variables. Table 3 contains the results for moderation effect using the random effects approach. As we can see from the table, none of the effects are significant at the conventional levels, and their confidence intervals include zero. Therefore, we cannot see significant support for moderation effect of these variables.

Insert Table 3 around here.

Conclusions

There is a substantial body of research on the fee structure of franchise contracts. However, there are very few integrative assessments of this stream of research, with an exception being Dnes' (1996) qualitative review of the economics literature on franchising contracts. To the best of our knowledge, there is no comprehensive quantitative review or meta-analysis on this topic, although there are two meta-analyses on other franchising research questions – on ownership redirection in franchising (Dant et al., 1997) and on resource scarcity and agency theory-based explanations of franchising (Combs and Ketchen (2003). The need for a meta-analysis on the fee structure of franchise contracts is magnified by two factors – the managerial significance of this fee structure for franchisor profits in practice and the existence of potentially contradictory and opposing theoretical predictions regarding the relationship between initial and ongoing fees paid by franchisees to franchisors. We contribute to the franchise contracting literature by addressing this gap through a meta-analysis of the relationship between initial and ongoing fees. In doing so,

we also make contributions to franchising practice – our findings should aid franchisors in setting the initial and ongoing fees in a manner that strengthens system performance and enhances franchisor profits.

In this study, we aggregated the results from empirical studies in franchising to measure the grand mean of correlation between the key components of the fee structure of franchise contracts using meta-analysis method. Although some economic theories expect, ceteris paribus, a negative correlation between royalty rates and franchise fees, our results reveal a small but significant positive correlation. The results indicate that, contrary to some of the predictions from agency and risk sharing theory, initial lump-sum fees, and ongoing fees move in the same direction. This result rejects the argument that franchisors set initial and ongoing fees primarily to extract franchisee rents and share risk. Instead, it suggests that prices for franchise rights are more likely to be set based on the quality of the franchisor, brand effects, distribution of intangible assets and the level of franchisor initial and ongoing support. The positive correlation which is concluded from the integrated sample in this study is in accordance with the idea that the two-part price mechanism in franchising is a mechanism to share value based on each party's investment in the initial and ongoing needs of the business. It is also consistent with theoretical reasoning that a higher quality franchisor with greater brand equity will set relatively higher royalty rates (to communicate private information to prospective franchisees) as well as higher franchise fees (to screen out lower quality franchisees and obtain hostages as safeguards against ex-post opportunism by franchisees that join the system). Our focal result also supports Windsperger's (2001) prediction of the positive correlation based on property rights theory. He argues that a franchisee's and a franchisor's stake in intangible assets drive the allocation of income between them. Therefore, the higher a franchisor's 'system specific assets' relative to a

‘franchisee’s local market know-how’, the higher the franchisor’s residual income rights (in terms of both initial and ongoing fees).

As with any research study, this meta-analysis has inherent limitations. First, we found a relatively small number of studies that actually reported the correlation between initial and ongoing fees. Moreover, in some cases, authors used the same data in more than one paper – in these situations, we used only one of the papers in order to keep our data points independent. Second, there were a substantial number of published studies that collected data on initial and ongoing fees but did not report the correlation between them. These studies were not included in our meta-analysis. Third, in the studies which are used in this meta-analysis, the royalty rate is conceptualized as a percentage of franchisee revenue that should be paid to the franchisor. However, some franchisors charge their franchisees a fixed royalty, so they are not included in these studies. Finally, franchisors may use other mechanisms (e.g., markups on the supply of inputs to franchisees) for extracting franchisee rents. The absence of this information from the data available to us limits our ability to control for rent extraction mechanisms other than franchise fees and royalty rates.

This study brings an integrative synthesis to a body of franchising research to answer the often asked question of how franchisors set their contracts. In contrast to qualitative and theoretical papers, this aggregate view comes from a quantitative analysis of a very large sample. In terms of theory, this study tests conventional theories behind franchising and provides empirical ground for new theory development. It reflects the maturation of franchising research (in terms of a shift in emphasis from ‘why’ firms franchise to ‘how’ firms franchise) by shedding light on how franchisors price their franchise rights to franchisees. In doing so, it identifies a number of avenues for future research. First, our heterogeneity test of the main effect shows

significant variation among studies. Therefore, there should be one or more moderators that cause this variation. However, we could not find a significant factor among the limited number of moderators considered by us. Future research is needed to investigate factor(s) that cause variation of correlation between fees in different studies. Second, there are multiple theoretical explanations that are consistent with our focal finding of a small and significant positive correlation between royalty rates and franchise fees. Future research could aim to disentangle the predictions of these theories and identify those that have the most comprehensive and conclusive empirical support. Third, the sample size should be expanded by including correlations from studies that collected the relevant data but did not report the pertinent correlation in the published study. Finally, many of the franchising studies included in our meta-analysis have used aggregated data from more than one industry. Hence, we could not control for the effect of sectorial norms on fee structures. Extant franchising literature has revealed significant diversity across different franchising sectors (Blair & Lafontaine, 2005) and between service and retail-type franchise chains (Barthélemy, 2008; Perrigot, 2006) in terms of their contract settings. Therefore, future empirical studies are needed to investigate variations in the relationship between initial and ongoing fees in different sectors.

Notes

[1] Franchise Business Economic Outlook for 2016: by IHS Economics, January 2016

[2] ELMAR is an electronic newsletter associated with American Marketing Association.

[3] International Society of Franchising.

[4] International Conferences on Economics and Management of Networks.

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Table 1: List of studies

No	Author	Data Period	Source
1	Carney and Gedajlovic (1991)	1988	SMJ
2	Combs and Castrogiovanni (1994)	1986-1991	JSBM
3	Shane (1996)	1983	AMJ
4	Shane (1998a)	1991-1994	JOM
5	Shane (1998b)	1981-1985	SMJ
6	Lafontaine and Shaw (1999)	1980-1992	JPE
7	Alon (2001)	1990-1997	JSBM
8	Windsperger (2002),	1997	EJLE
9	Affuso (2002)	1995	Applied Economics
10	Windsperger (2003)	1998	JMG
11	Castrogiovanni, Combs, and Justis (2006)	1999-2000	JSBM
12	Shane, Shankar and Aravindakshan (2006)	1979-1996	Management Science
13	Elango (2007)	2002	JSBM
14	Mitsuhashi, Shane, and Sine (2008)	1991-1997	SMJ
15	Michael and Combs (2008)	1991	JSBM
16	Combs, Michael and Castrogiovanni (2009)	1980-2000	JOM
17	Gillis, McEwan, Crook, and Michael (2011)	2006	ET&P
18	Polo-Redondo, Bordonaba-Juste and Palacios (2011)*	2008	EJM
19	Perrigot, López-Fernández, and Eroglu (2013)**	2009	JSBM
20	Lucia-Palacios, Bordonaba-Juste, Madanoglu, & Alon (2014)	1994-2008	JSM
21	El Akremi, Perrigot, and Piot-Lepetit (2015)	2009	JSBM
22	Fadairo, Lanchimba, and Windsperger (2015)	1996-2000	SSRN
23	Kacker, Dant, Emerson, and Coughlan (2016)	1995-2004	JSBM
24	Sadeh and Kacker (2016)	2001-2009	Working Paper

* This study includes two sets of data from fashion and catering sectors.

** This study includes two sets of data from the US and France.

Table 2: Computation Results for Grand Mean Effect Size

No. of Observations	26			Homogeneity Analysis		
Minimum Observation	-0.27			Q	422.56	
Maximum Observation	0.96			df	25	
Weighted SD	0.137			p	0.000	
	Mean	-95% CI	+95% CI	SE	Z	P
Fixed Effect	0.0469	0.0339	0.0599	0.0066	7.0693	0.0000
Random Effect	0.0721	0.0118	0.1324	0.0307	2.3459	0.0189
Random effects variance component = 0.01983 estimated via non-iterative method of moments.						

Table 3: Moderation Test Results

Variable	Coefficient	Standard Error	95% Confidence Interval		No. of Observations
Business Age	-0.0040	0.0057	-0.0151	0.0072	14
Chain Size	-0.0001	0.0001	-0.0003	0.0001	21
Percent of owned unit	-0.0050	0.0031	-0.0111	0.0011	18
Data collection time	0.0012	0.0054	-0.0094	0.0119	26
Geographic scope	0.0802	0.0993	-0.1144	0.2747	26
Training	-0.0534	0.0339	-0.1198	0.0130	7
Operationalization	-0.1142	0.0999	-0.3101	0.0817	26