# Texto para Discussão

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## **Contractual Mix Analysis In The Brazilian Franchising**

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#### Abstract

This paper aims to analyze some features of the transaction between franchisors and franchisees in Brazil, with an emphasis on the contractual mix (proportion of company-owned units) employed by Brazilian franchising. It is considered that agents do not restrict themselves to the choice of pure governance structures (market, hybrid and hierarchy), but rather choose a portfolio of mechanisms, i.e., a contractual mix. The theoretical literature provides a wide variety of arguments to explain this phenomenon. The arguments can be classified in three groups: a) different transactions attributes, b) transitory contractual mix (endogenous change in basic conditions), and c) stable contractual mix. Some of our results are consistent with Lafontaine and Shaw (2001), mainly those that associate brand value to a higher proportion of company-owned units. However, the Brazilian data provides some additional results on the role of a) differences in the institutional environment between Brazil and U.S., b) hostages in providing more control over franchising, and c) the relationship between payment design and contractual mix.

#### Classification Code: L14, L22, L8

Key words: (i) franchising; (ii) Brazilian franchising; (iii) contractual mix; (iv) brand name value; (v) hostage effect; (vi) governance inseparability

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#### **1. Introduction**

One of the main features of franchising organization is the *mélange* of different governance structures to conduct similar transactions. This diversity comes into sight most plainly in the combination of company-owned and franchised outlets, but it is not restricted to it, as it takes the form also of different payment incentive schemes, different contract duration and varying levels of investments in specific assets.

The literature, mainly about American franchising, is extensive but without an established conclusion. As stated by Dant *et al.* (1996, p. 48), "while the debate has been waged for over 25 years now, it shows few, if any, signs of abating". This article explores the theme of governance structure diversity (contractual mix) in Brazilian franchising. We rely on an approach rooted in New Institutional Economics to develop hypotheses that we test with a data set from the Brazilian Franchising Association (ABF) that accounts for more than 90% of Brazilian franchising, in terms of employment and chains. Although similar studies have been conducted for example with French and American data, this is the first research about the contractual mix of Brazilian franchising. As a consequence, this paper constitutes a first attempt in that direction, identifying, moreover, opportunities for future research.

Agency theory, the most adopted framework in franchising studies, proposes that the main advantage of this governance structure, compared to expansion via company-owned outlets, is a reduction in monitoring costs. Asymmetric information about franchisee effort is a prime feature of the transaction between franchisor and franchisee, leading to moral hazard problems<sup>1</sup>. The use of incentive contracts may reduce these problems by granting the benefits of a desired action (e.g. work harder) to franchisees, generally in a form of residual claims. As a consequence, this governance structure, in comparison with hierarchy (company-owned outlets), reduces monitoring costs.

Nevertheless, franchising contracts are susceptible to several transaction hazards, among which the adequate use of franchisor's brand name is most noteworthy<sup>2</sup>. In order to uphold brand name value, which is central to its ability to transmit information to consumers, franchisors need to control quality. This is particularly difficult in a geographically dispersed organization, with multiple agents each earning residual claims, as in the case of franchising<sup>3</sup>.

One important conclusion of Lafontaine and Shaw (2001) is that the proportion of company-owned outlets depends on the brand name value. They agree that the higher this value is, the greater the need for control over the final product or service. One possible strategy to achieve this control is a higher proportion of company-owned outlets.

We specially test this argument for the case of Brazilian franchising. This paper has four sections, besides this introduction. In the next section, we discuss theoretical arguments that compete to explain the choice of a contractual mix, dividing then in three main branches: a) transactions attributes, b) transitory contractual mix, and c) stable contractual mix. Section 3 summarizes existing empirical results about contractual mix in franchising. These two sections together provide the foundations for the empirical analysis we perform using Brazilian data. Our forth section presents our analyses and results. Lastly, Section 5 contrasts

<sup>&</sup>lt;sup>1</sup> As both parts have private information about their effort, it is usual to treat franchising as a case of double sided moral hazard (Dnes, 1996).

 $<sup>^{2}</sup>$  As suggested by Ménard and Valceschini (2000), in this paper trademark and brand name are used as synonymous, once "there is no significant difference between the two in American English; there may be a slight difference though, in that "trademark" has a legal dimension, since in the American legal system it needs to be registered. But most brand are as well".

<sup>&</sup>lt;sup>3</sup> The need for standardization also affects franchisors' backward transactions, conducing, under some additional conditions, to the adoption of vertical integration or idiosyncratic contracts with suppliers (Azevedo and Silva, 1999).

our results with evidence from other analyses and discusses their implications for the theoretical literature. As this is a first empirical approach to Brazilian franchising, the paper also suggests some possible questions for future research.

### 2. The Contractual Mix Problem

There are several private arrangements to govern transaction hazards. The literature of Transaction Costs Economics (TCE), since Williamson (1985), has the merit of providing a model that, given the characteristics of a particular transaction, predicts the adopted governance structure. Moreover, transaction dimensions (asset specificity, frequency and uncertainty) are to some extent observable, thereby allowing empirical tests of important TCE propositions.

The argument initially presented by Williamson (1985) – and maintained in subsequent work (Williamson, 1991; 1996) – matches transactions dimensions to the choice of a singular governance structure (e.g. market, hybrid or hierarchy), which is arguably the most efficient among the set of possible structures in mitigating transactions costs. However, empirical studies have revealed the existence of contractual mixes in many contexts, i.e., there is a *mélange* of governance structures to conduct similar transactions. This suggests that economic agents are not restricted to the choice of a single governance structure, but select a portfolio of mechanisms to govern a given transaction. For example, a firm may partially produce its own inputs (backward tapered integration); it may make use of distribution channels that imply different governance structures, such as company-owned outlets and independent retailers; or it may adopt different labor contracts in managing the same activity. Examples arise in a variety of markets, for example ranging from contract or market acquisition in agricultural markets to direct or on consignment sales of books or CDs. The problem of contractual mix is, therefore, quite general.

Franchising provides a case of contractual mix suitable for empirical analysis, inasmuch as it is usual in this context to combine company-owned and franchised outlets. This particular organizational form can be interpreted as a forward tapered integration, where different governance structures govern the same transaction<sup>4</sup>. Therefore, the choice of a proportion of company-owned outlets is a problem of contractual mix, and may be interpreted by the literature that addresses this subject.

Several different arguments explain the combination of different governance structures to conduct similar transactions. Empirical analyses have sought to assess which of these arguments best explain actual contractual mixing in franchising. For analytical purposes, we have divided these arguments in three groups: a) transaction attributes, b) transitory contractual mix, and c) stable contractual mix.

In the first group, there are two arguments that reinforce the classical model, presented by Williamson (1991), with adaptations for contract heterogeneity interpretation. In general, they maintain the correspondence of a combination of transaction dimensions to a singular governance structure. This means that different mechanisms indeed govern transactions that are different in, at least, one of its attributes (asset specificity, frequency and uncertainty). For instance, a franchisor may use company-owned outlets in areas where asset specificity is higher (e.g., a site that provides some quasi-rent for the franchised business) or where

<sup>&</sup>lt;sup>4</sup> Actually, each relation between the franchisor and an outlet (owned or franchised) is a distinct transaction. However, transaction dimensions, as established by the TCE literature, are similar. As a consequence, there are not, in the simple model, reasons for the observed governance structure heterogeneity. Possible differences in transactions may be due to location and franchisee local knowledge.

uncertainty about business performance prevents the adoption of hybrid forms such as franchising (Fan, 1995). In short, each transaction between the franchisor and an outlet may have distinct attributes and, therefore, can be associated to distinct governance structures.

Also closely aligned with Williamson's model, a second argument explains contract heterogeneity based on cognitive limits in agents' actions. Briefly, there are costs (or inability) to measure transaction dimensions and, in addition, to solve complex problems. This difficulty in finding an optimal solution may imply different outcomes. In other words, given the behavioral assumption of bounded rationality, there is not a unique solution, inasmuch as for small changes in transaction attributes it is impossible to identify the best alternative. As a consequence, the governance structure heterogeneity would result from agents' incapacity to choose the most efficient solution to mitigate transaction costs.

Some arguments, however, propose the choice of a contractual mix to govern transactions that have similar attributes. They seem more suitable to the franchising system, in which key business features are standardized<sup>5</sup>.

A significant part of the literature states that similar transactions may imply a transitory contractual mix, in which a singular governance structure would prevail in the long run. This is the case of Gallini and Lutz (1992) and Scott (1995), quoted by Lafontaine and Shaw (2001), for whom company-owned outlets signal franchisor relevant characteristics. In other words, in a world where there is not *ex-ante* asymmetric information between franchisors and potential franchisees, firms would prefer franchising to vertical integration. Nevertheless, if a potential franchisee is uncertain about franchisor quality (in technical language, there is an asymmetric information about franchisor type) – for instance, quality of the product or match to the market – a desired transaction may not be accomplished in a typical problem of adverse selection.

In order to sell franchises, the franchisor may maintain some company-owned outlets, with the major role of signaling the quality of its products, mitigating the problem of *ex-ante* asymmetric information. As time goes by, the franchisor acquires reputation regarding the quality of its services and other important elements of post contractual behavior. As a consequence, the development of a franchised chain would cause the progressive reduction of the proportion of company-owned outlets, resulting in the prevalence of franchised units. As the basic issue here is revelation of an ex-ante type, more than the numbers of established outlets, time can be used to capture how the mix should evolve under this hypothesis.

Nevertheless, other statement also predicts a transitory contractual mix, but in the opposite direction. In the franchising literature, it is still relevant the hypothesis of ownership redirection, i.e., the idea that initial growth stage of a chain relies on franchising, with progressive substitution of company-owned outlets over time as these are assumed fundamentally more profitable. In the long run, only the hierarchical governance structure would prevail (Dant *et al.*, 1996). In this argument, the franchising is a device to capture human or capital resources when there are external constrains in the capital and labor markets. In general, these constrains are temporal or due to the small size of an incipient business. As a consequence, as time goes by and the business reaches its maturity, these restraints cease to exist. Without the initial reason for using franchising, the firm would then progressively replace it with company-owned outlets.

Although both arguments of transitory contractual mix predict distinct trajectories, in the long run both end in singular governance structures: company-owned outlets, in the case of ownership redirection, and franchised ones only, in the case of the signaling hypothesis. Empirical tests of both propositions require the use of longitudinal data, with a temporal dimension. A cross-sectional data set, as the one used in this paper, is not suitable to

<sup>&</sup>lt;sup>5</sup> Two important exceptions are location and local knowledge (Windsperger, 2001).

distinguish the two arguments. Nevertheless, the number of years of a franchised chain may be used to indicate its position in the contractual mix trajectory.

The third group of arguments states that, in the absence of exogenous change in the basic conditions of governance structures choice (transaction attributes), the contractual mix may be stable. The most classical argument of stable contractual mix associates uncertainty to tapered vertical integration (Carlton, 1979), with the foundations of portfolio theory. Briefly and with some adaptations inspired by Williamson (1991), governance structures are subject to hazards that may be not correlated. If this is the case, a combination of different governance structures (a contractual mix) decreases governance hazards in its entirety.

In addition to the thesis of governance structure diversification to mitigate transaction hazards, a stable contractual mix may occur to explore some synergy between complementary mechanisms of governance. This idea apparently contradicts the original insight of Coase (1937), for whom different coordination mechanisms – in his initial proposition, restricted to market and firm – were alternatives ways to govern a given transaction. Even though this insight is still one of the main foundations of TCE, the contractual mix problem also revels that, besides being alternatives, governance structures may also be complementary. Particularly in franchising, company-owned outlets (vertical integration) – although an alternative to franchised units (hybrid form) – can enhance the efficiency of the second.

This idea is also present in Argyres and Liebeskind (1999), who propose that the choice of a governance structure for a given transaction is inseparable of all other transactions the firm takes part, in addition to its organizational and bargaining strategies. Lafontaine and Raynaud (2002) present a similar argument in the context of franchising, exploring complementarities of contract features. Although there is governance inseparability, transaction attributes are still a key element for predicting governance structures (Klein and Shelanski, 1994).

Bargaining is an essential point in stable contractual mix. Azevedo (1996), using a Nash bargaining solution concept, submits that tapered vertical integration affects the disagreement payoffs of an alternative governance structure (an incomplete long term contract, with ex-post bargaining). This, in its turn, affects the division of gains in a bargaining game. As a consequence, a tapered vertical integration may be adopted to improve bargaining position in a hybrid governance structure. Michael (2000) proposes a similar argument, in which tapered integration permits the acquisition of information about the subsequent production stage<sup>6</sup>, with consequences on bargaining. In both cases, there is not a predicted trajectory for the contractual mix. On the contrary, it remains stable in the absence of exogenous change in transaction attributes<sup>7</sup>.

In the next section, we present some existing empirical results about the contractual mix in franchising, using Lafontaine and Shaw (2001) as a major reference. The main empirical results, in addition to this theoretical discussion about contractual mix, provide the foundations for the empirical analysis of Brazilian franchising in section 4.

<sup>&</sup>lt;sup>6</sup> Riordan (1990) emphasized this role of vertical integration, when he defined it as a change in the information structure.

<sup>&</sup>lt;sup>7</sup> With the assumption of increasing returns (Arthur, 1989), the contractual mix may remain stable even when an exogenous change in transaction attributes occurs.

#### 3. Contractual Mix in Franchising: Main Results

The arguments presented in the last section have been tested in several empirical studies about contractual mix in franchising. Nevertheless, as most of these studies deal with crosssection data sets about U.S. franchisors, there are two potential problems. First, some arguments about transitory contractual mix are more appropriately analyzed using longitudinal (or panel) data sets. Second, particularities of the U.S. institutional environment can affect the analysis, leading to a need for similar studies in different institutional environments.

Lafontaine and Shaw (2001) approached the first problem. With a panel database, they examine how franchise chains choose the proportion of company-owned outlets and how this changes over time. Their impressive sample has information on approximately 1.000 U.S. and Canadian franchisors, from 1980 through 1997, resulting in a total sample size of 19.162 observations. Basically, their database contains information on (1) the number of company-owned and franchised outlets, (2) years of business and franchising experience, (3) royalty rates, advertising fees and franchise fees, and (4) a set of variables describing some features of the franchisor, such as the amount of capital required to open an outlet, and the type of business it is involved in.

Gujarati (2000) argues that panel data sets provide valuable information about a variable behavior – in this case, the proportion of company-owned outlets in the franchised chains. As a first result, Lafontaine and Shaw (2001, p. 9) show that the proportion of company ownership decreases intensely during the first eight or seven years in franchising. According to the authors, this is not a result of signaling arguments, as discussed in the last section, but an adjustment (not instantaneous) when firms begin franchising. As they say, firms "are almost always 100% company owned initially".

On the other hand, Lafontaine and Shaw (2001, p. 9) point out that "after this initial decline, the proportion of company-owned outlets stabilizes at a very constant rate of 15% on average in the overall sample". This result supports the arguments of a stable contractual mix against a transitory contractual mix, suggested by signaling and ownership redirection arguments.

Additionally, Lafontaine and Shaw (2001, p. 11) identify that "the 'stable' proportion of company units is not the same across sectors". For example, they describe that "restaurant chains seem to stabilize at the highest proportion of company units, while the construction and maintenance sectors show the lowest 'stable' reliance on company ownership". Lafontaine and Shaw (2001, p. 48) explain this result with the hypothesis that "franchising firms with higher trade name value will target a higher level of company ownership".

In their empirical analysis, Lafontaine and Shaw (2001, p. 28) employ three main proxies for brand name value: (a) the percentage advertising fees that franchisees are required to pay to franchisor, (b) the experience of the franchisor in business before beginning to franchise (number of years), and (c) the amount of advertising spent across media for the brand. Although these are not ideal proxies for trade name value, they reveal the knowledge developed and embedded into the chain, in addition to the reputation that the franchisor has developed with consumers.

For all these three measures, the results show that brand name value has a positive effect on the extent of company ownership. This, according to Lafontaine and Shaw (2001), is a deliberate strategy that depends on the brand name value.

These conclusions about sector effects deserve some special attention. Those effects may be due to omitted variables or to distinct production functions, with different input needs and, as a consequence, different monitoring costs. It is noteworthy that Lafontaine and Shaw

(2001) identify that franchisors that transfer a product to resale tend to franchise more than the ones that rely on services under franchisee control. One possible explanation is that firms tend to use more franchising when they have more control over the final product or service. As franchisees' actions can depreciate the trade name value – franchisor specific asset – it is necessary to impose some kind of control. In the case of resale, franchisor still has control over product standardization, thereby allowing a higher level of franchised units. On the contrary, in the case of service franchises, it is expected that franchisors choose a higher company-owned proportion, because they have less control over the final product (service).

About the franchised unit size, Lafontaine and Shaw (2001) find that the larger the units, the greater is the percentage of company-owned outlet. They interpret this to mean that the franchisor interest to control outlets directly grows with unit size. This result is supported by agency theoretic arguments (Lafontaine and Slade, 2001), because the negative externality effect of one franchisee's misbehavior is greater the larger the units are. Also, Lafontaine and Shaw (2001) identify that firms tend to rely more on franchising when outlets are more dispersed geographically, a result consistent with the argument of monitoring costs.

Lafontaine and Shaw (2001, p. 18) argue that the proportion of company units is not a passive outcome. On the contrary, firms maintain constant their overall proportion of company units when they grow or shrink in size, in a deliberate organizational strategy. They point out that this result is consistent with chain strategies reported in several U.S. case studies. For instance, Lafontaine and Shaw (2001, p. 19, 20) refers that Burger King controls directly just 10% of its units, while McDonald's controlled in 1995 about 21% of its restaurants as a part of its overall strategies.

Finally, Lafontaine and Shaw (2001) conclude that the number of outlets does not affect the stable proportion of company units. As monitoring costs tend to be higher with the increase in chain units, it would be reasonable to expect an inverse correlation between the number of outlets and company ownership. It is possible that this result is due to the control over geographic dispersion, the mayor source of increasing monitoring costs.

#### 4. Contractual Mix in Brazilian Franchising

The Brazilian franchising occupies the third position in the world terms of number of franchised outlets, after the U.S. and Canada. Notwithstanding this achievement, there are few empirical studies on Brazilian franchising, mainly because consistent data have been collected only since the second half of the 90's. Moreover, the database was not directed to academic purposes, thereby imposing additional difficulties to researchers. As a consequence, this paper aims to present a first approach to this subject, taking Lafontaine and Shaw (2001) as a reference, for a comparison, when possible, between some results of Brazilian and American franchising.

The database contains information from the *Guia Oficial 2000*, published by the Brazilian Franchising Association (ABF). All data refer to the year 1999, about almost 1.000 franchised chains, divided into 23 segments. This original sample contained also firms willing to franchise their business but that have not yet sold their first franchise. In order to have a more appropriate sample, those franchised chains were discarded, resulting in a sample of 664 cases, divided in 21 sectors<sup>8</sup>. The data contain information on a) business sector, b)

<sup>&</sup>lt;sup>8</sup> The sectors are a) food and beverages, b) shoes and personal accessories, c) beauty and health; d) communication, e) construction, f) cosmetics and perfume, g) education and training, h) sport and leisure, i) photograph, j) publishing and signaling, k) hotels and tourism, l) real estate, m) child sector, n) computing and electronic, o) cleaning services, p) books, q)furniture, r) house utilities, s) special services, t) vehicles, and u) clothing.

experience before franchising (number of years), c) years of franchising experience, d) agreed contract length, e) franchise fee, royalties and other payments, f) number of outlets, g) support services (ten binary variables), h) public company (1 if franchisor is a public company and 0 otherwise), i) let surface area required, j) franchise investments in facilities, and outlet sales.

Departing from this primary data set, we created three new variables as proxies for brand name value, support services and payment incentives. The first is the estimated present value paid by the franchisee (total payment), which is a proxy for brand name value. In order to compute this variable, we summed the franchisee fee with the present value of monthly payments, such as royalties and advertising fees, using Brazilian interest rate and contract length. The second is an index of support services, which is the sum of items that are provided by the franchisor, ranging from 0 to 10 (support index)<sup>9</sup>. Finally, the third is the proportion of total payments that is fixed (% fixed payments), which is a measure of incentive power of the franchising contract. The higher this proportion, the higher is the incentive to the franchisee, in the form of residual profits. Table 1 presents the descriptive statistics of these variables for the complete sample.

Variable Name	Ν	Minimum	Maximum	Mean	Std. Deviation
Food & Beverages	664	0.00	1.00	0.2244	0.4175
Health & Beauty	664	0.00	1.00	0.0798	0.2712
Education & Training	664	0.00	1.00	0.1145	0.3186
Special Services	664	0.00	1.00	0.0888	0.2847
Clothing	664	0.00	1.00	0.1250	0.3310
# of franchised units	664	1	1506	40.23	117.99
# of company units	664	0	189	5.70	14.04
Total outlets	664	1	1532	45.91	121.88
Percent company-owned	664	0.00	0.96	0.2834	0.2511
Years of franchising experience	650	1	37	6.47	4.88
Years before franchising	643	0	118	9.66	14.66
Public company	605	0.00	1.00	0.0578	0.2337
Total payment (R\$x10 <sup>3</sup> )	372	0.00	896.08	76.3231	103.5788
Support index	664	0	10	7.16	2.79
% fixed payments	370	0.004	1.000	0.50757	0.38555
Area (m <sup>2</sup> )	610	1.00	31000.00	231.1975	1353.1747
Franchisee specific investment (R\$x10 <sup>3</sup> )	611	0.00	862.50	65.5174	94.2697
Contract length (months)	470	6	240	54.70	30.44

**TABLE 1: DESCRIPTIVE STATISTICS** 

Source: Guia Oficial 2000 – Brazilian Franchising Association (ABF)

<sup>9</sup> We treated support services as an unique variable because activities were correlated.

The first step towards the characterization of the contractual mix in Brazilian franchising is to identify the proportion of company-owned outlets in the whole sample and within the main sectors -a) food and beverages, b) beauty and health; c) education and training, d) special services, e) clothing, f) cosmetics and perfume, g) furniture, and h) vehicles. Following Lafontaine and Shaw (2001), we calculate the same variables for a sub-sample of franchisors with more than 8 years of experience, in order to avoid the adjustment effect when firms begin franchising. The sectorial statistics, presented in Table 2, show some interesting preliminary findings.

Sector	Ţ	Whole Sample	<b>Reduced sample</b> (franchising experience ≥ 8)		
Sector	Ν	Average % Company-owned	Ν	Average % Company-owned	
All sectors	664	28.34 (0.2511)	186	21.21 (0.2220)	
Food & Beverages	149	30.07 (0.2182)	49	23.95 (0.1978)	
Beauty & Health	53	36.76 (0.2803)	11	32.24 (0.2801)	
Education & Training	76	20.54 (0.2223)	20	12.41 (0.2268)	
Cosmetics & Perfume	32	7.31 (0.1078)	14	6.10 (0.0748)	
Furniture	37	28.51 (0.2716)	11	19.73 (0.2329)	
Vehicles	39	23.10 (0.2510)	8	12.14 (0.1305)	
Special services	59	29.99 (0.2635)	6	5.21 (0.0339)	
Clothing	83	31.95 (0.2590)	34	33.09 (0.2355)	

Table 2 – Proportion of Company-Owned	l Outlets in Brazilian Franchising by Main
Sectors	s (1999)

Note: standard deviation in parentheses.

Source: Guia Oficial 2000 – Brazilian Franchising Association (ABF)

The first comment about Table 2 is that the decrease of company ownership in the beginning of franchising, identified by various authors, is also supported by Brazilian evidence<sup>10</sup>. This pattern is observed in the whole sample and within sectors, with the exception of Clothing.

When confronted with U.S. and Canadian data, Brazilian franchisors tend to rely more on company-owned outlets. Table 2 shows that in the 'stable' sample (franchisors with more than 8 years of experience), the level of tapered vertical integration in Brazil is nearly 40% higher than the one identified by Lafontaine and Shaw (2001).

<sup>&</sup>lt;sup>10</sup> In order to have a more precise conclusion, it would be desirable the use of longitudinal data.

One possible explanation for this result are the differences in institutional environment elements, particularly the macroeconomic stability and the established franchising law, in the U.S. and Canada versus Brazil. Besides macroeconomic instability, Brazil established a specific law to regulate franchising contracts only in 1994. Following Williamson (1991), in environments subjected to a lower degree of uncertainty, as it is the U.S. case, the use of hybrid forms is more likely, other things equal.

Finally, unlike in Lafontaine and Shaw (2001), it is not possible to identify a clear explanation for the differences among sectors. We expected that sector that re-sell products (e.g. clothing) would have a lower level of company-ownership than services (e.g. education and training). The results of Table 2 may be due to other sector particularities or a correlation between sectors and other explanatory variables, such as brand name value.

In order to investigate further the determinants of the contractual mix in Brazilian franchising, we proceeded with some regression analyses, with the proportion of companyowned outlets for each chain as a dependent variable. At first, we considered all explicative variables as exogenous. Nevertheless, some of these variables – such as contract length, the proportion of fixed payment and support activities – result from decisions undertaken by franchisors. This may cause a problem of endogeneity, with serious consequences on parameter estimation (Greene, 1997, p. 763). In order to solve this problem, we need to use instrumental variables, but the data set contains few options to play this role. As an alternative, we estimated the reduced form coefficients, with variables that are not under franchisor control. Notwithstanding this problem, we report the estimation of the structural equation because it permits some important insights.

In order to test the main argument for a higher level of company-ownership – brand name value – we use two proxies that are similar to the ones suggested by Lafontaine and Shaw (2001). The first is the number of years before franchising, which captures the learning process that builds firm capabilities and the reputation achieved through experience. As we expect that the marginal gain from experience is decreasing, we applied a natural log transformation on this variable. The second proxy is the present value paid by the franchisee (total payment), which has already been mentioned. Surprisingly these two variables are not correlated. We expect to have a positive effect on the proportion of company-owned outlets.

For the purpose of drawing some inference about the contractual mix trajectory in a cross-sectional data set, we use the variable 'years of franchising experience' also with a natural log transformation. To avoid the effect of adaptation to the franchising strategy identified by Lafontaine and Shaw (2001), we also estimated the models for a sub-sample, for franchisors with more than 8 years of franchising experience.

The number of outlets in our sample represents the size of the chain, but it is also correlated to the geographic dispersion, as we are unable to control for this variable. Both elements are conducive to negative effects on company-ownership, because they imply higher monitoring costs.

The contract length seems an important variable in contract design, but it is not deeply explored in the franchising literature. It is possible that a longer contract provides higher incentives for franchisees, because it "affects the amount of rent franchisees can expect to earn within the franchise relationship" (Lafontaine and Raynaud, 2002, p. 20). If this is true, the optimal contractual mix may be affected, as the control provided by company-owned outlets is less necessary. On the other hand, longer contracts "may increase the cost of self-enforcement by making it more difficult to 'end' the relationship itself via non-renewal or termination" (Lafontaine and Reynaud, 2002, p. 21). In short, contract length has two contradictory effects on the proportion of company-owned outlets. As other time variables, it was subjected to a natural log transformation. A similar argument justifies the inclusion of a support index, expressing the number of support activities the franchisor offers to franchisees.

The index denotes the capacity of the franchisor to control some important aspects of each outlet, such as project, business plan and human resource training. Controlling these aspects through franchising means that it is not necessary to maintain company-owned outlets to ensure more control.

The payment design (proportion of fixed payments) may also influence the level of company ownership. Incentive contracts rely on the association between agent effort and her payoffs. As a consequence, a higher proportion of fixed payments implies that a more relevant fraction of the residual profit will constitute franchisee's reward, leading to stronger incentives. If franchising operates with higher incentives it will save more monitoring costs and, therefore, will induce a lower proportion of company ownership. The franchise fee (the fixed payment) could also be used to represent the incentive mechanism adopted in a franchising contract. However, the franchise fee is not only a incentive mechanism, but also represents part of the amount paid for the franchising, i. e., the brand name value. In order to separate both concepts, we use the proportion of fixed payments as an incentive mechanism and the total payment (the present value paid by the franchisee) as a proxy for brand name value.

The transaction between franchisor and franchisee also has, as an important dimension, the amount of specific investments each part is committed<sup>11</sup>. Brand name value is the franchisor specific investment, with the investment in facilities as a counterpart by the franchisee. The effect of this variable on the proportion of company-owned outlets is foggy because there are different and conflicting arguments. First, the specific investment plays the role of a hostage in the transaction, credible committing the franchisee in the contract. Therefore, a higher level of specific investment implies a lower level of company ownership. On the other hand, if the amount of specific investment increases, the transaction hazards are more costly to the franchisee. As a consequence, she will engage in franchising only with a credible signal about the franchisor type. As company-owned outlets are a signaling mechanism, an increase in specific investments may positively affect the company ownership. For the purpose of drawing some inferences about the interaction of both effects, we employed this variable in linear and quadratic forms.

In order to evaluate the effects of the size of an outlet, we used let surface area. In our sample, the number of employees is highly correlated with this and other variables, leading us to prefer the first variable.

Finally, we constructed five dummies to represent the main sectors: a) food & beverages, b) health & beauty, c) education & training, d) special services, and e) clothing.

The dependent variable may be modeled as a proportion or a binary occurrence in grouped data (each case contains an integral number of owned or franchised units) (Maddala, 1983, p. 32). In order to evaluate the consistence of estimations, we opted for three models: logit, probit and weighted least squares. The first two models are suitable to qualitative grouped data estimation and have the advantage of restricting predictions to the interval between 0 and 1(Amemiya, 1981).

The first estimation (Table 3) includes the variables that result from decisions undertaken by the franchisor. Despite the potential endogeneity problem<sup>12</sup>, we have decided to report the estimates because it allows some inferences. Three dummy variables and the support index were not significant, being discarded in the reported estimation. It is noteworthy the consistency among the three models, with similar significant variables and coefficients, with the exception of the WLS model, whose parameters are linear and, therefore, has a

<sup>&</sup>lt;sup>11</sup> As Minkler and Park (1994, p. 410) maintain, "of all types of specific assets, brand name capital is the most relevant for franchising".

<sup>&</sup>lt;sup>12</sup> Potential because it is not clear whether franchisor's decisions are interdependent.

distinct effect on the depend variable, which is the probability of an unit in a specific chain being company-owned.

Variabla Nama	Logit		Probit		WLS	
v al lable Ivallie	Coef.	t stat.	Coef.	t stat.	Coef.	t stat.
Intercept	0.504	1.863	0.270	1.863	0.508	4.858
Food & Beverages	-0.693	-7.977	-0.389	-8.152	-0.103	-3.216
Special services	0.592	4.945	0.351	4.778	0.139	2.278
Public company	-0.343	-2.693	-0.180	-2.539	-0.045	-0.902
Total outlets	-0.008	-19.917	-0.004	-20.279	-0.001	-8.940
Total payment	0.002	4.980	0.001	4.983	0.000	1.438
% fixed payment	-0.302	-2.458	-0.170	-2.472	-0.090	-1.994
Area	-0.001	-4.334	0.000	-3.654	0.000	-0.626
Years before franchising	0.253	9.154	0.142	8.901	0.027	2.623
Years of franchising experience	-0.555	-9.881	-0.336	-10.807	-0.081	-4.670
Contract length	-0.282	-4.655	-0.149	-4.333	-0.034	-1.520
Franchisee specific investment	0.015	9.123	0.007	8.525	0.001	2.076
Franchisee specific investment (square)	0.000	-8.652	0.000	-8.330	0.000	-2.209
Regression information	Pearson Go Chi Square DF = 256	odness-of-Fit = $6410.900$ P = $0.000$	Pearson Go Chi Square DF = 256	odness-of-Fit = $4159.094$ P = $0.000$	Adjusted F F = 12	R2 = 0.336 2.321

 TABLE 3: ESTIMATION WITH FRANCHISOR DECISION VARIABLES

At this point, it is interesting to comment only the franchisor decision variables, which are discarded in the subsequent estimations. The proportion of fixed payments has the expected effect on company ownership, significant at 5% in the WLS model and 1% in the other two. This means that probably the high-powered incentives of fixed payment contract are associated to a more intense use of franchising. The other decision variable, contract length, is significant at 1% for the first two models. Also, the coefficients have the expected effect in all three estimations, indicating that longer contracts are associated with a lower level of company ownership.

In the following estimation (Table 4), we restricted the model to variables that are not part of the contract design, such as fixed payment, contract length and support services<sup>13</sup>. It is noteworthy the better adjustment of the regression and the high significance level of several coefficients. Only, two sector dummies and the let surface area were discarded because they were not significant.

In general, the results are consistent with those of Lafontaine and Shaw (2001). Both proxies for brand name value have a positive effect on company ownership, indicating that

<sup>&</sup>lt;sup>13</sup> To be precise, other variables (number of outlets and brand name value) result also from franchisor strategy. We considered that they are weakly exogenous (Greene, 1991, p. 713), because the control the franchisor exerts over them is significantly lower.

when this specific asset is higher, firms may choose a contractual mix that ensures more control. Although both have significant coefficients, the marginal effect of the experience before franchising is much stronger than the total payments, as it is clear in the marginal effects graphs<sup>14</sup> in the appendix.

The years of franchising experience have a negative effect on the company ownership, may be due to two reasons. First, as pointed out by Lafontaine and Shaw (2001), in the first years of franchising, firms adjust their contractual mix departing from a proportion of 100% of company-owned units. Second, the need for signaling may decrease, allowing the firm to franchise its owned outlets. A subsequent estimation with a sub-sample of mature franchisors tries to differentiate both arguments.

Variable Nama	Logit		Probit		WLS	
v al lable Tvalle	Coef.	t stat.	Coef.	t stat.	Coef.	t stat.
Intercept	-1.02605	-9.18443	-0.55505	-8.93909	0.15200	4.842
Food & Beverages	-0.30429	-3.96395	-0.19773	-4.66059	-0.00269	-0.108
Special services	0.64761	6.48637	0.32011	5.44919	0.08121	2.181
Clothing	0.65170	6.46847	0.36901	6.42795	0.08863	2.468
Public company	-0.61359	-5.31584	-0.35961	-5.77387	-0.08646	-2.707
Total outlets	-0.00871	-21.30856	-0.00458	-21.71186	-0.00039	-8.532
Total payment	0.00240	6.97957	0.00139	6.93379	0.00267	4.238
Years before franchising	0.31653	12.66559	0.16782	12.04353	0.03802	5.147
Years of franchising experience	-0.56977	-10.50599	-0.34263	-11.39637	-0.03012	-2.400
Franchisee specific investments	0.01446	9.90842	0.00733	10.15253	0.00042	1.888
Franchisee specific investments - square	-0.00005	-9.21038	-0.00002	-9.52647	0.0000	-0.543
Regression information	Pearson Goodness-of-Fit Chi Square = $4309.559$ DF = $306$ P = $0.000$		Pearson Goodness-of-Fit Chi Square = 3614.616 DF = 306 P = .000		Adjusted $R2 = 0.334$ F = 20.090	

#### **TABLE 4: REDUCED FORM ESTIMATION**

Contrasting with Lafontaine and Shaw (2001) findings, the number of outlets has a negative and highly significant effect on the company ownership. This result is consistent with agency theory, because dispersion implies increasing monitoring costs, which makes franchising more desirable. Nevertheless, as we are not controlling geographic dispersion, this may be the key element, as identified by Lafontaine and Shaw (2001).

If the franchisor is a public company, the proportion of company-owned units tends to be lower. This negative effect surprisingly supports the idea of franchising as an instrument to obtain capital resources. Firms that do not have access to the stock market tend to rely on franchising more potentially due to their higher transaction costs in the financial market. It is important to add that the Brazilian credit system is far from a perfect market.

<sup>&</sup>lt;sup>14</sup> The marginal effect graphs were constructed using the logit estimation.

Three sector dummies – food & beverages, special services, and clothing – also have significant effect. It is interesting to note that the food sector, which has a proportion of company-owned outlets above the sample average, has a negative coefficient for its dummy variable once we control for other effects such as the number of outlets (which is lower in the case of the food sector), brand name value and other variables. Consequently the higher level of company ownership in this sector is explained not by production function particularities, but by underlying correlations with some other significant variables.

Finally, the coefficients associated to the franchisee specific investment provide an interesting finding. Both the linear and the quadratic forms are significant with positive and negative effects respectively. This means that for small amounts of specific investments the effect over the proportion of company-owned outlets is positive. On the other hand, when the specific investment is too high, it has a negative effect on company ownership. In order to have a more precise illustration of the role of this variable, we present in Figure 1 the marginal effect graph of the specific investment. As seems clear, the effect is positive for investments below approximately R\$ 140 thousands<sup>15</sup>. This behavior may be explained using two apparently contradictory arguments. For specific investments inferior to R\$ 140 thousands, the signaling effect (higher specific investment demands more credible signals about franchisor type) dominates the hostage effect (higher specific investments credible commit franchisees). As a consequence, this variable has a positive effect on the proportion of company ownership. The hostage effect seems to become more relevant as the specific investments increase, changing the overall effect.





As a final estimation (Table 5), following Lafontaine and Shaw (2001), we replicated the same model for a sub-sample, restricted to franchisors with more than 8 years of franchising experience. In general, results are the same, but with a lower significance level, inasmuch as the sample is much smaller. It is noteworthy that all coefficients preserve their sign, with two exceptions: the franchising experience and the dummy for special service sector. The latter, as shown in Table 2, has only 6 cases in the sub-sample, possibly affecting its significance. The former, on the contrary, provides an interesting result, in accordance with the findings of Lafontaine and Shaw (2001). The franchising experience, which has a strong

 $<sup>^{15}</sup>$  As the exchange rate in 1999 was around 1,70 reais (R\$) per dollar, this amount correspond to nearly US\$ 80 thousands.

negative effect in the whole sample, is not significant in any of the three estimated models. Even though our data set is cross-sectional, it offers some evidence towards the argument of a stable contractual mix, i.e., after the initial adjustment to franchising, firms tend to rest on a stable proportion of company-owned outlets.

Variahla Nama	Logit		Pr	obit	WLS	
variable Maine	Coef.	t stat.	Coef.	t stat.	Coef.	t stat.
Intercept	-2,49583	-4,12299	-1,41256	-4,36584	0,113	0,606
Food & Beverages	-0,14616	-1,02069	-0,16270	-2,12987	-0,106	-2,397
Special services	-1,43820	-1,38760	-0,79882	-1,68888	-0,168	-0,718
Clothing	0,75000	5,55738	0,39215	5,21687	0,07275	1,542
Public company	-0,35154	-1,29488	-0,15286	-1,15691	-0,02242	-0,307
Total outlets	-0,01347	-14,94691	-0,00639	-15,72064	-0,00070	-5,000
Total payment	0,00212	2,43932	0,00096	1,95008	0,00020	0,569
Years before franchising	0,46802	8,78490	0,21224	7,67293	0,03978	2,442
Years of franchising experience	0,12801	0,53642	0,06224	0,49055	-0,01326	-0,185
Franchisee investments	0,00925	3,17608	0,00699	4,42300	0,00232	2,459
Franchisee investments (square)	-0,00004	-3,25522	-0,00003	-4,29193	-0,00001	-2,287
Regression information	Pearson Goodness-of-Fit Chi Square = 504,846 DF = 73 P = ,000		Pearson Goodness-of-Fit Chi Square = 544,654 DF = 73 P = ,000		Adjusted $R2 = 0,285$ F = 4,303	

### **TABLE 5: SUB-SAMPLE ESTIMATION**

All of the variables used in this paper, their descriptions, expected effects and findings are summarized in Table 6. Additionally, this table gives possible explanations when the predictions and findings do not match.

# Table 6: Variables Descriptions, Predictions and Finds about the Proportion of<br/>Company-Owned Outlets (PCO) in the Empirical Analysis

<b>T</b> 7 <b>• • • • • •</b>		Prediction	Finding	
Variable Name	Description	(PCO)*	(PCO)*	Reconciliation
Total payment	proxy for brand name value – present value paid by the franchisee (sum of franchisee fee and present value of monthly payments $(R\$x10^3))$	+	+	ОК
Years before franchising	proxy for brand name value – franchisor experience in business before selling the first franchised unit (number of years)	+	++	ОК
Years of franchising experience	franchisor experience in the franchising (number of years)	initial adjustment followed by a stable contractual mix	initial decline with evidences about stable contractual mix (higher PCO than U.S.)	Brazilian institutional environment (higher degree of uncertainty)
Total outlets	proxy for the chain size – number of franchised units and company-owned outlets in operation	-	_	ОК
Contract length	number of months of the franchise contract	-	_	OK
Support index	number of support activities provided by the franchisor (ranging from 0 to 10)	_	not significant	
% Fixed payment	proportion of franchisee fixed payments	-	-	ОК
Franchisee specific investment	amount of specific investments that franchisee is committed (R\$x10 <sup>3</sup> )	double role (signaling mechanism <i>versus</i> hostage effect)	prevalence of hostage effect for higher levels of specific investments	ОК
Let surface area required	proxy for the franchised unit size (m <sup>2</sup> )	-	not significant	
Sector Dummies	five dummies that represent the main sectors (food & beverages; health & beauty; education & training; special services; and clothing)	sector that re-sell products would have a lower PCO level than service franchises	not significant	influence of other sector features
Public company	1 if franchisor is a public company and 0 otherwise	+	-	franchising may be an instrument to obtain capital resources and imperfection of Brazilian credit system

(\*) The signs (+) and (-) represent a positive and negative effect on PCO respectively.

### 5. Conclusion

This paper addressed the transaction between franchisors and franchisees in Brazil, focusing on the identification of the contractual mix chosen by franchisors and its determinants.

On the whole, the findings of the main international references are confirmed by data from the Brazilian franchising systems. Among those findings, it is remarkable that brand name value – for which we used two proxies: experience before franchising and the present value of franchisee payments – has a positive effect on the proportion of company-owned outlets. This result is consistent with the argument that a tapered vertical integration is a

mechanism that may enhance the capability to exert control over franchising contracts. This is especially necessary when brand name asset specificity is higher. Also it is noteworthy that the Brazilian franchising has a higher proportion of company-owned outlets than U.S. This may be due to the differences in the institutional environment in both countries and its consequences on the degree of uncertainty. This finding is observed even in a reduced sample, restricted to franchisors with more than 8 years of franchising systems is subjected to. Finally, the data provide evidences about the role of franchisee specific investments on the contractual mix choice. There are two opposing effects – the need for signaling and the hostage effect – with the prevalence of the second for higher levels of specific investments.

The analysis also suggests some complementary research, particularly those that link payment design, contract length and support services. Moreover, the econometric difficulties to treat simultaneously all variables that constitute contract design highlights the need to develop more detailed data sets.

In addition to these open questions, the convenient approach to the test of contractual mix trajectories is a panel analysis. As a consequence, for future research, the construction of such a data set is highly recommended.

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7. APPENDIX

FIGURE 2: TOTAL OUTLETS EFFECT







FIGURE 4: EFFECT OF YEARS EXPERIENCE BEFORE FRANCHISING



**Figure 5: Franchising Experience Effect** 

