Assessing the intangibles transferred in franchise businesses

1 Introduction

The business model that has grown the most and has been the most successful worldwide in recent decades is franchising due to its considerable increase in the commercial distribution area, and to the constant increase in franchisors and franchisees in both developed and developing countries (Rondán *et al.,* 2007). Nonetheless, the decision to adopt the franchise system requires the careful analysis of various aspects such as staff selection, location, etc. (Forward and Fulop, 1993).

Research into franchise relationships generates two groups: those that qualitatively focus on dyadic relationships from the agents' organizational viewpoint and those that attempt to quantify the exchanges taking place in the relationship by means of a franchising contract with empirical studies. As part of these exchanges, the franchisor enables the brand name and a series of intangible assets to be exploited in exchange for an upfront fee and periodic payments paid by the franchisee. In light of this, Álvarez (2007) defined the franchising chain as intensive businesses in intangible assets that do not deteriorate with use and which are hard to commercialize. This research presented here is within the context of empirical research studies into franchising relationships.

Pioneering studies on franchising focused on analyzing the indicators of the franchise value, such as those of Baucus *et al.* (1993) carried out on franchises in the US. These authors determined the influence of the firm's age, its presence in the market and growth in the number of franchises in terms of upfront fees and royalties. These drivers have been considered by several studies analyzing the firms´ propensity to franchise. (Gillis and Castrogiovanni, 2010). Later research looked deeper into the many aspects that intervene in the relationship, which is based on cooperation rules, information exchanges and the continuity of the relationship (Bordonaba and Polo, 2003) and evolves throughout its life cycle (Blut *et al*, 2010). Whatever the degree of the relationship's orientation, the franchisee's trust in the franchisor is essential for a satisfactory relationship to emerge (Bordonaba and Polo, 2008), as is partner commitment (Fernández and Martín, 2006). Moreover, franchise business formats must develop to consider the capabilities and intentions among participating stakeholders (De Castro *et al.,* 2009). The organisational drivers should be considered as a main issue in the franchise selection decision process (Altinay and Okumus, 2010). Indeed, the greater the complexity of the knowledge transmitted, which is measured by the number of services the franchisor provides to the franchisee, not only when the activity commences, but also as long as the relationship lasts, the more it helps to develop business and to make the system more efficient (Minguela-Rata *et al*., 2009).

However, conflicts can emerge in this relationship, known as the channel conflict derived from the franchisors' need to control their franchisees, and from their authority as legally independent businesspeople. Another emerging conflict is the territorial encroachment-related conflict, which takes place when new franchisees appear to compete with and encroach on already existing ones. The latter may even offer positive value to not only the franchisor when an exclusivity clause is included in the contract, but also to the franchisee by purchasing this exclusivity (Nair *et al*., 2009). Likewise, this competence among franchises means their numbers increase, which lowers their incomes, and this gives rise to a negative relationship between the royalties and the number of franchises (Chu and Liu, 2003).

Whereas the upfront fee tends to be a set amount, royalties are normally calculated as a percentage of the franchisee's sales or profits as profit sharing between the franchisor and the franchisee (Combs and Castrogiovanni, 1994). Whereas sales-based royalties are a widely used system in the USA, systems based on profit margins are more frequently used in countries like Japan, and may lead to lower prices, more sold amounts and more profit in the channel (Jeon and Park, 2002). In some countries, however, royalties are set as flat rate continuing franchise fees (Frazer, 1998), as in the case of Australia, which means that the franchisor makes less effort in helping his or her flat fee franchisors invest less effort in monitoring their franchisees.

Other aspects which affect the value of royalties and upfront fees are each country's legislation (Brickely, 2002), the sectors and the degree of franchising maturity. Therefore, Bordonaba *et al.* (2008) observed higher franchise fees and royalties in the restaurant business sector than in the fashion sector, and also a greater expansion of the newer franchises going through a stage of more rapid growth.

Harmon and Griffiths (2008) considered that the relational equity and social exchange theories were relevant to support the relational value perceived in franchising. That is, relationships must be based on the mutual franchisor-franchisee benefit and on the balance between the inputs and outputs that this exchange generates. Thus, the upfront fee represents not only the relational value perceived by the franchisor through tangible and intangible benefits, but also the expenses incurred while the relationship between the franchisor and franchisee lasts. In other words, the franchisee accepts paying the upfront fee in exchange for receiving the franchisor's know-how*,* which is an intangible asset that allows the franchisee to set up a business guaranteed to succeed. Therefore, the upfront fee paid is considered to be the value of franchise business intangibles, and this value is associated with the firm's capabilities, the brand name image and the firm's goodwill, all of which are intangible resources (Caves and Murphy, 1976).

In the empirical studies conducted to date that attempt to account for the payment of royalties and upfront fees, many operative variables have been used in relation to: size, firm age, presence in markets, etc., and other economic and financial-type variables have not been included. Additionally, considering a high number of variables makes it difficult to understand the meaning of the intangibles transferred in the relationship. Moreover, these studies have been conducted with franchising data from the USA, Canada and Europe. Consequently, the main objective of this study is to obtain an econometric model that explains the joint influence franchisors' operative, economic and financial variables on the payments made to franchisees in the Mexican restaurant industry, and to identify the intangible elements that underlie these variables and are transmitted in these franchising relationships. We present an empirical analysis to define the fundamental reasons and concepts for which franchisees are willing to pay the franchisor initial and periodic fees as part of this transfer-based relationship. We also analyze whether these fees complement or substitute each other.

The main novelty of this study is that it is the first to jointly analyze operative and financial variables of chains to determine the underlying factors in these variables and to explain the value of the intangibles transferred in the relationship rather than identifying strategic groups (Carney and Gedajlovic, 1991; Rondán *et al.*, 2007).

To meet these objectives, we propose the following structure for this study. We now go on to analyze the importance of the restaurant industry in Mexico and other countries, the contributions made by studies into franchises, and the characteristics that determine the value of the intangibles as measured by the upfront fees and periodic fees which are set out at the end of the hypothesis to be verified. Then the third section explains the survey conducted to obtain data, describes the sample and defines the variables to be studied. The fourth section describes the methodology used to analyze the data collected, while the fifth section presents the results of the analysis, which are compared with the hypotheses put forward. Finally the sixth section offers the conclusions drawn and future lines of research.

2 Background

We have used the franchise business in the restaurant industry in Mexico for this empirical analysis for two reasons. First, because of the importance and the growth registered in the franchise system in this country, which also occur in more developed countries despite the fact that studies into franchising in this country are scarce. According to the International Franchise Association (IFA)[1], in 2006 there were more than 2,500 franchise systems operating in the USA. In Europe, France occupies first place, followed by Germany, Spain, Italy and the United Kingdom with 855, 830, 800, 735 and 718 franchise systems, respectively, in 2005 (Holmberg and Morgan, 2007).

[1] *www.**franchise**.org*

However, this importance and growth taking place in the franchise system worldwide also took place a few years ago in the emerging markets of Latin America, where the highest numbers were recorded in Mexico and Brazil (Dant and Kaufmann, 2003). Although Brazil boasts almost 45% of all head offices and more than 50% of outlets, Mexico, with much less surface area and a much lower population, has more than 25% and 42% of the head offices and outlets in Latin America, respectively.

The franchise system was introduced into Mexico at the end of the eighties and, according to the Mexican Franchise Association (AMF), there were more than 500 business and around 32,000 branches or points of sale in 2008, with an annual turnover of approximately 85,000 million pesos, generating more than half a million direct jobs. Its contribution to the Gross Domestic Product (GDP) of Mexico is estimated to be 5%.

From 1998 to 2007, the number of points of sale in Mexico increased from 1,600 to 6,000, which is an annual increase of 440 new points of sale. This rapid growth has placed Mexico in eighth place in the international ranking of franchising countries in 2009.

Second, because the restaurant industry is highly significant in the franchise systems of most countries. According to the classification of both the AMF and the Mexican Secretariat of Economy, this industry includes restaurants, cafeterias and fast-food businesses, which include both food and drink. The AMF also reports that in terms of franchise sectors, 24% corresponds to the services sector, 23% to restaurants, 21% to retailing and 14% to education. Yet if we consider the restaurant industry, the percentage of its franchise businesses comes to 60% of the total.

In other countries like Spain, the restaurant sector is the most important in terms of turnover, which amounted to 5,269 million euros in 2007. Nonetheless, the fashion sector exceeds it in terms of the number of chains with 133 as opposed to the 116 in the restaurant sector of a total of 905 of all chains (Bordonaba *et al*., 2008). Likewise, the restaurant sector has a higher percentage of franchised units in relation to all the owned and franchised units with a total of 86% in 2006. Besides, it was the only sector with a rising trend over the period 1994-2006 (Díez *et al.,* 2008). Therefore, this sector has been the object of various studies, and of some carried out in specific subsectors such as bars serving more than one type of beer (Ramírez, 2007).

The same trend is observed in the US, which is precisely why the restaurant sector was selected by: Bradach (1997) in the study on organizational performance in five US chains; by Sen (1998) to analyze the relationship between the higher number of franchisees and firm growth; by Michael (1999) to compare advertising in franchised units and owned units; by Dant and Kaufmann (2003) to study the changes taking place in the tendency to franchise as the time chains have been operating lengthens; and by Michael and Combs (2008) to investigate the reasons behind failures. It is not only the restaurant industry that is important within the franchise system; although Hua and Templeton (2010) recommend adopting franchises in the US restaurant industry to improve sales in forthcoming years.

Nonetheless, several empirical studies on the franchise systems in various sectors of activity (restaurant, retailing and service) and countries (USA, Canada, Japan, Austria and Spain) follow the regression method to explain the reasons that lead to franchisees paying an upfront fee and periodic fees to the franchisor. To go about this, several franchise characteristics are employed, which are summarized in Table 1.

Table 1

Relevant literature on the estimation of franchisees' payments

No.	Author	Sample	Variable to be explained	Explanatory variables	R^2
1	Sen (1993)	996 franchises	Franchise fee and royalty rate	25 variables related with channel control, franchisor services and franchisee risks	0.08-0.31
2	Kaufmann & Dant (2001)	152 franchises	Franchise fee	Sale, royalties	0.280
3	López *et al.* (2001)	500 franchise firms from various sectors in 1998	Franchise fee	Length of service, length of contract, outlets, turnover, investment, population and outlet size	0.240
4	Bordonaba *et al.* (2006)	212 franchise firms from the hotel and catering and	Franchise fee	Contract, royalties, experience in the market, time package, AEF, investment, amount of time	0.680

		fashion sectors in 2003		franchising, expansion, own units, franchised units, units abroad.	
5	Windsperger (2002),	216 franchises in 1997 in Austria	Royalty rate	Knowledge on the local franchising market and number of days of training.	0.236
6	Vázquez (2005)	145 franchising networks in 2000	Royalty rate	Variation in sales, percentage of closures, outlet size, investment in marketing, investment in training, length of service, outlets, upfront fee	0.310
7	Maruyama & Yamashita (2010)	184 franchises in 2003 in Japan	Franchise fee and royalty rate	Investment, growth in outlets, years in business, variation of sales, franchisee’s value added, sales per outlet	

Sen (1993) observed in 996 franchises in the USA and Canada how channel control and franchisor services, such as financial help and centralized data processing, influence both the upfront fee and royalties, although the same cannot be said of the franchisee risks.

López et al (2001) consider the initial upfront fee to be a means of covering the costs which the franchisor has to defray when a new franchising outlet is being opened. This initial fee covers technical assistance, promotional objects and the outlet's design, among others. Clients easily recognize a franchises' products by their brand name and because the chains' outlets are similar; this situation allows reductions in search costs by extrapolating former experience with other premises in the network (Rubin, 1978). In order to explain the franchisee payment, López et al (2001) use a sample of 500 insignias from all the sectors in Spain, plus the following variables: the time since the franchise was set up, length of contract, outlets, turnover, investment, population and outlet size. Of these, only turnover and investment are significant at 5% and 10%, respectively.

Bordonaba *et al.* (2006) analyze the value of the upfront fee paid in a sample of 212 firms in both the hotel and catering and fashion sectors. As the most positively valued intangibles, these authors identified those related to capacities (expansion or size), reputation (participation in the Spanish Franchise Association (AEF), initial investment and the time taken to set up the business), and organizational resources (contract terms).

Kaufmann and Dant (2001) and Windsperger (2002) found a positive relationship between the initial upfront fee and royalties. For the former authors, the upfront fee did not initially compensate the franchisees' income surpluses. For Windsperger, more know-how during the pre-contract period required more intangible-type investments on the franchisee's part while the contract lasted in order to maintain a certain value for the brand name.

Nevertheless, the franchisee also contributes knowledge of the local market to the system as an intangible asset (Windsperger, 2002). As a result, the greater the franchisee's knowledge about the local market, the lower the royalties; and the higher the number of training days, the higher the royalties.

Vázquez (2005) studies these variable payments with a sample of 145 franchising networks in Spain in 2000. The results of this study are consistent with the theory that maintains that such payments generate bonuses to alleviate the bilateral moral risk problems that affect franchisors and franchisees alike. Therefore, the variables that measure the importance of the franchisor's work (percentage of closures, outlet size, investment in marketing, investment in training, network size and initial upfront fee) were found to be significant for periodic payments.

More recently, Maruyama and Yamashita (2010) analyzed 182 franchising chains in Japan to explain the upfront fee and royalties in 2003. Their findings coincide with some results obtained by Vázquez (2005) in terms of the positive effect of the number of outlets, yet they contradict the results of Sen (1993) and Vázquez (2005) in relation to the negative effect of the variation of sales on the dependent variables.

Other research (García-Herrera and Llorca-Vivero, 2010; Grace and Weaven, 2010) have attempted to explain variables other than the upfront fee and royalties, such as the length of the franchising contract, satisfaction with the relationship and risks in investing.

As we may note, these cited works did not include any financial variable, the correlation coefficients obtained were quite low in most cases, and a large number of explanatory variables was used which no doubt could be reduced to a few factors, as shown in the studies carried out to define strategic groups. In addition, these explanatory variables may present multicollinearity and, therefore, erroneous interpretations of the models.

Therefore we put forward the following hypotheses:

H1: The characteristics or the operative and financial variables of franchising businesses intercorrelate, and may be condensed to a few representative factors of the intangibles transmitted.

H2: The factors obtained and a small number of explanatory variables account for the value of the intangibles transferred by means of the franchise fee and the royalty rate.

H3: Franchises' efficiency is one of the intangibles transmitted in the relationship.

3 Information sources

According to the AMF, there were around 300 franchises in 2005 in Mexico in the restaurant sector. Yet there is no database available that provides information about them. After making initial contact with them all, certain abnormalities were detected. Therefore, a final total population of 270 firms participated in this study.

A survey was used to collect data. For this purpose, the survey was conducted to collect a series of distinctive operative franchising variables, in line with the studies reviewed in the previous section and other financial variables. These were grouped into three types: identifying the franchise; general franchise data ranging from the initial investment and the initial upfront payment required for their location and association membership; and the franchise firm's financial and economic data.

This survey was previously tested among academic experts and professionals from the franchise sector. Surveys were conducted in the first five months of 2006 by means of personal interviews with the franchisor firms' agents. Valid responses were obtained for 160 of the national and foreign franchises (a response rate of 60%), and these firms became the object of our study.

From the data collected with the survey, we were able to verify how the total amount of the initial upfront fee varied between 3,000 and 190,000 US dollars, with a median[2] and modal value of 30,500 and 20,000 US dollars, respectively.

Half the chains do not charge subsequent advertising fees and 4% do not pay royalties either. These total periodic payments are established as a percentage of the franchisee's annual sales (around 6%, of which 1% corresponds to advertizing) and may amount to as much as 146,850 US dollars a year, whose median[3] value is 15,748 US dollars.

These periodic payments reflect the conditions of the agreement reached and the organizational resources that are transferred through exploitation manuals which, along with the initial upfront fee, take the value of the intangibles transferred with the franchise.

[2] (percentiles 25%, 50% and 75% are: 20,000, 30,500, and 60,000 US dollars, respectively).
[3](percentiles 25%, 50% and 75% are: 7,172, 15,748, and 38,191 US dollars, respectively).

Thirty-five variables have been defined from the rest of the data collected with the survey (Table 2), and will be used to explain the value of the franchises' intangibles.

Table 2

List of the variables used to explain the value of the intangibles

No.	Type of variable	Variable	Definition
	Qualitative variables:		
1	**Trade register**	Registered	Indicates whether the franchise is registered.
2	**Origin**	Origin	Indicates whether the franchise is Mexican or not.
3	**Membership**	AMF	Indicates whether the franchise belongs to the Mexican Franchise Association.
4	**Expansion**	Central-M	Indicates whether it is present in the central region of Mexico.
5		North-west	Indicates whether it is present in the north-west region of Mexico.
6		North-east	Indicates whether it is present in the north-east region of Mexico.
7		South-west	Indicates whether it is present in the south-west region of Mexico.
8		South-east	Indicates whether it is present in the south-east region of Mexico.
9		Central-A	Indicates whether it is present in Central America.
10		South	Indicates whether it is present in South America.
11		USA	Indicates whether it is present in the USA.
12		Europe	Indicates whether it is present in Europe.
13		Canada	Indicates whether it is present in Canada.
14	**Optimum**	Outlet	Indicates whether the optimum location to set up

	location		the firm is a business outlet.
15		Shopping	Indicates whether the optimum location to set up the firm is a shopping mall.
16		Isolated	Indicates whether the optimum location to set up the firm is an isolated unit.
	Quantitative variables:		
17	**Length of time operating**	Operating years	Number of years that the first outlet or point of sale has been operating.
18		Franchise years	Number of years since the firm became a franchise.
19	**Size**	Size 04	Total number of branches or outlets in the chain in 2004.
20		Size 05	Total number of branches or outlets in the chain in 2005.
21	**Economical**	Initial investment	Cost of the initial investment required to set up the franchise in thousands of US dollars.
22		Recovery rate	Average number of months needed to recover the initial investment.
23		Sales	Mean sales obtained by the outlet or point of sale in 2005 in thousands of US dollars.
24		Sales cost	Average cost of the firm’s sales in 2005 in thousands of US dollars. That is, what it cost the firm to acquire the merchandise sold.
25		Gross profit	The firm’s mean gross profit in 2005 in thousands of US dollars.
26		Operating cost	The firm’s mean operating costs in the year 2005 in thousands of US dollars.
27		Financial cost	The firm’s mean overall financial costs in the year 2005 in thousands of US dollars.
28		Profit	The mean profit before the firm paid tax 2005 in thousands of US dollars.
29		Taxes	The taxes paid by the firm in 2005 in thousands of US dollars.

30		Net profit	The firm's net profit in 2005 in thousands of US dollars.
31		Assets	The firm's total assets in 2005 in thousands of US dollars.
32		Liabilities	The firm's total liabilities in 2005 in thousands of US dollars.
33		Capitals	Sum of the firm's contributed and earned capitals in 2005 in thousands of US dollars.
34		Profitability ratio	The economic profitability ratio as a result of either investment or economic performance. This is the quotient between the net profit and the entire assets.
35		Turnover ratio	The turnover ratio of the total assets. This is the quotient between sales and the entire assets.

Column 1 in Table 2 indicates the number of the franchise chain order, column 2 shows the type of variable, column 3 is its name, and column 4 provides the meanings.

Of the 35 variables, 16 are dummy variables with different characteristics: if the franchise is registered, its origin, if it is an AMF member, its expansion in Mexico and in other countries, and its optimum location in business outlets, shopping malls or as an isolated unit. The variable takes a value of 1 if the chain presents a characteristic and 0 otherwise.

Of the total number of 160 franchise networks analyzed, only 3 were registered or recorded, 90 were of Mexican origin and 45 belonged to the AMF. With respect to geographic expansion, 156 outlets were located in the central region of Mexico, 149 in the northwest, 150 in the northeast, 149 in the southwest, 149 in the southeast, 39 in Central America, 41 in South America, 32 in the US, 23 in Europe and 33 in Canada.

The 19 remaining variables are of a quantitative kind and refer to the time that the franchise firm and the franchise have operated, that is, maturity, the number of franchise premises that are owned and franchised, the amount that the franchisee invested, the time taken to recover this investment, the franchisee's economic performance and balance, and some economic ratios. Below, Table 3 statistically summarizes them.

Table 3

Statistical summary of the quantitative explanatory variables

Variable	Mean	Median	Standard deviation	Min.	Max.
Operating years	20.4	15.4	17.4	2	76
Franchise years	9.9	7.0	8.4	1	34
Size 04	25	12.0	38.5	1	304
Size 05	29.6	15.0	43.3	1	342
Initial investment	94.2	75.0	79.5	3.2	375
Recovery rate	10.9	8.5	6.8	0	36
Sales	436.4	303.3	373.6	21.6	2285.6
Sales cost	301.2	213.2	262.6	15	1600
Gross profit	137.0	90.9	124.2	6.48	685.7
Operating cost	32.9	23.7	27.9	1.51	173.7
Financial cost	2.4	0.0	5.15	0	46
Profit	101.8	65.8	96.6	4.6	587.7
Taxes	37.3	16.9	54.4	0	493.9
Net profit	64.5	47.7	54.1	3.1	331.3
Assets	297.9	227.0	255.7	18	1600
Liabilities	190.5	138.8	170.1	9	1120

Capitals	107.4	77.5	96.6	6	480
Profitability ratio	0.2339	0.2221	0.0825	0.0062	0.8886
Turnover ratio	1.567	1.515	0.532	0.048	5.515

The franchises in this study have been operating for a mean of 20 and 10 years as a firm and a franchise, respectively. The total number of owned and franchised outlets is, on average, 25 in 2004 and 30 in 2005, which is a mean growth of 5 units in only one year. The franchisee has to make an initial investment of some 94,200 US dollars. Otherwise, an initial upfront fee is paid which the franchisee recovers in a time of under 11 months, although this time could be as long as three years. The mean sales that each franchisee makes are 436,400 US dollars a year, of which 64,500 US dollar are net profits; these amounts correspond to 156.7% and 23.39% of the value of the assets, respectively. The mean value of the franchisee's assets is 297,900 US dollars, whose mean liabilities amount to 190,500 US dollars and whose book value is 107,400 US dollars.

4 Methodology

Having reviewed the literature, we found that each variable had been assigned an intangible of the franchise (experience, image, brand name, organizational resources, capacities, etc.) with a meaning, its own explanatory power and which is independent of the rest. They have all been jointly used to account for the franchisee's payments.

Nonetheless, there is every likelihood that several variables have the same intangible meaning. Therefore it would be interesting to reduce the number of the dimensions and to identify those factors that explain the value of the underlying intangible resources within the series of franchise chain characteristics. The methodology used to confirm Hypothesis ***H1*** was a factorial analysis with varimax rotation. Those factors whose eigenvalues were higher than the unit were selected from the rotated components matrix.

Having determined the intangible factors, we did an ordinary least-square regression analysis to confirm Hypotheses ***H2*** *and* ***H3*** and to determine the components of the intangibles value. In general terms, the regression equation to be estimated in each case is as follows:

$$V = \propto + \beta * X_1 + \gamma * X_2 + \cdots \ldots . + \delta * X_n + \varepsilon \qquad (1)$$

Where the dependent variable V is the upfront fee paid or the franchise chain royalties, and the independent variables ($X_1, \ldots . X_n$) were, first, the factors previously obtained in the factorial analysis and, second, the value of the franchise's characteristics where the characteristics are substitutes of each factor. ε is the error term.

The coefficients in Equation (1) reflect the marginal valuation that the franchisees confer to each particular characteristic of the franchise business.

For the purpose of obtaining the normality assumptions of the multivariate analysis, neperian logarithm (Ln) transformations of the quantitative variables were done, except the ratio variables, Profitability and Turnover. In this way, better results were obtained in all the regression models than with the original variables form, as some other authors have done (Combs and Castrogiovanni, 1994; Sen, 1998; Haufmann and Dant, 2001; Castrogiovanni *et al.,* 2006).

5 Results

Table 4 presents the results of the principal component analysis with varimax rotation which was applied to the quantitative variables. After 4 repetitions, the varimax-rotated components matrix revealed the existence of 3 factors whose eigenvalues were higher than the unit. The results of the KMO index and Bartlett's test of sphericity reflect that the use of this factorial analysis to reduce the number of the variables employed and to identify the intangibles is advisable.

Table 4

Results of the factor analysis of the variables

Variable	Factor 1	Factor 2	Factor 3
Ln Operating years	0.857		
Ln Franchise years	0.822		
Ln Initial investment	0.928		
Ln Recovery rate	0.835		
Ln Sales	0.979		
Ln Sales Cost	0.969		
Ln Gross profit	0.982		
Ln Operating costs	0.974		
Ln Financial costs	0.931		
Ln Profit	0.976		
Ln Taxes	0.748		
Ln Net profit	0.976		
Ln Assets	0.963		
Ln Liabilities	0.951		
Ln Capitals	0.917		

Ln Size 04		0.957	
Ln Size 05		0.974	
Profitability ratio			0.986
Turnover ratio			0.989
Eigenvalues	15.06	2.115	1.807
Explained variance	71.715	10.070	8.603
Accumulated variance	71.715	81.786	90.389
Adequacy tests			
Determinant of correlation matrix 3.08E-034			
KMO index 0.841			
Bartlett's test 3716.739**			

(**) Indicates a level of significance of 99%

We obtained only 3 factors. The first explains almost 72% of the variance and groups all the variables related to the years of the chain as a firm and also as a franchise, the amount of the franchisee's initial investment, the recovery rate of the investment and the franchisee's results. All these are positive, meaning that they vary in the same direction. This factor represents the image of the brand name (initial investment), experience and reputation (years) and the capacity to make a profit, as well as the franchisee's success (results). In short, this factor could be known as the franchise's ***brand name*** since the brand mark image is consolidated with experience and is a guaranteed source of future results for the franchisee.

The second factor brings together the number of units that the insignia possesses nationally and internationally in the years 2004 and 2005, and includes both owned and franchised units. This factor represents the ***size*** of the franchise. A larger size allows the chain to accomplish economies of scale in its promotion and, therefore, a much more competitive costs structure which, at the same time, also helps the chain's brand name to expand (Sen, 1998). A larger sized network also implies the franchisee's hard work and greater managerial capacity (Vázquez, 2005).

The third and final factor explains the ***efficiency*** in the franchisee's management, which is revealed by the results and sales ratios over the franchise firms' assets.

Consequently, Hypothesis ***H1*** is feasible as the variables characterizing the franchises may be reduced to a lower number of factors which have the same interpretation potential.

Next we did a regression analysis by taking the neperian logarithm of the franchise fee as a dependent variable (Table 5). First, the regression analysis was performed with the three factors (Model 1), of which the third was not significant. Thus it was eliminated and the regression analysis was done with the first two factors (Model 2). Next a variable from within each factor was selected as a substitute of the factor itself to obtain Model 3 to which a third qualitative-type variable, that had not been included in the factorial analysis, was added to obtain the best result in Model 4.

Table 5

Estimating the value of the franchise fee

Factor	(1)	(2)	**Substitute variable**	(3)	(4)
Factor 1 ***Brand name***	0.813 (19.78)**	0.813 (19.855)**	**Ln Sales**	O.836 (29.271)**	0.823 (30.674)**
Factor 2 ***Size***	0.187 (4.556)**	0.187 (4.573)**	**Ln Size 04**	0.070 (3.479)**	0.079 (4.202)**
Factor 3	0.032				

Efficiency	(0.772)				
			AMF		0.243 (4.862)**
Constant	3.438 (84.369)**	3.438 (84.685)**		-1.504 (-9.890)**	-1.521 (-10.697)**
N	59	59		159	159
Adj. R^2	0.880	0.881		0.877	0.893
F	137.538**	207.559**		569.054**	441.941**

Table 5 shows how only the *brand name* and *size* factors explain 88% of the variability of the value of the intangibles transferred in the franchise. Therefore, Hypothesis ***H2*** may be accepted, but not Hypothesis ***H3***.

The level of explanation was maintained when the *brand name* and *size* factors were substituted for the *sales and number of outlets in 2004* variables as substitutes of the factors. When the qualitative variable *belonging to AMF* was introduced as an intangible in relation to the franchise's *external membership*, a level of explanation of 89.3% was finally obtained. Being an AMF member indicates that the Association backs the good performance on the franchisors' part in terms of ethics and morals; this is a guarantee for franchisees. The remaining qualitative variables were not seen to be significant in all four models, indicating that registration, the franchise's origin, and its expansion and location do not account for the intangibles exchanged for the upfront fee paid.

The previously described process was carried out with the periodic payments or royalties as a dependent variable, and the results shown in Table 6 were obtained.

Table 6

Estimation of the value of royalties

Factor	Total royalties	Total royalties	Substitute variable	Franchisee's component	Advertising component	Total royalties
Factor 1 ***Brand name***	0.920 (15.65)**	0.920 (15.66)**	**Ln Sales**	1.039 (38.01)**	1.044 (14.66)**	1.035 (30.9)**
Factor 2 ***Size***	0.195 (3.32)**	0.195 (3.321)**				
Factor 3 ***Efficiency***	0.058 (0.99)					
Constant	2.871 (49.31)**	2.871 (49.32)**		-3.270 (-20.63)**	-4.209 (-10.16)**	-3.082 (-15.89)**
N	152	152		159	77	152
Adj. R^2	0.819	0.819		0.908	0.735	0.863
F	85.669**	128.07**		1444.74**	215.04**	954.89**

Regarding the variable payments, factor 3 was not significant in explaining the neperian logarithm of the periodic payments, while the first two factors, *brand name* and *size*, explained 81.9% of the value of the intangibles transferred with continuous counseling, which is a much higher figure to those shown in Table 1. Therefore, Hypothesis ***H2*** may be accepted, but not Hypothesis ***H3***.

However, when the representative variables of the factors were substituted, only sale volume was significant, and explained up to 86.3% of the total royalties. This may be accounted for by the fact that the franchisee is willing to make periodic payments in exchange for receiving continuous counseling if this leads to better results, irrespective of the firm's size or if it is registered with the AMF.

4 Conclusions

Despite there not being a franchising database available in Mexico, which exists in other countries such as the USA, Japan, Spain, etc., having conducted personal interviews with 60% of Mexican franchises has enabled us to conduct this research into restaurant industry franchising in Mexico, which also complements the research work done into this system in the US (Sen, 1993).

The result of the factorial analysis suggests that the firms' operational, economic, accounting and financial characteristics may be grouped into only three factors: *brand, size* and *efficiency;* this does not coincide with the results obtained by Carney and Gedajlovic (1991) and Rondán *et al. (*2007), among others, who obtained 5 and 4 factors or groups of variables. This reduces the number of variables used to explain the payments made by the franchisee and facilitates the interpretation of the intangibles transmitted in franchises. However, it will be necessary to complete and extend this study by including other sectors to confirm the representativeness of these three factors alone in all the franchise sectors.

Three variables have explained 89% of the variability of the upfront fee value under study, which has a much greater explanatory power than that obtained in other research (Sen, 1993; Kaufmann and Dant, 2001; López *et al*., 2001; Bordonaba *et al*., 2006) where, on occasion, the variables included in the *brand name* factor (operating years, investment, sales, experience in the market) are all considered simultaneously in the regression model; this implies a possible resulting collinearity problem that may lead to an erroneous interpretation of the regression coefficients. In other words, there are three intangible assets transferred with the upfront fee: capacity to make profit (the brand name factor), economies of scale (size) obtained with a large number of outlets, and acknowledged reputation for belonging to the AMF. The assets that are not taken into account when the upfront fee is paid are the firm's geographic expansion or the franchise units' efficiency. These results coincide with those obtained in the work of Bordonaba *et al.* (2006) in which initial investment, chain size and Spanish Franchise Association membership are relevant aspects in relation to the upfront fee paid, but are contradictory as far as geographical expansion is concerned, which has no influence on the upfront fee in Mexico. The results obtained are also in agreement with the work of Kaufmann and Dant (2001) in which franchisees' sales play a fundamental role. Similarly, they coincide with the work of Maruyama and Yamashita (2010) in that they consider investment, operating years and sales.

The intangible resources transferred by means of periodic payments mainly relate to secure demand and, therefore, to less sales risks. Although this finding coincides with Maruyama and Yamashita (2010), these authors also include five additional variables in their model. Only sales show an 81% explanatory power of the periodic payments. Finally, firm efficiency is not taken into account in these payments.

The main contribution of this study to the literature is that it includes variables that relate not only to the firms' results, but their accounting and efficiency; it uses a factor analysis to identify and summarize the key factors considered in transferring franchisors' intangibles; it analyzes the intangibles transferred with the payments made, in other words, the franchise fee and periodic payments. The study implications for franchisors and franchisees alike are very important to help develop and improve the franchise system in Mexico. They provide future franchisees with information about the franchise chains in the Mexican restaurant industry, and identify their characteristics and the strategies carried out for decisions to be made in the future on key factors to determine initial fees and periodic payments. These study implications enable franchisors to know the main lines of action to be taken not only to improve their relationships with franchisees, but to accomplish greater future success in chain management and increased competitiveness terms.

This research may prove an important starting point for future research lines into Mexican franchising; for instance, the inclusion of new explanatory variables in the model; knowledge of the franchisee's local market; the franchisee's number of training days a year; the growing number of franchisees and their causes; territorial exclusivity; and length of contract; just as other authors have done (López *et al*., 2001; Bordonaba *et al*., 2006; Windsperger, 2002). It could also prove interesting to extend the study on franchising to other sectors, such as other area of the services sector, retailing and education, to do an in-depth study into the efficiency between owned and franchised units, and to conduct longitudinal studies on introducing variability of the variables over time (Vázquez, 2005; Maruyama and Yamashita, 2010).

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