

Customization and Management Control: An Analysis of Franchise Contracts

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Abstract

The aim of this paper is to investigate how service customization impacts on the way in which franchisors control the relationship with their franchised service units. We particularly investigate variation in franchise contract design in terms of the delegation of decision rights, monitoring, incentives and input control in chains offering services with varying levels of customization. We code and analyze a unique sample of 81 contracts of chains from different service industries. The results of our empirical analyses show that there exist important differences in the contractual control system dependent on the level of service customization. Franchisors of chains offering highly customized services delegate more decision rights to their service units, but include higher monetary incentives and more input control items as safeguards in their contracts. Regarding outcome monitoring, we observe no difference in the use of financial outcome monitoring across chains with different levels of service customization. Nevertheless, higher customization is associated with a higher use of subjective nonfinancial outcome monitoring, whereas objective nonfinancial outcome monitoring is used to a higher extent when services are more standardized. In chains offering standardized services, franchisors make higher use of behavior monitoring. Supplementary analyses point to complementary as well as substitutive relationships among the contractual control items in franchising contracts of chains with different degrees of service customization.

Key words: customization, contract design, franchising

1. Introduction

Service organizations are of major importance in today's economy provided that services are responsible for the majority of both employment and GDP in most developed countries (Sampson & Froehle, 2006). The services offered may vary from standardized services to more customized services according to the degree to which a service unit allows individual customers to affect the product and service attributes the business unit produces (Bouwens & Abernethy, 2000). Customization has been shown to be an important determinant of customer satisfaction (Fornell et al., 1996) and gives rise to particular types of management control challenges for a service organization. Customized services highly rely on customer inputs and are characterized by high levels of uncertainty making it more difficult to program service tasks and to pre-select inputs for the service production process (Larsson & Bowen, 1989; Bouwens & Abernethy, 2000; Safizadeh et al., 2008). Given the communication of unique specifications by customers in case of highly customized services, information asymmetries between the headquarters and service units increase as this specific information is not possessed by the headquarters (Jensen & Meckling, 1992). This information is costly to transfer, especially since service employees need to be highly responsive to customers' heterogeneous and unique requests (Bouwens & Abernethy, 2000). Furthermore, in order to deal in a flexible way with customers' requests, organizations offering highly customized services need to rely to a high extent on contributions and input by service employees for adaptively serving customers (Gwinner et al., 2005; Safizadeh et al., 2008). It is therefore crucial to manage and control this adaptive service behavior by managers and employees (Gwinner et al., 2005).

Extant research on management control issues in different types of service firms is relatively scarce (Chenhall, 2003; Auzair & Langfield-Smith, 2005) and we are not aware of studies focusing on how service companies characterized by various levels of customization manage and control their organizations.¹ An exception is Campbell et al. (2009), who focus on variation in customer demand faced by chain organizations when operating service units across different locations and investigate the relationship between market-type dispersion and the decision to franchise or own units in the convenience store industry. They find that market-type dispersion is positively associated with the use of franchising, being a proxy for higher delegation and incentives, as greater difficulties are associated with monitoring managers' behavior. In addition, serving customers in more diverse markets requires adaptations to the tastes of local customers which is done more effectively by local entrepreneurs.

¹ Despite the importance of service customization (e.g. Gwinner et al., 2005; Safizadeh et al., 2008), the small amount of prior work on the implications of customization for management accounting and control mainly focuses on manufacturing companies and the use of integrative liaison devices and performance measurement systems (Abernethy & Lillis, 1995) and the importance for operational decision making of different dimensions (i.e. scope, integration, aggregation, timeliness) of management accounting systems (Bouwens & Abernethy, 2000).

The aim of this study is to examine in depth how chain organizations design their contracts with their service units to minimize potential control problems. We thereby focus on the contract design of franchising chains with different levels of customization characterizing their service offering. More specifically, we investigate variation in franchise contract design in terms of the delegation of decision rights, monitoring, incentives and input control. We focus on these aspects as delegation, monitoring of performance and rewards are considered to be important dimensions of management control (Jensen & Meckling, 1992; Anderson & Dekker, 2005). We additionally focus on input control as it has been identified as an important alternative form of control (Cardinal, 2001; Dekker, 2008; Dekker & Van den Abbeele, 2010; Campbell, 2012). Franchising provides the ideal setting for our study as franchising chains are active in industries characterized by diverse services, ranging from relatively standardized to more customized services (Caves & Murphy, 1976; Lafontaine & Kaufmann, 1994). Franchising chains typically consist of a large number of geographically dispersed service units and are faced with the dual challenge of maintaining uniformity, while at the same time allowing the system to adapt to changing markets (Bradach, 1997). In franchising, the franchisor contracts with a legally independent party, the franchisee, which allows the latter to use the franchisor's service concept to sell goods or services under the franchisor's trademark (Fladmoe-Lindquist & Jacque, 1995). Franchising is an example of a hybrid inter-firm relationship resembling market transactions with regard to incentives and asset ownership, but being characterized by a relatively strong authority relationship (Makadok & Coff, 2009). A recent stream of research has started to investigate contract design for the management of inter-firm relationships such as buyer-supplier relationships in IT (Mayer & Argyres, 2004; Anderson & Dekker, 2005; Argyres et al., 2007) and electronics manufacturing (Krishnan et al., 2011), cooperation in the framework of joint technology development (Ryall & Sampson, 2009) or franchising (Arruñada et al., 2001). Similar to other types of inter-firm settings, the franchise contract is considered to be a crucial formal control device reflecting the control structure designed by the franchisor to cope with information and monitoring problems and to safeguard the relationship from inconsistent objectives of both partners (Rubin, 1978; Brickley, 1999; Arruñada et al., 2001; Cochet & Garg, 2008).

In this paper, we analyze a unique sample of 81 franchise contracts to investigate the implications of customization for delegation, outcome monitoring, behavior monitoring, incentives and input control used by the franchisor to manage the relationship with the franchised service units. Our findings indicate that there exist important differences in contract design across chains with varying levels of customization. Chains offering highly customized services delegate more decision rights to their service units, but include incentives and input control items (i.e. partner selection criteria and obligated training) to a higher extent in their contracts. We observe no difference in the use of financial outcome monitoring across

chains with different levels of service customization. Nevertheless, higher customization is associated with a higher use of subjective nonfinancial outcome monitoring, whereas objective nonfinancial outcome monitoring is used to a higher extent when services are more standardized. As expected, franchisors make higher use of behavior monitoring in chains offering more standardized services. In order to gain more insight into the interdependent nature of different contractual control items, we perform a cluster analysis on these items. The results indicate complementary as well as substitutive relationships among the contractual control items which can partly be explained by differences in the degree of service customization. Overall, chains offering highly customized services are more likely characterized by high levels of delegation to their service units, leading them to substitute direct behavior monitoring for higher monetary incentives. Within this group of chains, incentives are more likely complemented with input control and a certain amount of subjective nonfinancial outcome monitoring. By contrast, chains offering highly standardized services more likely retain a high degree of decision rights and substitute incentives for direct behavior monitoring. The chains within this group may or may not complement behavior monitoring with a considerable amount of objective nonfinancial outcome monitoring and input control.

We contribute to the literature in three ways. First of all, by analyzing the controls codified in the contracts used to coordinate and govern service units in chains with different levels of customization, we contribute to the management accounting literature focusing on the implications of heterogeneity in customer demand or more generally, uncertain customer inputs (Larsson & Bowen, 1989), for organizational design (Campbell et al., 2009). Secondly, we further add to the management accounting literature by providing exploratory insights into how multiple elements of the control system (i.e. delegation, outcome monitoring, behavior monitoring, incentives and input control) are used in combination in organizations offering standardized versus customized services. Thirdly, we contribute to the franchising literature by executing a detailed analysis of franchise contracts as most prior studies on franchise contracting focus on the payment terms (i.e. royalty rates and franchise fees) and / or use publicly available basic contract information instead of examining franchise contract provisions in detail (e.g. Brickley, 1999; Lafontaine & Shaw, 1999; Brickley et al., 2006). Empirical studies based on a detailed analysis of franchise contract terms are scarce as most firms do not release detailed contract information to the public (e.g. Dnes, 1993; Leblebici & Shalley, 1996; Arruñada et al., 2001; Azoulay & Shane, 2001; Cochet & Garg, 2008). In this way, we add to the findings of Arruñada et al. (2001) who investigate cross-chain differences in rights allocation (completion, monitoring, termination) and monetary incentives in franchised automobile distribution. Furthermore, by focusing on franchise contract design, this study adds to the management accounting and control literature on inter-firm relationships (van der Meer-Kooistra & Vosselman, 2006; Caglio & Ditillo, 2008).

The remainder of the paper is structured as follows. Section 2 presents the literature and develops our hypotheses. Section 3 describes our research method including a description of the contract sample. Section 4 discusses the results of the empirical analyses, while section 5 concludes.

2. Literature and hypotheses

In this section, we first discuss the concept customization and the management control problems associated with increasing levels of customization in service firms. Next, we develop our hypotheses concerning the implications of service customization for contract design.

2.1. Customization and management control

In line with Bouwens and Abernethy (2000), we define customization as the degree to which a service unit allows individual customers to affect the product and service attributes the service unit produces. The offering of service organizations can vary from relatively standardized services, such as fast-food restaurants, airlines or self-service retail, to more customized services, such as medical care, consulting or hairdressing. The essential commonality across different types of service businesses is that they rely on customer inputs, which is considered to be a necessary and sufficient condition to define a production process as a service process (Sampson & Froehle, 2006). As customized services are adapted to suit the heterogeneous needs of customers, they face higher levels of uncertainty concerning customer inputs than more standardized services (Larsson & Bowen, 1989). Consequently, the tasks performed in service units are characterized by lower programmability and headquarters generally has less knowledge about input-output relationships. In addition, inputs are difficult to pre-select as customer requests may involve activities that the service unit has not carried out before. Furthermore, customized services require more inputs and contributions by service employees and rely to a higher extent on tacit knowledge (Bouwens & Abernethy, 2000; Safizadeh et al., 2008). Customization requires employees that are able to be customer-responsive and perform flexible service-adaptive behavior as supplying customized services may call for the design of alternative actions to satisfy customers (Bouwens & Abernethy, 2000; Gwinner et al., 2005). In sum, customization strategies create important information asymmetries between headquarters and service units as the higher amount of customer inputs gives unit managers specific information which is not possessed by the headquarters and costly to transfer (Jensen & Meckling, 1992), especially since service employees are required to be highly responsive to customer needs (Bouwens & Abernethy, 2000). In addition, organizations offering customized services are faced with the challenge of making sure service employees and managers perform adequate service-adaptive behavior to properly serve customers (Gwinner et al., 2005).

2.2. Contract design in service firms with varying levels of customization

Jensen and Meckling (1992) consider the alienability of decision rights to be the feature which distinguishes market systems from firms. In the absence of this alienability, firms must solve the control problems associated with the delegation of decision rights by means of performance measurement and evaluation systems and reward and punishment systems. According to Jensen and Meckling (1992), the optimal level of delegation of decision rights is a function of the costs associated with information problems and agency costs. We expect that chain organizations with higher levels of customization are characterized by a higher level of information asymmetry between the headquarters and the service unit as compared to chains with lower levels of customization. The communication of unique specifications by customers increases the amount of specific information gathered by the franchisee, which is not possessed by the headquarters. Given the costs associated with transferring this specific information to the headquarters and the importance of local knowledge and a quick response to customers, more decision rights can be expected to be delegated to franchisees in chains with higher levels of customization as compared to chains with lower levels of customization (Jensen & Meckling, 1992; Colombo & Delmastro, 2004). We therefore formulate the following hypothesis:

H1: Chain organizations offering highly customized services allocate more decision rights to their service units than chains offering less customized services.

The level of customization is also expected to impact the headquarters' monitoring rights that are included in the contract. With regard to monitoring, a distinction can be made between outcome and behavior monitoring (Ouchi, 1979; Eisenhardt, 1985). Concerning outcome monitoring, a further distinction can be made between the monitoring of financial and nonfinancial performance measures (e.g. Kaplan & Norton, 1992; Ittner & Larcker, 1998). Examples of nonfinancial performance measures include productivity, inventory turnover, customer satisfaction and product quality. In case of standardized services, we anticipate outcome measurability to be high and therefore outcome monitoring as highly efficient since it is a low-cost form of control (Ouchi, 1979; Rockness & Shields, 1984). Although it is likely more difficult to specify and directly measure customized service outcomes, the monitoring of certain types of outcomes such as customer evaluations (e.g. Ittner & Larcker, 1998) or financial results remains feasible for service units offering highly customized services. As a consequence, we anticipate that customization does not affect the extent to which outcome monitoring is used by service chains. This expectation is further supported by the fact that franchising is an outcome-based contract: franchisees are residual claimants of the profit stream of their units and mostly pay an initial franchise fee and periodical remunerations in the form of a royalty percentage on their sales to the franchisor (e.g. Lafontaine & Shaw, 1999). As a consequence, franchisors are expected to monitor

franchisees' financial outcomes (e.g. revenue number) to a high extent regardless of the level of service customization. We therefore formulate the following hypothesis:

H2: Chain organizations use outcome monitoring to a high extent irrespective of the level of customization.

In chains with higher levels of customization, we expect that the franchisor is less able to write and impose detailed procedures² concerning the tasks that need to be performed in the chain's units because of the customers' input in the form of unique requests which renders service tasks much less programmable (e.g. Ouchi, 1979; Eisenhardt, 1985; Larsson & Bowen, 1989; Bouwens & Abernethy, 2000; Safizadeh et al., 2008). Consequently, we anticipate that chains with higher levels of customization are less likely to directly monitor behavior as compared to chains offering more standardized services. In addition, agency models assume a trade-off between delegation and behavior monitoring which makes increased delegation and monitoring behavior inconsistent: delegation is more likely when there is greater uncertainty about what the agent should be doing. In more certain environments, organizations are more likely to assign tasks to agents and to monitor their tasks directly (Prendergast, 2002). This further supports our expectation of lower behavior monitoring in case of higher customization. We therefore formulate the following hypothesis:

H3: Chain organizations offering highly customized services use behavior monitoring to a lower extent than chains offering less customized services.

The supply of customized services relies to a high extent on the effort and input of service employees in interaction with customers (Gwinner et al., 2005). In addition, service tasks are rather difficult to specify for headquarters given the incomplete knowledge of input-output relationships (Bouwens & Abernethy, 2000; Safizadeh et al., 2008). In such a situation, outcome-based rewards provide service managers and employees with the necessary discretion, but at the same time steer behavior towards desired actions by tying their pay to desired performance. The higher delegation in case of higher levels of customization makes outcome-based incentives more appropriate than in case of lower customization, where behavior can be more easily observed (Prendergast, 2002; Nagar, 2002). Based on the preceding, we formulate the following hypothesis:

H4: Chain organizations offering highly customized services use outcome-based incentives to a higher extent than chains offering less customized services.

² Based on interviews with franchise experts, we know that the operating manual - the so-called "bible" of the franchising agreement - is an important behavioral control tool. The operating manual turns the franchising concept into a transferable asset and it is therefore a vital part of the franchising agreement. It specifies in detail how the franchisee should manage the day-to-day operation of his outlet and which rules and procedures should be followed. However, although franchise contracts in our sample often refer to the operating manual and state that it should be considered as part of the contractual agreement, it is a separate, highly confidential document containing the chain's know-how and is therefore not included in our dataset.

Besides monitoring and incentives, the selection of an appropriate partner is an additional form of control which may limit the need for certain governance arrangements in inter-organizational relationships (Dekker, 2008; Dekker & Van den Abbeele, 2010). Furthermore, employee selection has also been shown to be an effective alternative control mechanism to solve the delegation problem when it is difficult to contract on output in an intra-firm context (Campbell, 2012). In chains offering relatively standardized services, franchisee inputs are to a large extent restricted as they have to follow imposed standards and procedures in order to guarantee uniformity across the chains' units. The supply of customized services, by contrast, is expected to rely to a larger degree on tacit knowledge and to require more intellectual inputs and contributions by managers and service employees such as their local market expertise and (customer) knowledge (e.g. Combs & Ketchen, 2003; Gwinner et al., 2005; Safizadeh et al., 2008). Given this higher need for inputs by managers and service employees and the difficulties associated with monitoring service units in chains with higher levels of customization, we expect that chains offering highly customized services employ more extensive partner selection criteria as compared to chains offering more standardized services. Another means to have more control over managers' inputs is through the provision of training programs (e.g. Cardinal, 2001; Gwinner et al., 2005; Merchant & Van der Stede, 2007). We consider partner selection and training as forms of input control enabling organizations to have more control over the antecedent conditions of performance and service quality (e.g. Cardinal, 2001). Based on the preceding argumentation, we formulate the following hypotheses:

H5A: Chain organizations offering highly customized services use more extensive partner selection criteria than chains offering less customized services.

H5B: Chain organizations offering highly customized services use obligated training programs to a larger extent than chains offering less customized services.

A control system can be seen as a system of interdependent choices as the use of different elements of the control system is likely to be jointly determined (Jensen & Meckling, 1992). In this way, the inclusion of one control mechanism, may either require (complements) or preclude (substitutes) the inclusion of another control mechanism. However, not many empirical studies explicitly model the joint determination of different types of control mechanisms (e.g. Nagar, 2002; Abernethy et al., 2004; Anderson & Dekker, 2005). It would therefore be interesting to investigate whether the above-mentioned contractual elements (i.e. the delegation of decision rights, outcome monitoring, behavior monitoring, incentives and input control) act as complements or substitutes. Anderson and Dekker (2005) find evidence of complementary relationships among the four identified contract dimensions (rights assignment, product and price, after-sales service and legal recourse) in their sample of IT-transactions. Nagar (2002) finds that incentive-based pay has no influence on the extent of delegation, while delegation positively affects incentive-based pay for branch managers in retail banks. Abernethy et al. (2004) find that the use of divisional summary

measures for performance assessment of divisional managers does not affect the level of delegation, while delegation positively affects the use of these measures. Arruñada et al. (2001) analyze the franchise contracts of 23 automobile distribution networks and find indications of complementary relationships between manufacturer completion (i.e. the opposite of decision right allocation to franchisees) and termination rights, and between incentive intensity and monitoring rights. Brickley (1999) also finds evidence of complementarities among the inclusion of three types of restrictive provisions (i.e. restrictions on passive ownership, area development plans and mandatory advertising) and the proportion of company-owned units. Given the relatively large amount of contractual control elements considered in this paper, we have no concrete expectations concerning which control elements act as complements or substitutes, but we will therefore explore the interdependencies between these contractual dimensions in our dataset.

3. Method

In this section, we first discuss the data and data collection methods and the measurement of the variables. Next, we provide a detailed description of the contract sample.

3.1. Data and data collection methods

The empirical analysis is based on a unique sample of 81 franchise contracts of chains that are active in different types of service industries. Franchisors tend to offer one standard contract to all their franchisees at a particular point in time (Lafontaine, 1992; Brickley, 1999) as uniform provisions accommodate concerns for equity and save on the costs of customizing contracts to each particular franchisee (Cochet & Garg, 2008). The contracts were collected via direct contacts with franchising chains (with or without intermediation from national franchising federations) (42) and third parties (39). Because of confidentiality agreements, we cannot release the identity of the franchising chains under study. We complement the contractual data with information concerning the characteristics of the franchising chains, including the size of the chain, the proportion of company-owned units, the geographic dispersion of the chain, the age of the chain and the age of the chain's franchising strategy. This information was collected by examining the chains' corporate websites and national franchising guides. When the information concerning these variables appeared not to be publicly available, we contacted the chains via telephone and/or e-mail.³ The characteristics of the franchising chains are displayed in table 1.

[insert Table 1 here]

³ For a small number of chains, the dataset is characterized by some missing values with regard to these additional variables as this information is not publicly available nor could be obtained by contacting the chains directly.

Table 1 panel A indicates that the age of the chains ranges between 2 years and 194 years with an average of about 33 years. The chains' experience with franchising varies from 1 to 79 years. The average level of franchising experience in our sample is about 23 years. The number of units operated by the chains varies from 2 to over 15000 units. The average proportion of company-owned units is 23% with a minimum of 0% and a maximum of 95%. On average, the chains operate units in 9 countries. The average contact duration in our sample is about 6 years with a minimum of 3 and a maximum of 10 years.⁴

We consulted franchise experts of a franchising federation to learn more about franchise contracting practices. Although the contracts in our sample are characterized by a high degree of variation in terms of length and content, there are several contractual features that appear regularly across the sample. As also indicated by the guidelines for establishing a franchise contract that was handed over by one of contacted national franchising federations, the franchise contracts in our sample predominantly contain provisions including the identity of both partners, a preface, provisions with regard to the permission to franchise (e.g. the allocation of an exclusive territory), clauses with regard to the trade name, the obligations of the franchisor, the obligations of the franchisee, financial provisions, provisions concerning the duration of the contract, renewal provisions, revision provisions, dissolution provisions, provisions concerning non-competition (during and after the contract), provisions with regard to the withdrawal of the trademark after the contract and provisions assigning legal authority. We observe substantial variation in the length of the sampled contracts, which is only partly caused by differences in font and lay-out: the contracts in our sample range from approximately 5 to 48 pages with an average of about 23 pages each (see table 1).

Our coding scheme was based on the list of identified franchise contract items in automobile distribution coded in Arruñada et al. (2001), and further developed by reading through a small portion of the contract sample taking into account our research objectives. Two researchers coded the content of a large portion of the sampled contracts (59 contracts), which increases the reliability of the coding process. They coded most of the variables below by scrutinizing the contracts. About half of the contract sample (41 contracts) was coded twice. A first exploratory round of coding based on an initial coding scheme led to a better understanding of the content of the contracts, which enabled us to draw up a second revised coding scheme. During the second round of coding, we coded some contractual aspects in more detail and we were able to verify the accuracy of the first round of coding. During the coding process of 59 contracts, these researchers were sitting in the same room so that they were able to discuss and reach agreement concerning dubious cases. Based on these discussions, decision rules were developed regarding the

⁴ When the duration of the initial contracting period is variable and the duration of the second contracting period (upon renewal) is fixed and given, we consider the duration of the second contract period as our measure for contract duration. Six contracts of the sample have indefinite durations and three of the sampled contracts are characterized by a variable duration and do not contain the exact duration of the contract. These contracts are left out for the descriptive analysis of contract duration.

coding process. For instance, for behavior monitoring, we coded terms that referred to monitoring rights of the franchisor in the form of visits to the franchisee's premises such as site inspections, visits by franchise consultants or mystery shopping. Regarding partner selection, we coded the extent to which franchisee selection criteria are mentioned in the contract (see appendix). Coding rules were written out and one of these researchers meticulously applied these rules during the coding of the final portion of the contract sample (22 contracts). Except for decision rights, the coded measures reflect the degree to which a certain control mechanism is mentioned in the contract via a distinction between not mentioned in the contract ('0'), mentioned to some extent in the contract ('1') and mentioned to a high extent in the contract ('2'). Given the large variety in the phrasing and length of the contracts, the distinction between 'to some extent' and 'to a high extent' is inevitably characterized by some degree of subjective appraisal on the part of the researchers. In order to prevent this subjectivity to bias or distort our results, we also reran each regression with dummy variables referring to the occurrence versus non-occurrence of each type of contract term (see footnote 9). Detailed information with regard to the coded contract terms under study and the measurement of the contract variables can be found in appendix.

3.2. Variable measurement

3.2.1. *Dependent variables*

Decision rights. We construct a measure for the amount of decision rights allocated to the franchisees in the contracts by considering the following decisions with regard to the franchisee's unit: supplier selection, investments in the service unit, the size and the qualification of the service unit's personnel, the internal design and decoration of the service unit and local marketing.⁵ Each of these decisions has a value 0 when the decision is made by the franchisor or when the franchisor has a large influence on the decision, and a value of 1 when the franchisee has discretion concerning this decision or when the issue is not mentioned in the contract.⁶ Although this is not an exhaustive list of decisions made by the franchisor and/or franchisee in the relationship, we consider this list to give a good representation of relevant decisions in different types of service industries in order to compare the amount of discretion assigned to franchisees across chains with different levels of customization. Furthermore, the amount and type of decisions considered to construct our delegation measure are in line with prior empirical studies on

⁵ We separately coded decisions concerning the size and the qualification of the unit personnel, the content and investments in local marketing, and the decoration, internal organization and equipment of the unit on a scale from 0 to 2. We add up the scores for each business aspect (i.e. local marketing, human resources management, unit design) and transform this sum again to a variable ranging from 0 to 2, after which we transform the measures to 0/1 variables (see appendix for more detailed information).

⁶ When the decision is not tackled in the contract, we assume that it is more likely that the franchisee has discretion concerning this issue given his status of independent entrepreneur.

delegation (cf. Nagar, 2002; Abernethy et al., 2004; Moers, 2006). In order to verify whether these items reflect a common underlying delegation construct, we conduct a factor analysis with maximum likelihood estimation with an oblique rotation which yields one factor with an eigenvalue greater than 1 on which all five items load with weights greater than 0,327. This factor accounts for 39.11% of total variance in the degree of delegation across all five decisions. Cronbach's alpha equals 0.61. We use the factor score as our delegation measure.

Outcome monitoring. We construct measures regarding three types of outcome monitoring rights that we identified based on the exploratory coding of the content of the contracts, i.e. financial outcome monitoring and two types of nonfinancial outcome monitoring rights. To measure the franchisor's financial outcome monitoring rights, we coded the presence of the following items by means of 0/1 variables: (1) franchisee obligated to provide revenue number, (2) franchisee obligated to provide other accounting data, (3) franchisor's right to audit accounting data, as in Arruñada et al. (2001). To verify whether these items reflect a common underlying financial outcome monitoring construct, we conduct a factor analysis with maximum likelihood estimation with an oblique rotation which leads to one factor with an eigenvalue greater than 1 on which all three items load with weights greater than 0.320. This factor accounts for 62.40% of total variance in the use of all three financial outcome monitoring items. Cronbach's alpha equals 0.63. We use this factor score as one of our measures for the use of financial outcome monitoring rights. In addition, we coded the extent to which financial outcome monitoring rights are mentioned in the contract on a scale from 0 to 2 (see appendix). Concerning nonfinancial outcome monitoring, we identified on the one hand nonfinancial outcome monitoring rights concerning service unit's operations such as stock levels, number of customers, number of sold products, number of days of operation, opening hours or quality scores based on field audits. As these are rather objective nonfinancial performance measures, we label this construct as "objective nonfinancial outcome monitoring". We coded this construct by means of a 0/1 as well as a 0/1/2 variable indicating the extent to which this type of outcome monitoring is mentioned in the contract (see appendix). On the other hand, we coded the extent to which the contract mentions franchisor rights of monitoring customer reactions or franchisee obligations to report customer reactions. We label this construct as "subjective nonfinancial outcome monitoring" as customer reactions are rather subjective given that various customers may evaluate service quality differently even if it is consistent based on more objective measures (Bowen & Ford, 2002). We also coded this contract item on a scale from 0 to 2 referring to the extent to which this contract item was mentioned in the contract (see appendix).

Behavior monitoring. The amount of behavior monitoring rights is measured by the extent to which visits to the franchisee's unit such as unit inspections or mystery shopping programs are mentioned in the contract. This variable is measured on a scale from 0 to 2 as well as via a 0/1 variable indicating the franchisor's right to visit/monitor the franchisee's premises, which is in line with Arruñada et al. (2001) who include this item among their set of manufacturer monitoring rights (see appendix).

Incentives. The franchisee-owner is an independent entrepreneur and is the residual claimant of the profit stream of his unit. Most of the time, franchisees retain their units' profits minus periodical remunerations paid to the franchisor. Franchisees are therefore in general considered to possess high monetary incentives (e.g. Brickley & Dark, 1987; Lafontaine & Shaw, 1999). However, franchisees have higher outcome-based incentives, the lower the periodically paid amount of money to the franchisor (Rubin, 1978; Lafontaine, 1992). In order to construct a measure for incentives, we code the following contract items by means of 0/1 variables as these items were identified as possible elements of the monetary incentive scheme for franchisees in our contract sample: (1) the payment of a fixed periodical amount by the franchisee, (2) the payment of a fixed periodical amount by the franchisee that decreases in case of the attainment of higher performance thresholds by the franchisee, (3) the payment of a fixed royalty percentage on his periodical revenue number, (4) the payment of a royalty percentage on his periodical revenue number that decreases in case of the attainment of higher performance thresholds by the franchisee, (5) the payment of a margin on the purchased products from the franchisor and (6) other types of incentives. Our data show that franchisors may employ various combinations of the above items. Given the large variety in the structure of the monetary incentive scheme for the franchisees across the chains and the fact that we do not dispose of exact royalty percentages or amounts for a share of the contracts, we use the following proxy for incentives. Our measure equals 1 in case the contracts contain above-mentioned items 2 or 4 and 0 otherwise. This measure indicates whether the franchisor provides additional monetary incentives to the franchisee by offering discounts in function of the franchisee's attainment of performance thresholds in the framework of a certain remuneration scheme (i.e. item 2: a fixed fee (=basic scheme) or item 4: a royalty percentage (=basic scheme) that varies in function of the attainment of certain performance thresholds) (see appendix).

Input control. Concerning input control, we code the extent to which the contracts mention partner selection criteria and the degree to which the franchisor imposes obligated initial and additional training programs, each measured on a scale from 0 to 2 (see appendix). In addition, we code whether the contract stipulates desired partner selection criteria and whether the franchisor imposes obligated training programs in the contract via 0/1 variables.

Table 2 presents some examples of coded contract terms.

[insert Table 2 here]

3.2.2. Explanatory variable

Customization. The sampled franchising chains are active in different types of service industries ranging from relatively standard services such as fast-food, bakeries, and self-service retail, to more customized services such as business consulting, car repair services, beauty care and health services. In this study we consider customization as a continuum and classify the service chains in five groups characterized by low (1), low to medium (2), medium (3), medium to high (4) and high (5) levels of customization, respectively. We derived our classification from extant survey measures of customization (Bouwens & Abernethy, 2000; Safizadeh et al., 2008). Services with low levels of customization are standard services with few options and therefore almost completely standardized. Examples are fast-food restaurants or bakeries. Services with low to medium levels of customization are standard services with many standard options. These services contain more standardized than customized components. Examples are self-service retail chains and car window repair firms. Services with medium levels of customization are an in-between form and are characterized by a balanced combination of standardized and customized components. Examples are non-food retail stores with a lot of personalized service such as fashion boutiques, travel retail and maintenance services. Services with medium to high levels of customization are customized services with some standard service modules. Examples are pharmaceutical services, customized furnishing and repair services. Services with high levels of customization are highly customized services. Instances of chains in this category include personal care services, recruitment and selection and business consulting. We used researcher triangulation for classifying the 81 chains of our sample into one of the five above-mentioned categories. One researcher made an initial classification of the chains and presented it to the other two researchers. There were disagreements with regard to the initial classification of five chains out of the sample (6.2%). The three researchers discussed these cases until a final classification was agreed upon. According to this scheme, we classify 16 chains in the low category (19.80%), 23 chains in the low-medium category (28.40%), 18 chains in the medium category (22.20%), 15 chains in the medium-high category (18.50%) and 9 chains in the high category (11.10%) (see table 1 panel B). We therefore consider our contract sample to be balanced in terms of customization and therefore as appropriate within the scope of our research objective.

3.2.3. Control variables

In our multivariate analyses, we control for the following factors as they are expected to influence franchisors' contractual decisions.

Contract length. In order to control for the effect that lengthier contracts caused by phrasing and repetitive wording lead to an increased importance of certain contractual items, we control for contract length in our analyses. This variable is measured as the number of pages the contract contains. Similar to contracts in other inter-firm settings (Anderson & Dekker, 2005), legal professionals with regard to franchising may use boilerplate templates for their clients which are then adapted to each franchising chain's peculiarities. By controlling for contract length, we also control to some extent for this boilerplate effect as common templates more likely lead to contracts of comparable length. We expect contract length to have a negative effect on delegation and a positive effect on all other contractual items.

Proportion of company-owned units. Most franchising chains consist of franchised as well as company-owned units (e.g. Bradach, 1997) and the proportion of company-owned units may vary strongly across chains (e.g. Lafontaine & Shaw, 2005). We use the proportion of company-owned units as a control variable in our regression analyses as this variable proxies for the franchisor's experience with unit management (Cochet & Garg, 2008) and because of the expectation that chains with high rates of company-ownership are more likely to include restrictive provisions in their contracts (Brickley, 1999). The percentage of company-owned units is also expected to increase franchisor's bargaining power in the relationship with his franchisees (Michael, 2000). Company-owned units foster franchisors' knowledge of service operations, allow for performance benchmarking between the franchised and company-owned units and enhance the franchisor's ability to persuade franchisees as the chain disposes of detailed financial, operating data and test results from comparable company-owned units. Furthermore, potential within chain career paths (e.g. managers of company-owned units becoming franchisee) facilitate the franchisor's selection process of new franchisees and this socialization process enhances the chain's ability to exercise control over the franchise arrangement (e.g. maintaining standards) (Bradach, 1997). Controlling for the proportion of company-owned units therefore allows us to check for differences in the contractual system for franchised units in chains with different integration strategies. This variable is calculated as the number of company-owned units in the system divided by the total number (i.e. franchised and company-owned) of units in the network. Concerning delegation, we expect that a higher rate of company-owned units enables the franchisor to retain more decision rights in order to have more control over the franchisees as it increases their bargaining power (Michael, 2000) and as they have better knowledge about operations leading to improved operational decision making capabilities (Bradach,

1997). With regard to monitoring, we anticipate a positive effect of the share of company-owned units as these franchisors have better knowledge about service operations and have more benchmarking possibilities. In addition, we expect a negative impact of the percentage of company-owned units on the use of incentives in the relationship with franchisees as the need for outcome-based monetary incentives is likely decreased by the increased possibilities to maintain control generated by a larger share of company-owned units (e.g. performance benchmarking). Regarding input control, we expect a positive impact of the share of company-owned units on the inclusion of partner selection criteria and obligated training programs as franchisors are better able to identify desired criteria based on the selection process of and the experiences with the managers of their company-owned units. Furthermore, the increased knowledge of service operations via company-owned units improves franchisor's ability to design training programs. Based on the preceding, we expect the following effects of the percentage of company-owned units on the different contractual control elements: delegation (-), outcome monitoring (+), behavior monitoring (+), incentives (-) and input control (+).

Chain size. We add chain size, measured as the sum of the chain's franchised and company-owned units, as a control variable as it is expected to affect contract design in franchising chains (e.g. Arruñada et al.; 2001; Brickley et al., 2006). Distance between headquarters and service units as well as heterogeneity of unit locations likely increase when chains grow larger. Larger chains may therefore be faced with more information problems than smaller chains, leading to a higher degree of delegation of decision rights to franchisees when chain size increases (Jensen & Meckling, 1992). On the other hand, externalities such as free-riding behavior by franchisees (e.g. franchisees lowering the quality of their service) are expected to be more severe in larger chains, which may lead franchisors to retain more decision rights as chains increase in size (Arruñada et al., 2001). Given these opposing effects, we do not make any directional predictions regarding the effect of chain size on delegation. Concerning outcome monitoring, we expect a positive effect of chain size given the higher horizontal externalities and given that costs associated with monitoring outcomes are not expected to increase substantially with chain size. Regarding behavior monitoring, we expect chain size to have a negative effect as costs associated with sending managers to outlets increase substantially when chains grow larger (e.g. Combs & Ketchen, 2003). However, it should be noted that this effect is likely more pronounced when examining implemented day-to-day behavior control, as it is obviously less costly to include behavior monitoring rights in the contract as compared to executing these controls in reality. Furthermore, behavior monitoring rights might also be included to a higher extent to cope with increased control problems such as free-riding in larger chains. Overall, we therefore expect chain size to positively affect the inclusion of behavior monitoring rights. We expect larger chains to rely to a higher extent on outcome-based monetary incentives as this directs franchisee

behavior while reducing the need for costly behavior monitoring (e.g. Brickley & Dark, 1987). Finally, chain size is anticipated to have a positive effect on the inclusion of partner selection criteria and obligated training as larger franchisors are likely to be more knowledgeable and aware of these in comparison with smaller franchisors as they are able to observe more units (Brickley et al., 2006). In sum we anticipate the following effects for chains size: delegation (?), outcome monitoring (+), behavior monitoring (+), incentives (+), input control (+).

Franchising experience. The chain's experience with franchising as measured by the number of years since the chain opened its first franchised unit is added to control for franchise contracting experience (e.g. Brickley et al., 2006). Although franchisors tend to offer one standard contract to all franchisees at a particular point in time, franchise contracts undergo evolutions over time based on learning and experience (Cochet & Garg, 2008). With regard to the effect of franchising experience, as a proxy for contracting experience, we expect the following effects on the contract variables: delegation (-), outcome monitoring (+), behavior monitoring (+), incentives (no effect) and input control (+). Concerning delegation, we expect that franchisors may adjust these terms based on negative experiences or problems (e.g. granting franchisees too much freedom) and therefore anticipate franchisors to be tightening control by lowering the level of delegation over time. The same reasoning applies to the inclusion of contractual outcome and behavior monitoring rights. Concerning incentives, prior research indicates that share parameters tend to remain rather stable over time and that franchisors do not systematically increase or decrease their royalty rates and franchise fees (Lafontaine & Shaw, 1999). We therefore expect the amount of outcome-based monetary incentives not to vary in function of the amount of franchising experience. Concerning input control, we anticipate a positive effect of franchising experience as franchisors are likely to become more knowledgeable about desired partner characteristics and better aware of the content and necessity of training programs when they gain more franchising experience (Cochet & Garg, 2008).

Table 1 panel A contains the descriptive statistics for the control variables. Table 3 presents the descriptive statistics for the dependent (contract) variables.

[insert Table 3 here]

We estimate different regressions for each of the coded contractual control mechanisms. The general specification of the models we estimate is the following:⁷

Contractual item $i = f(\text{customization } i, \text{contract length } i, \text{proportion company-owned units } i, \text{chain size } i, \text{franchising experience } i)$

3.3. Description contract sample

Tabel 3 indicates that franchisees have on average most discretion concerning decisions related to the size and qualification of unit personnel (mean = 0.62) and local marketing (mean = 0.73). The level of discretion regarding investment decisions is moderate (mean = 0.43). Franchisors appear to retain most decision rights concerning supplier selection (mean = 0.09) and unit design (mean = 0.22). In terms of the monitoring rights, the contracts appear to be characterized by a relatively high degree of financial outcome monitoring rights. In 91% of the chains, the franchisees need to provide the franchisor with his revenue number. In 84% of the chains, the franchisees also have to communicate other types of accounting data such as balance sheets and annual accounts. The franchisor has the right to audit the bookkeeping of the franchisees in 35% of the chains in our sample. In general, financial outcome monitoring rights are mentioned to a relatively high extent in the sampled contracts (mean = 1.53). Nonfinancial outcome monitoring rights are mentioned to a lower extent as compared to financial outcome monitoring rights, but are still included to a considerable degree. 64% percent of the contracts mention the franchisor's right to monitor rather objective nonfinancial performance measures such as stock levels, client numbers or other types of commercial information. About 25% of the contracts mention that the franchisor has the right to directly monitor customer reactions or that the franchisee is obligated to report these. In general, objective nonfinancial outcome monitoring rights are mentioned to a moderate extent (mean = 0.94), whereas subjective nonfinancial outcome monitoring rights are mentioned to a relatively low degree across the contracts in our sample (mean = 0.27). 75% of the sampled contracts contain franchisor's right to visit or monitor the franchisee's premises (e.g. mystery shopping, unit inspections or other types of visits) and behavior monitoring rights are on average mentioned to some extent (mean = 1.02). For what concerns the incentives, we find that in a minority (16%) of the contracts the franchisor lowers the fixed periodical fee or the royalty percentage in function of the attainment of certain performance thresholds. Regarding input control, 75% of the contracts include partner selection criteria, whereas the imposition of obligated training programs to franchisees is included

⁷ Although some contractual control mechanisms and the level of customization may be jointly determined to some extent, we argue that service chains first decide on the type of service business they are in (i.e. the basis for our assessment of the level of service customization) before designing the contract. Endogeneity concerns should therefore be limited.

in 81% of the contracts. Partner selection criteria are on average mentioned to some extent (mean = 1.05), while obligated training programs are on average mentioned to a relatively low extent (mean = 0.79).

Table 4 presents the correlations among the variables of interest and the control variables. The correlations indicate that multicollinearity poses no concerns. In line with our expectations, customization is positively associated with delegation, incentives, partner selection and obligated training, while it is negatively associated with behavior monitoring. We also find a negative correlation between customization and objective nonfinancial outcome monitoring, while customization is positively correlated with subjective nonfinancial outcome monitoring. We observe no significant association between customization and financial outcome monitoring. The correlations between the different dimensions of the contractual control system seem to be in part consistent with complementarities among the contractual decisions (Brickley, 1999; Arruñada et al., 2001). We observe positive correlations between financial outcome monitoring and the use of behavior monitoring, objective nonfinancial outcome monitoring and obligated training. In addition, the use of objective nonfinancial outcome monitoring rights is positively associated with behavior monitoring and obligated training. Furthermore, we identify positive correlations between subjective nonfinancial outcome monitoring and the inclusion of partner selection criteria and obligated training, respectively. Partner selection and the use of obligated training programs are positively correlated as well. Finally, delegation is negatively associated with objective nonfinancial outcome monitoring, behavior monitoring and obligated training. Indications of substitutive relationships are the positive association between the amount of decision rights delegated to franchisees and incentive intensity (in case of complementarities, we would expect to observe a negative sign between our measure of decision rights and the other contractual decisions as franchisors have less control when franchisees have more discretion – see Arruñada et al., 2001) on the one hand, and the negative correlation between partner selection and behavior monitoring on the other hand. In sum, we can conclude that the correlation table gives indications of complementary as well as substitutive relationships among the different contractual control elements, but we will explore this phenomenon in more detail in the results section.

[insert Table 4 here]

4. Results

4.1. Univariate analyses

Table 5 presents the results of univariate tests relating the level of customization to the contractual control system. In line with hypothesis 1, we find that franchisees of chains with high levels of customization are assigned significantly more decision rights as compared to chains with low levels of customization (p-value = 0.02). The univariate tests indicate that financial and objective nonfinancial outcome monitoring rights are used to a similar degree by chains with low and high levels of customization (p = 0.89 and p = 0.23). Furthermore, chains with high levels of customization mention subjective nonfinancial performance outcome monitoring to a significantly higher extent than chains with low levels of customization (p-value = 0.00). We therefore find support for hypothesis 2 regarding financial and objective nonfinancial outcome monitoring, but reject hypothesis 2 when subjective nonfinancial outcome monitoring is considered based on the results of these univariate tests. We find support for hypothesis 3 as behavior monitoring is used to a significantly higher degree in chains with low levels of customization (p-value = 0.06). Table 5 also indicates that incentive intensity is significantly larger in chains with high levels of customization, which is in line with hypothesis 4 (p-value = 0.05). In support of hypothesis 5A, we observe that chains with high levels of customization appear to include more partner selection criteria in their contracts (p = 0.01). Finally, we find that chains with high levels of customization tend to place greater emphasis on imposing obligated training programs in their contracts, although this difference is only marginally significant (p-value = 0.13).

[insert Table 5 here]

4.2. Multivariate analyses

The results of an OLS-regression in table 6 show that customization has a significant positive effect on the degree to which decision rights are allocated to the franchisees, which supports hypothesis 1. Chains offering highly customized services delegate more decision rights to their franchisees as this allows them to be more responsive to customers' unique and changing requests. Concerning the control variables, we find that contract length and franchising experience negatively affect the degree of delegation, which is in line with our expectations. The results also indicate a positive and significant effect of chain size on the delegation of decision rights to the franchised units. These results indicate that larger chains delegate more as they are faced with more severe information problems, while more experienced franchisors tighten control by retaining more decision rights because of learning from bad experiences over time.

[insert Table 6 here]

Table 7 presents the regression results for outcome monitoring. As can be seen in this table, we do not find a significant effect of customization on the use of financial outcome monitoring based on an OLS-

regression with the factor score for financial outcome monitoring as the dependent variable.⁸ Together with the univariate results which show a high use of financial outcome monitoring regardless of the level of customization, this finding supports our hypothesis 2. This indicates that the monitoring of financial outcomes, being a low-cost form of control, is feasible regardless of the level of service customization. Except for a positive significant effect of contract length, we do not observe important effects of the included control variables on the use of financial outcome monitoring. Regarding the use of nonfinancial outcome monitoring, we find opposite and significant effects of customization on the likelihood of including more objective versus subjective nonfinancial outcome monitoring rights in the contract based on the estimation of Ordered Logit models.⁹ Customization negatively affects the use of objective nonfinancial outcome monitoring. Chains offering highly customized services monitor to a lower extent objective performance measures such as the number of customers, the number of sold products or quality scores based on field visits. As customization is characterized by a lower knowledge of input-output relationships, efficiency is expected to be more difficult to evaluate in this situation (Govindarajan, 1984; Abernethy & Lillis, 1995). Our finding that customization negatively affects the probability of using more objective nonfinancial outcome monitoring is in accordance with this notion. We also find that contract length positively affects the use of objective nonfinancial outcome monitoring, whereas a higher proportion of company-owned units negatively affects the likelihood of using more objective nonfinancial outcome monitoring. Although chains with higher proportions of company-owned units are expected to have better knowledge about the service operations within their units (Bradach, 1997), they do not seem to use this knowledge to monitor their franchisees to a higher degree regarding objective internally-oriented nonfinancial performance. Our findings point to the opposite, which indicates that the better knowledge about operations associated with larger shares of company-owned units reduces the need to gather this information among the franchised units of the chain. In that way, franchisors dispose of sufficient information regarding operational performance (e.g. to develop and test innovations) while avoiding the cost of monitoring among the franchised part of the chain. Table 7 indicates that customization positively affects the probability of using more subjective nonfinancial outcome monitoring in the form of customer reactions and complaints. As customers are most knowledgeable about their unique requests in case of highly customized services, customer evaluations are more

⁸ Untabulated OLS and ordered logit regressions with the ordered categorical variable financial outcome monitoring (the extent to which financial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)) as the dependent variable yield largely similar results: only the marginally significant negative effect of log(franchising experience) disappears in these two specifications.

⁹ For objective nonfinancial outcome monitoring, subjective nonfinancial outcome monitoring, behavior monitoring, partner selection and obligated training, untabulated OLS (same dependent variable) and Binary Logit regressions (dependent variable = 1 if item mentioned in the contract; 0 if item not mentioned in the contract) yield results that are largely similar to the results of the Ordered Logit specification.

appropriate in this context as compared to standardized services where input-output relations are better known and customers are offered a rather limited number of standard options (Bouwens & Abernethy, 2000; Safizadeh et al., 2008). Furthermore, chain size and the proportion of company-owned units positively affect the probability of using more of this type of outcome monitoring, which is in line with our expectations. Larger chains are faced with higher horizontal externalities and are likely present in more heterogeneous customer markets, which leads them to monitor customer reactions to a higher extent. Chains with larger shares of company-owned units monitor their franchised units to higher extent via customer reactions, which provides them with overall, subjective assessments of service experience in the different franchised units allowing them to take specific action to avoid or limit damage to the chain's image and brand name in case of service or quality problems in certain units. Overall, these findings indicate that it is relevant to distinguish between different types of outcome monitoring in the context of services with varying levels of customization.

[insert Table 7 here]

The results in table 8 show that chains with lower levels of customization are likely to include more behavior monitoring rights in their contracts than chains with higher levels of customization, which supports hypothesis 3. These results support our expectation of less behavior monitoring in chains with higher levels of customization, given the franchisor's inferior knowledge concerning the input-output relationships characterizing the service processes undertaken in these chains' service units (Ouchi, 1979; Eisenhardt, 1985; Larsson & Bowen, 1989; Bouwens & Abernethy, 2000; Safizadeh et al., 2008). This finding also seems to point to an inconsistency between higher levels of delegation and an increase in behavior monitoring in case of highly customized services. As expected, contract length positively affects the likelihood of including more behavior monitoring rights in the contract.

[insert Table 8 here]

We run a binary logit model with our dummy variable for incentives as the dependent variable and find that customization also has a positive impact on the likelihood of a higher level of incentive intensity (see table 8).¹⁰ However, given the non-significant LR test statistic, this result should be interpreted with caution. Together, the univariate and multivariate analyses provide support for hypothesis 4. Given the difficulties associated with specifying behavior in chains with high levels of customization, franchisors are likely to make higher use of discounts on the periodical remuneration in function of the attainment of certain performance thresholds by franchisees. This form of outcome-based rewards steers franchisees'

¹⁰ An untabulated OLS-regression yields similar results.

service behavior in the desired direction while at the same allowing for a sufficient degree of discretion to perform customized services (Prendergast, 2002; Nagar, 2002).

Based on the estimation of Ordered Logit models and in support of hypotheses 5A and 5B, we find that chains with higher levels of customization are likely to include more extensive partner selection criteria and obligated training programs in their contracts than chains with lower levels of customization (see table 9). The results of the analyses provide evidence that input control is a more important alternative form of control when highly customized services are supplied. Given the higher need for inputs by service managers and employees in case of highly customized services (e.g. Gwinner et al., 2005; Safizadeh et al., 2008), the contractual specification and use of more extensive partner selection criteria and the imposition of obligated training programs enables the franchisor to control the antecedent conditions of service performance (e.g. Cardinal, 2001). Furthermore, chains with more franchising experience are likely to include partner selection criteria to larger extent in their contracts, which is in line with our a priori expectation.

[insert Table 9 here]

4.3. Supplementary analysis

In order to gain more insight into the interdependent nature of contractual choices, we perform a cluster analysis on the coded contract items in order to identify configurations of contractual control.¹¹ Cluster analysis allows the consideration of multiple variables to classify chains into similar groups regarding contract design (Ketchen & Shook, 1996). The cluster solution yields clusters of contracts that are similar in the way in which they combine delegation, outcome monitoring, behavior monitoring, incentives and input control. Based on the cluster solution and cluster membership, we examine how the types of contracts vary across chains with different levels of customization.

¹¹ Similar to Ketchen and Shook (1996), we use a two-stage cluster procedure. In the first stage a hierarchical algorithm is used to define the number of clusters and the cluster centroids. In the second stage, these results are used as the starting point for subsequent nonhierarchical clustering. As this approach avoids some of the weaknesses associated with using hierarchical or nonhierarchical algorithms in isolation, the resulting cluster solution has a higher validity. In the first stage, we opt for Ward's method as it minimizes the total within-cluster variance. By applying this hierarchical agglomerative method, each observation starts as its own cluster and at each subsequent step two clusters are joined so that the increase in the total within-cluster variance is minimized. This process continues until all observations are allocated to one cluster. The dendrogram and agglomeration coefficient point to a five cluster solution. We specify the number of clusters to be five for the k-means nonhierarchical method in the second stage and use the cluster centroids of the five-cluster solution generated by Ward's method as the initial seeds. In this second stage, observations are assigned to the cluster with the nearest seed and when each new observation is allocated cluster means are recalculated. An important advantage of this technique is that the final solution optimizes within-cluster homogeneity as well as between-cluster heterogeneity by making multiple passes through the data until no observations change clusters and cluster means converge (Ketchen & Shook, 1996; Ittner et al., 1999; Masschelein et al., 2012).

The final five-cluster solution is presented in panel A of table 10 in which we present the means of the different contract items for the different clusters. The differences in means of the contract items across the five clusters are statistically significant at $p \leq 0.05$ for all contract items except for subjective nonfinancial outcome monitoring where the difference is only marginally significant ($p = 0.132$). Based on the means displayed we identify three major groups of contracts. The first group contains clusters 1 and 2 and is characterized by contracts with relatively low levels of delegation (mean cluster 1 = -0.57; mean cluster 2 = -0.21), high financial outcome monitoring (mean cluster 1 = 0.43; mean cluster 2 = 0.43), low subjective nonfinancial outcome monitoring (mean cluster 1 = 0.28, mean cluster 2 = 0.17), relatively high behavior monitoring (mean cluster 1 = 1.21; mean cluster 2 = 1.22) and rather low incentives (mean cluster 1 = 0.10; mean cluster 2 = 0.00). The clusters in this group differ regarding the use of objective nonfinancial outcome monitoring and input control, where cluster 1 makes more use of these contract items than the contracts in cluster 2. The second group contains clusters 4 and 5 and is characterized by relatively high levels of delegation (means cluster 4 = 1.05; means cluster 5 = 0.66), high financial outcome monitoring (means cluster 4 = 0.43; means cluster 5 = 0.43), low to medium levels of behavior monitoring (means cluster 4 = 1.00; means cluster 5 = 0.78) and relatively high incentives compared to the other clusters (means cluster 4 = 0.42; means cluster 5 = 0.33). Also in this group, the clusters differ regarding the use of objective nonfinancial outcome monitoring and input control items, and additionally regarding the use of subjective nonfinancial outcome monitoring: the contracts in cluster 4 contain more objective nonfinancial outcome monitoring rights whereas cluster 5 includes input control items and subjective outcome monitoring rights to a higher extent. The third group contains cluster 3 and is characterized by medium delegation, low levels of monitoring (financial, nonfinancial, behavior) and low to medium levels of incentives and input control (medium partner selection, low obligated training).

[insert Table 10 here]

In table 10 panel B we present the sampled chains' cluster membership for low, medium and high customization categories.¹² In line with hypotheses 1, 3 and 4, we find that cluster membership of group 1 strongly decreases and cluster membership of group 2 increases for increasing levels of customization. Based on this exploratory analysis, we overall conclude that chains with higher levels of customization substitute behavior monitoring for higher incentives, which partly follows from the necessity of delegating more decision rights in case of higher customization. However, for the clusters within each of the two groups, we observe some differences with regard to cluster membership of chains with varying levels of customization. For cluster 1 of group 1, we surprisingly observe a relatively high cluster

¹² In order to present the results in a concise way, we display cluster membership for tree (low, medium, high) customization categories. Similar conclusions can be drawn based on cluster membership for five customization categories (low, low-medium, medium, medium-high, high).

membership of chains with high levels of customization. We conclude from this observation that when franchisors of chains offering highly customized services delegate less, they likely substitute incentives for increased behavior monitoring, objective nonfinancial outcome monitoring as well as input control. For chains with low levels of customization, we observe a considerable membership in both clusters (i.e. cluster 1 and cluster 2), which indicates that chains with low customization may or may not use input control and objective nonfinancial outcome monitoring in a complementary way with behavior monitoring in case of low delegation. In group 2, a considerable amount of chains with low customization belongs to cluster 4 (while the level cluster membership is comparable to that of the chains with high levels of customization), whereas no chains with low to medium levels of customization belong to cluster 5. We conclude from this observation that franchisors of chains with low customization who delegate decision rights to their franchisees to a relatively high extent, substitute behavior monitoring for incentives and objective nonfinancial outcome monitoring. For chains with high levels of customization, we observe the majority of contracts in cluster 5, which means that these chains substitute direct behavior monitoring for incentives, input control and a considerable amount of subjective nonfinancial outcome monitoring (in comparison with the other clusters). Group 3 can be described as a “low control” cluster of contracts characterized by medium delegation, low to medium incentives, low monitoring (financial, nonfinancial, behavior) and low to medium input control. Except for a slight increase in cluster membership for chains with medium levels of customization, we do not observe clear variation in cluster membership in function of the level of customization. This presents a group of contracts that overall contain relatively few of the coded contractual items.

In sum, we conclude that this cluster analysis points to complementary as well as substitutive relationships among particular contract items and this partly in function of the level of service customization. Overall, we observe that in case of higher customization, chains are most likely to delegate decision rights to a relatively high extent and to substitute behavior monitoring for higher monetary incentives (50% - clusters 4 and 5). Chains with high customization following this control approach also most likely (75%) complement these higher incentives with input control and a higher degree of subjective nonfinancial outcome monitoring (in comparison to other clusters). Chains offering standardized services most likely retain a considerable amount of decision rights and substitute incentives for behavior monitoring (74.36% - clusters 1 and 2). Chains with low customization following this control strategy may (58.62%) or may not (41.38%) complement behavior monitoring with a considerable degree of input control and objective nonfinancial outcome monitoring.

4.4. Robustness tests

As a first robustness check, we also ran the regressions depicted in tables 6 to 9 with the following alternative measures for customization: a customization variable with three categories (1 = if customization equals 1 or 2; 2 if customization equals 3; 3 if customization equals 4 or 5) and a customization measure with two categories (0 if customization equals 1 or 2; 1 if customization equals 3, 4 or 5). All specifications yield largely similar results to those depicted in tables 6 to 9 for these alternative measures of customization. Only for objective nonfinancial outcome monitoring, the effect of customization becomes insignificant for the three-category variable ($p = 0.198$) and the dummy variable ($p = 0.232$), while the sign of the coefficient remains robust across specifications. The significant negative effect of the customization variable with five categories seems to a large extent driven by the lower use of objective nonfinancial outcome monitoring by chains offering the most customized services (customization = 5). This is also supported by the untabulated cluster membership results for the customization variable with five categories, which indicate that 60% of the contracts with a customization score of 4 are situated in clusters with relatively high levels of objective nonfinancial outcome monitoring (clusters 1 and 4), whereas only 22.22% of the contracts with a customization score of 5 belong to these clusters. Overall, we conclude that our results are robust for alternative measures of customization. As a second robustness test, we ran the regressions of which results are depicted in tables 6 to 9 separately for the group of contracts that were handed over by chains (with or without intermediation from national franchising federations) (42 contracts) and for the group of contracts that were received from third parties (39 contracts). In this way, we can verify whether results differ dependent on the channel through which the contracts were obtained. For instance, chains experiencing problems regarding their contract might be less willing to release their contract for research purposes. In order to verify whether results change dependent on the selection channel, we compare the results for the subsamples “handed over by chain” (42) and “handed over by third party” (39). The untabulated results indicate that the sign of the coefficient of the customization variable is robust across all regression models for the two subsamples. However, we observe some differences concerning the significance of the effect of customization on the contractual items. For the group “handed over by chain”, we observe non-significant positive effects of customization on delegation ($p = 0.33$), incentives ($p = 0.17$) and obligated training ($p = 0.23$). For the group “handed over by third party”, we observe a non-significant positive effect of customization on the probability of higher monetary incentives ($p = 0.19$) and non-significant negative effects of customization on the likelihood of including more objective nonfinancial outcome monitoring ($p = 0.33$) and behavior monitoring ($p = 0.16$). However, given the small subsample sizes, the robustness of the sign of customization and the fact that we do not observe a systematic difference regarding the significance of the effects of customization on the studied contractual control items across the two subsamples, we are confident that the type of selection channel is not driving our results.

5. Conclusion, limitations and suggestions for future research

Based on a unique sample of 81 contracts of franchising chains active in different types of service industries this paper (1) investigates how the degree of customization affects variation in franchise contract design in terms of delegation, outcome monitoring, behavior monitoring, incentives and input control and (2) provides exploratory insights into how different management control dimensions are used in combination in chains offering customized versus standardized services.

The results of our empirical analyses show that customization leads to important differences in the contractual control system used by franchisors to manage their franchised service units. We hypothesize and find that chains offering highly customized services delegate more decision rights to their franchisees than chains offering more standardized services, given the higher information asymmetries between headquarters and service units (Jensen & Meckling, 1992). When services are more customized, franchisors provide their service units with higher monetary incentives and include more input control items in their contracts. Incentives allow for sufficient degrees of discretion while steering appropriate service behavior (e.g. Prendergast, 2002) and higher input control is warranted as the provision of customized services relies to a higher extent on service managers' and employees' contributions and input (e.g. Gwinner et al., 2005; Safizadeh et al., 2008).

We do not observe differences in the use of financial outcome monitoring across chains with varying levels of customization, as it is a low-cost form of control which is not hindered when customers affect the attributes of the services and products produced by service units. Furthermore, the monitoring of financial outcomes can be expected to be important in a franchising context regardless of the level of customization as the size of franchisors' remuneration often depends on their franchisees' revenue number (e.g. Lafontaine & Shaw, 1999). Furthermore, based on the coding of the contracts, we are able to distinguish between two types of nonfinancial outcome monitoring. Interestingly, these two types of outcome monitoring are affected in opposite ways by the degree of service customization: chains offering more customized services make less use of objective nonfinancial outcome monitoring, which can be explained by the higher difficulty of evaluating efficiency in the presence of highly uncertain customer inputs (Govindarajan, 1984; Abernethy & Lillis, 1995; Bowen & Ford, 2002). By contrast, as customers are most knowledgeable about their unique requests, subjective nonfinancial outcome monitoring in the form of customer reactions and evaluations is relied on to a higher extent in case of highly customized services.

Importantly, our supplementary analysis indicates that the use of these different contractual items is interdependent. Our analysis points to complementary as well as substitutive relationships among

different dimensions of management control which can partly be explained by the degree of service customization. Overall, in case of high customization, chains likely delegate more decision rights to their service units and substitute behavior monitoring for higher incentives. Within this group, chains more likely complement incentives with input control and a considerable degree of subjective nonfinancial outcome monitoring. Chains offering standardized services are most likely characterized by low delegation and substitute incentives for behavior monitoring. These chains may or may not complement behavior monitoring with objective nonfinancial outcome monitoring and input control.

Despite the importance of customization in a services context (e.g. Anderson et al., 1997; Gwinner et al., 2005) and more generally for customer satisfaction (e.g. Fornell et al., 1996), the management accounting literature has paid only limited attention to the implications of customization for management control aspects (Abernethy & Lillis, 1995; Bouwens & Abernethy, 2000). Our study contributes to this literature by showing how customization affects the use of multiple dimensions of management control. By focusing on customization, this research also builds further on accounting research concerning the consequences of uncertain customer inputs for organizational design (Campbell et al., 2009). In addition, although the interdependent nature of different control dimensions is widely acknowledged (Jensen & Meckling, 1992), empirical evidence on how different management control mechanisms are used in combination is scarce (e.g. Anderson & Dekker, 2005; Nagar, 2002). Our study adds to this debate by showing indications of complementary as well substitutive relationships among different contractual control items, which can partly be explained by the level of customization. Finally, by performing a detailed contract analysis of a large sample of contracts of franchising chains, our study extends prior findings of Arruñada et al. (2001) regarding contract design in franchised automobile distribution while also adding to the research stream on management control of inter-firm relationships (van der Meer-Kooistra & Vosselman, 2006; Caglio & Ditillo, 2008).

We recognize that our study is characterized by certain limitations, which at the same time provide interesting opportunities for future research. First of all, given the difficulties associated with getting access to franchise contract information, our sample size is relatively small which prevents us from performing more sophisticated econometric analyses to test the interdependencies among the different contractual dimensions in a statistically more solid way. Notwithstanding this shortcoming, the richness of the data allows us to provide insights into how contracts vary in terms of several control dimensions and to offer some exploratory insights into how different types of contractual items are used in combination across chains with varying levels of customization.

A second limitation of our study is that we investigate a cross-section of franchise contracts as equilibrium outcomes. This can be misleading when franchisors are still in the process of learning to contract (Argyres et al., 2007). A growing body of research (e.g. Mayer & Argyres, 2004; Argyres et al., 2007; Vanneste & Puranam, 2010) focuses on how firms learn to contract with partners over time. A challenge with regard to studying contractual learning is the difficulty of disentangling learning effects from other consequences of prior interactions such as trust-building (Vanneste & Puranam, 2010). Franchising would be a very interesting setting for research on contractual learning as franchisors tend to offer one identical contract to all franchisees at a particular point in time (Brickley, 1999). They are therefore expected to adapt their contracts based on learning from experiences with several contracting partners and experiences of competitors and franchising associations (Brickley et al., 2006; Cochet & Garg, 2008). Consequently, contractual changes are more likely to be caused by learning as compared to trust-building due to repeated interaction with the same partner. Nevertheless, research on contractual learning in franchising is scarce. Cochet and Garg (2008) explore the evolution of formal contracts used by three German franchising chains active in the restaurant, hotel and retail sector. They find that learning explains contract design capability better than does foresight, that a new management and the pursuit of uniformity lead to contract changes and that the presence of an active franchisee council promotes the efficiency of the contract change process. Lafontaine and Shaw (1999) find that there is very little inter-temporal variance in franchise fees and royalty rates. However, until now and to our knowledge, there exists no large-scale evidence on the stickiness of other franchise contract policies (Azoulay & Shane, 2001; Cochet & Garg, 2008).

A third limitation of our study is the fact that we do not dispose of the operating manual of the sampled franchising chains as it is a highly confidential document containing chains' know-how. The contracts in our sample often refer to the operating manual which should be considered as an important behavior control tool containing procedures describing how franchisees are expected to manage the day-to-day operation of their service units. As a consequence, behavior control is likely underestimated in our analyses and confined to an estimation of the use of behavior monitoring in the form of field visits based on what is described in the contract. A fruitful opportunity for future research would therefore be to investigate behavior control in a more comprehensive way across service chains with varying levels of customization.

Fourthly, and related to the previous caveat, we measure the amount of delegation and the use of outcome monitoring, behavior monitoring, incentives and input control based on an analysis of contract terms. As a consequence, our measures are likely characterized by a certain degree of error. Kashyap et al. (2012) investigate the effect of contractual one-sidedness and completeness on ex-post monitoring and

enforcement efforts in franchised automobile distribution and find that these contract characteristics have an important influence on ex-post governance. Although they do not proxy for the use of different types of management control based on what is described in the contract, they conclude that contracts in terms of their one-sidedness or completeness “set the stage” for monitoring efforts during the relationship. However, despite the limitation of not directly measuring implemented controls, our research approach allows for the large-scale investigation of a relatively large number of management control dimensions across chains with varying levels of service customization.

Another interesting avenue for future research would be to compare the formal contract with its implementation. Despite the existence of literature investigating the implemented or use of controls (e.g. Dekker & Van den Abbeele, 2010) on the one hand, and contractual control on the other hand (e.g. Anderson & Dekker, 2005; Ryall & Sampson, 2009), we are not aware of studies systematically comparing the written contract with its implementation. Franchising chains are a particularly interesting setting to investigate the differences between the written contract and its implementation, given the standard nature of the contract and the fact that the franchisor needs to manage and control a large number of interdependent relationships. As most franchisors do not tailor the contract to the characteristics of each separate unit (e.g. Cochet & Garg, 2008), it would be interesting to investigate how franchisors use their contract in the relationship with their abundance of partners and under what circumstances the implementation of the contract might deviate from what is formally written.

Finally, given the fact that the contracts are generally offered to potential franchisees on a take-it-or-leave-it basis (e.g. Brickley et al., 2006) and as particular types of franchisees might be more or less attracted to chains offering certain types of contracts (Dnes, 1993), it would be interesting to investigate the franchise contract as a partner selection mechanism. It would for instance be interesting to investigate whether certain types of contract provisions (e.g. non-competition covenants) attract different types of franchisees and whether franchisors that better match their contracts with the characteristics and preferences of appropriate franchisee-candidates perform better than chains that do not.

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Table 1: Descriptives chains**Panel A: Chain and contract characteristics**

	N	Mean	SD	Min	Max
Age chain	80	33.41	35.01	2.00	194.00
Franchising experience	71	22.68	17.73	1.00	79.00
Size chain	77	1097.01	3001.10	2.00	15661.00
Proportion company-owned units	72	0.23	0.28	0.00	0.95
Geographic dispersion	79	8.91	15.08	1.00	73.00
Contract duration ^b	72	6.17	2.24	3.00	10.00
Contract length	81	22.51	9.32	5.00	48.00

Panel B: Industry sectors and customization

Industry sectors	Customization	Score	Frequency	% of sample
Fast-food restaurants, bakeries, chocolate stores, hotels	Low	1	16	19.80%
Food and non-food self-service retail, car window repair	Low-Medium	2	23	28.40%
Energy system provision, restaurants with personalized service, specialized retail with personal advice and assistance, cleaning, maintenance, travel retail	Medium	3	18	22.20%
Customized furnishing and construction, customized maintenance, repair and renovation, beauty care, renovation brokerage, pharmaceutical services, customized travel retail	Medium-High	4	15	18.50%
Real estate, personal care services, business consulting, financial counseling, training and coaching, recruitment and selection	High	5	9	11.10%

-*Age chain* = number of years since the chain opened its first unit

-*Franchising experience* = number of years since the chain opened its first franchised unit

-*Size chain* = total number of units operated by the chain

-*Proportion of company-owned units* = proportion of units operated by the chain under company-ownership

-*Geographic dispersion* = number of countries in which the chain operates units

-*Contract duration* = the duration of the contract measured in number of years

-*Contract length* = the number of pages the contract contains

^a Our sample is characterized by missing values for age chain (1), franchising experience (10), size chain (4), proportion company-owned units (9) and geographic dispersion (2). This information could not be retrieved as it is not publicly available nor could be obtained by contacting the chains directly.

^b When the duration of the initial contracting period is variable and the duration of the second contracting period (upon renewal) is fixed and given, we consider the duration of the second contract period as our measure for contract duration. Six contracts of the sample have indefinite durations and three of the sampled contracts are characterized by a variable duration and do not contain the exact duration of the contract. These contracts are left out for the descriptive analysis of contract duration.

Table 2: Examples of contract terms

1. Decision rights	
Investments	“The franchisee commits himself to obey the requirements concerning bringing up-to-date the outlook and the design of the store.”
Supplier selection	“The franchisee is obligated to buy all products belonging to the *name of chain* product assortment from the franchisor or from the suppliers who are appointed by the franchisor.”
Size and qualification staff	“The franchisor reserves the right of not accepting staff elected, if not corresponding to the image of the chain.”
Local marketing	“The franchisor will help with the formation and organization of regional groups of franchisees who invent and lead local actions in the field of recruitment, stimulation and advertising which the franchisees will have to join.” “The franchisee is obligated to spend 2% of his revenue number (...) to local marketing.”
Unit design	“The franchisee commits himself to have the logo, the information board, the signposts and all other elements of identification produced and installed in accordance with the instructions of the franchisor.” “The franchisee commits himself to respect the uniformity of style as determined by the franchisor, by submitting the plans with respect to the design of the store for approval to the services of the franchisor at the establishment of the store or in the context of later renovation jobs.”
2. Outcome monitoring	
Financial outcome monitoring	“The franchisee will give inspection of his books and records to the accountant of the franchisor, whenever he asks for it.” “The franchisee is obligated to provide a specified overview of his revenue number and number of customers of the past week specified in terms of days, hours and staffing, within every three weekdays after each week.”
Objective nonfinancial outcome monitoring	“If the franchisor wishes to do so, stock levels will be monitored once per year.” “The franchisee commits himself to communicate to the franchisor at his request all information regarding the evolution of his customer files.”
Subjective nonfinancial outcome monitoring	“The franchisor has the right to investigate the satisfaction of customers and to survey them regarding their satisfaction.” “Every quarter, an evaluation with customers takes place.”
3. Behavior monitoring	
Behavior monitoring	“The franchisee is obligated to give the franchisor the opportunity of inspecting the unit so that he is able to evaluate whether the contractual obligations are fulfilled.” “The unit will be visited at least four times per year by the franchisor or by the franchisor’s appointed franchise manager who will communicate a report of each visit.”
4. Incentives	
Incentives	“In case of a monthly gross revenue number of more than *x* euros, the usual fee of *y* percent will be charged. On the part of the revenue number above *x* euros, a reduced fee will be charged.”
5. Input control	
Partner selection	“The franchisor wishes to enter into a contract with the franchisee because of his quality, whereby personal qualities such as knowledge, education level, capabilities and experience within health care, just as his involvement with the exploitation of the *name of the chain* franchising formula.” “The franchisee binds himself to the following bases to be an effective franchisee: a. ... b. that franchisee is vital and enthusiast and makes sure that this remains c. that franchisee disposes of a broad self-knowledge and is emotionally intelligent d. ... e. that franchisee is good at expressing himself in front of a large group f. ... g. that franchisee disposes of leadership qualities and also demonstrates these. ...”
Obligated training	“The initial training happens in the first place during two weeks in *city x* or *city y*”; the first week will be dedicated to a theoretical formation with regard to the products; the second week is needed to deepen this formation, and this in combination with a practical formation in the store.”

Table 3: Descriptives coded contract variables^a

1. Delegation					
	N	Mean	SD	Min	Max
Investments	81	0.43	0.50	0.00	1.00
Supplier selection	81	0.09	0.28	0.00	1.00
Size and qualification staff	81	0.62	0.49	0.00	1.00
Local marketing	81	0.73	0.45	0.00	1.00
Unit design	81	0.22	0.42	0.00	1.00
2. Outcome monitoring					
	N	Mean	SD	Min	Max
Financial outcome monitoring	81	1.53	0.65	0.00	2.00
Objective nonfinancial outcome monitoring	81	0.94	0.81	0.00	2.00
Subjective nonfinancial outcome monitoring	81	0.27	0.50	0.00	2.00
Outcome monitoring items					
Franchisee obligated to provide revenue number	81	0.91	0.28	0.00	1.00
Franchisee obligated to provide other accounting data	81	0.84	0.37	0.00	1.00
Right to audit accounting data	81	0.35	0.48	0.00	1.00
Right to monitor customer complaints or franchisee obligation to report customer reactions	81	0.25	0.43	0.00	1.00
Right to monitor other nonfinancial performance measures	81	0.64	0.48	0.00	1.00
3. Behavior monitoring					
	N	Mean	SD	Min	Max
Behavior monitoring	81	1.02	0.72	0.00	2.00
Behavior monitoring item					
Right to visit and/or to monitor the franchisee's premises	81	0.75	0.43	0.00	1.00
4. Incentives					
	N	Mean	SD	Min	Max
Incentives	81	0.16	0.40	0.00	1.00
5. Input control					
	N	Mean	SD	Min	Max
Partner selection	81	1.05	0.74	0.00	2.00
Partner selection item	81	0.75	0.43	0.00	1.00
Obligated training	81	0.79	0.70	0.00	2.00
Obligated training item	81	0.81	0.39	0.00	1.00

-*Decision rights* = the extent to which the franchisor delegates decision rights to the franchisees with regard to investments, supplier selection, size and qualification of staff, local marketing and unit design (0 if decided by franchisor or franchisor has a large influence; 1 if decided by franchisee or not mentioned in the contract)

-*Financial outcome monitoring* = the extent to which financial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Objective nonfinancial outcome monitoring* = the extent to which objective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Subjective nonfinancial outcome monitoring* = the extent to which subjective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Outcome monitoring items* = 1 if item mentioned in the contract; 0 if item not mentioned in the contract

-*Behavior monitoring* = the extent to which field visits are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Behavior monitoring item* = 1 if item mentioned in the contract; 0 if item not mentioned in the contract

-*Incentives* = 1 if the contract contains a decreasing fixed periodical fee and/or a decreasing periodical royalty percentage in function of the attainment of performance thresholds; 0 otherwise

-*Partner selection* = the extent to which partner selection criteria are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Partner selection item* = 1 if the contract contains partner selection criteria; 0 otherwise

-*Obligated training* = the extent to which obligated training is mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Obligated training item* = 1 if the contract contains the obligation to follow certain training programs; 0 otherwise

^a See appendix for more detailed information on the coding of the contracts and the measurement of the variables.

Table 4: Correlation matrix for the contract sample (N = 81)^a

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Customization		0.28**	0.03	-0.21*	0.38***	-0.35***	0.22**	0.40***	0.22**	-0.14	-0.31***	-0.15	-0.05
2. Delegation factor score	0.32***		-0.08	-0.23**	0.03	-0.17	0.30***	-0.11	-0.29***	-0.06	-0.12	0.05	-0.32***
3. Financial outcome monitoring factor score	-0.01	-0.08		0.16	0.12	0.22**	0.09	-0.06	0.31***	0.02	0.08	0.27**	0.21*
4. Objective nonfinancial outcome monitoring	-0.21*	-0.22**	0.26**		-0.09	0.20*	0.08	-0.02	0.19*	-0.13	0.08	0.12	0.30***
5. Subjective nonfinancial outcome monitoring	0.39***	0.05	0.04	-0.08		0.14	-0.02	0.32***	0.22**	0.11	-0.13	0.07	0.08
6. Behavior monitoring	-0.36***	-0.19*	0.29***	0.19*	0.12		0.03	-0.22*	0.11	0.20*	0.05	0.08	0.31***
7. Incentives	0.23**	0.30***	0.01	0.08	-0.04	0.03		-0.03	0.12	-0.09	0.02	0.11	0.04
8. Partner selection	0.40***	-0.12	-0.06	-0.02	0.34***	-0.21*	-0.03		0.40***	-0.07	0.01	0.00	0.23**
9. Obligated training	0.23**	-0.27**	0.26**	0.20*	0.24**	0.13	0.13	0.38***		0.02	-0.04	0.10	0.46***
10. Proportion company-owned units	-0.14	-0.09	0.08	-0.19	0.12	0.13	-0.11	-0.01	-0.11		-0.23*	-0.23**	0.14
11. Franchising experience	-0.28**	-0.14	-0.19	0.03	-0.11	-0.04	-0.04	0.00	-0.10	-0.21*		0.77***	0.06
12. Size chain	-0.08	-0.01	-0.03	-0.01	-0.07	-0.01	0.10	-0.03	-0.09	-0.11	0.55***		0.17
13. Contract length	-0.08	-0.36***	0.26**	0.32***	0.05	0.28**	0.02	0.27**	0.42***	0.06	0.04	0.14	

^a As the dataset is characterized by missing values for the control variables proportion company-owned (9), franchising experience (10), chain size (4), these cases are excluded pairwise. Pearson correlations below diagonal; Spearman correlations above diagonal; ***, ** and * indicate p-values of ≤ 0.01 , ≤ 0.05 and ≤ 0.1 (two-tailed).

Table 5: Univariate tests relating customization to the contractual control system (N = 81)

	<u>Customization = 0</u>	<u>Customization = 1</u>	<u>Difference in means</u>		<u>p-value^a</u>
	<u>N = 39</u>	<u>N = 42</u>	<u>Predicted sign</u>		
Delegation factor score	-0.21	0.20	-	-0.41	0.02
Financial outcome monitoring factor score	0.02	-0.01	No difference	0.03	0.89
Objective nonfinancial outcome monitoring	1.05	0.83	+	0.22	0.23
Subjective nonfinancial outcome monitoring	0.08	0.45	-	-0.37	0.00
Behavior monitoring	1.18	0.88	+	0.30	0.06
Incentives	0.08	0.24	-	-0.16	0.05
Partner selection	0.82	1.26	-	-0.44	0.01
Obligated training	0.67	0.90	-	-0.23	0.13

-*Customization* = 0 if customization is low (1) or low to medium (2); 1 if customization is medium (3), medium to high (4) or high (5) (see table 1 panel B)

-*Delegation factor score* = factor score representing the extent to which the franchisor delegates decision rights to the franchisees with regard to investments, supplier selection, size and qualification of staff, local marketing and unit design

-*Financial outcome monitoring factor score* = factor score representing the extent to which financial outcome monitoring rights are mentioned in the contract (franchisee obligation to provide revenue number, franchisee obligation to provide other accounting data, franchisor right to audit accounting data)

- *Objective nonfinancial outcome monitoring* = the extent to which objective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Subjective nonfinancial outcome monitoring* = the extent to which subjective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Behavior monitoring* = the extent to which field visits are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Incentives* = 1 if the contract contains a decreasing fixed periodical fee and/or a decreasing periodical royalty percentage in function of the attainment of performance thresholds; 0 otherwise

-*Partner selection* = the extent to which partner selection criteria are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Obligated training* = the extent to which obligated training is mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

^a p-values are two-tailed

Table 6: Regression Results Delegation factor score (N = 81)

	<u>Predicted sign</u>	<u>OLS</u>	<u>p-value (two-tailed)</u>
		<u>Delegation</u>	
		<u>Coefficient</u>	
Intercept		0.45 (0.44)	0.31
Customization	+	0.15** (0.07)	0.03
Contract length	-	-0.03*** (0.01)	0.00
% company-owned^a	-	-0.18 (0.31)	0.57
Log(size chain)^a	?	0.11** (0.05)	0.04
Log(franchising experience)^a	-	-0.21* (0.12)	0.07

F-statistic = 5.23

Prob.(F) = 0.00

Adj. R² = 20.90%

-*Delegation factor score* = factor score representing the extent to which the franchisor delegates decision rights to the franchisees with regard to investments, supplier selection, size and qualification of staff, local marketing and unit design

-*Customization* = 1 if low level of customization; 2 if low to medium level of customization; 3 if medium level of customization; 4 if medium to high level of customization; 5 if high level of customization (see table 1 panel B for more details)

- *Contract length* = the number of pages the contract contains

-*% company-owned* = proportion of units operated by the chain under company-ownership

-*Size chain* = total number of units operated by the chain

-*Franchising experience* = number of years since the chain opened its first franchised unit

***, **, * and (*) indicate p-values of ≤ 0.01 , ≤ 0.05 , ≤ 0.1 and ≤ 0.15 (two-tailed). Standard errors are in parentheses.

^a We imputed the median for the small number of missing values for certain control variables (median size chain = 60 units (4 missing values), median franchising experience = 19 years (10 missing values), median proportion company-owned units = 9% (9 missing values)).

Table 7: Regression Results Outcome Monitoring (N = 81)

	<u>OLS</u>			<u>Ordered logit</u>			<u>Ordered Logit</u>		
		<u>Financial outcome monitoring factor score</u>		<u>Objective nonfinancial outcome monitoring</u>			<u>Subjective nonfinancial outcome monitoring</u>		
	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>
Intercept		-0.30 (0.60)	0.62						
Customization	No effect	-0.02 (0.09)	0.83	No effect	-0.41** (0.19)	0.03	No effect	0.96*** (0.28)	0.00
Contract length	+	0.02* (0.01)	0.06	+	0.08*** (0.03)	0.00	+	0.02 (0.03)	0.62
% company-owned^a	+	0.13 (0.43)	0.77	+	-1.75** (0.89)	0.05	+	2.31** (1.12)	0.04
Log(size chain)^a	+	0.10 (0.07)	0.18	+	-0.02 (0.14)	0.87	+	0.32* (0.20)	0.10
Log(franchising experience)^a	+	-0.23(*) (0.16)	0.14	+	-0.14 (0.31)	0.67	+	-0.29 (0.41)	0.47
F-statistic = 1.71 Prob.(F) = 0.14 Adj. R ² = 4.20%				$\chi^2 = 16.60$ Prob.(χ^2) = 0.01 Pseudo R ² = 9.40% Prob.> χ^2 Likelihood ratio test of proportionality of odds = 0.72			$\chi^2 = 19.38$ Prob.(χ^2) = 0.00 Pseudo R ² = 18.70% Prob.> χ^2 Likelihood ratio test of proportionality of odds = 0.89		

-*Financial outcome monitoring factor score* = factor score representing the extent to which financial outcome monitoring rights are mentioned in the contract (franchisee obligation to provide revenue number, franchisee obligation to provide other accounting data, franchisor right to audit accounting data)

- *Objective nonfinancial outcome monitoring* = the extent to which objective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Subjective nonfinancial outcome monitoring* = the extent to which subjective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Customization* = 1 if low level of customization; 2 if low to medium level of customization; 3 if medium level of customization; 4 if medium to high level of customization; 5 if high level of customization (see table 1 panel B for more details)

- *Contract length* = the number of pages the contract contains

- *% company-owned* = proportion of units operated by the chain under company-ownership

- *Size chain* = total number of units operated by the chain

- *Franchising experience* = number of years since the chain opened its first franchised unit

***, **, * and (*) indicate p-values of ≤ 0.01 , ≤ 0.05 , ≤ 0.1 and ≤ 0.15 (two-tailed). Standard errors are in parentheses.

^a We imputed the median for the small number of missing values for certain control variables (median size chain = 60 units (4 missing values), median franchising experience = 19 years (10 missing values), median proportion company-owned units = 9% (9 missing values)).

Table 8: Regression Results Behavior Monitoring and Incentives (N = 81)

	<u>Ordered Logit</u> Behavior monitoring			<u>Binary Logit</u> Incentives		
	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>
Intercept					-4.00** (1.91)	0.04
Customization	-	-0.58*** (0.19)	0.00	+	0.53* (0.28)	0.06
Contract length	+	0.06** (0.03)	0.02	+	0.00 (0.04)	0.94
% company-owned^a	+	0.11 (0.85)	0.90	-	-0.59 (1.36)	0.66
Log(size chain)^a	+	0.05 (0.14)	0.72	+	0.17 (0.21)	0.41
Log(franchising experience)^a	+	-0.17 (0.32)	0.60	No effect	0.01 (0.50)	0.99
$\chi^2 = 17.12$ Prob.(χ^2) = 0.00 Pseudo R ² = 10.00%				$\chi^2 = 5.92$ Prob.(χ^2) = 0.31 Pseudo R ² = 8.30%		
Prob.> χ^2 Likelihood ratio test of proportionality of odds = 0.66						

-*Behavior monitoring* = the extent to which field visits are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Incentives* = 1 if the contract contains a decreasing fixed periodical fee and/or a decreasing periodical royalty percentage in function of the attainment of performance thresholds; 0 otherwise

-*Customization* = 1 if low level of customization; 2 if low to medium level of customization; 3 if medium level of customization; 4 if medium to high level of customization; 5 if high level of customization (see table 1 panel B for more details)

- *Contract length* = the number of pages the contract contains

-*% company-owned* = proportion of units operated by the chain under company-ownership

-*Size chain* = total number of units operated by the chain

-*Franchising experience* = number of years since the chain opened its first franchised unit

***, **, * and (*) indicate p-values of ≤ 0.01 , ≤ 0.05 , ≤ 0.1 and ≤ 0.15 (two-tailed). Standard errors are in parentheses.

^a We imputed the median for the small number of missing values for certain control variables (median size chain = 60 units (4 missing values), median franchising experience = 19 years (10 missing values), median proportion company-owned units = 9% (9 missing values)).

Table 9: Regression Results Input control (N = 81)

	<u>Ordered Logit</u> Partner selection			<u>Ordered Logit</u> Obligated training		
	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>	<u>Predicted sign</u>	<u>Coefficient</u>	<u>p-value (two-tailed)</u>
Customization	+	0.87*** (0.21)	0.00	+	0.47** (0.19)	0.02
Contract length	+	0.08*** (0.03)	0.00	+	0.11*** (0.03)	0.00
% company-owned^a	+	0.85 (0.88)	0.33	+	-0.72 (0.89)	0.42
Log(size chain)^a	+	-0.12 (0.15)	0.41	+	0.04 (0.15)	0.77
Log(franchising experience)^a	+	0.50(*) (0.32)	0.12	+	-0.16 (0.33)	0.62
$\chi^2 = 25.64$ Prob.(χ^2) = 0.00 Pseudo R ² = 14.90% Prob.> χ^2 Likelihood ratio test of proportionality of odds = 0.77			$\chi^2 = 24.52$ Prob.(χ^2) = 0.00 Pseudo R ² = 14.90% Prob.> χ^2 Likelihood ratio test of proportionality of odds = 0.15			

-*Partner selection* = the extent to which partner selection criteria are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Obligated training* = the extent to which obligated training is mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Customization* = 1 if low level of customization; 2 if low to medium level of customization; 3 if medium level of customization; 4 if medium to high level of customization; 5 if high level of customization (see table 1 panel B for more details)

- *Contract length* = the number of pages the contract contains

-*% company-owned* = proportion of units operated by the chain under company-ownership

-*Size chain* = total number of units operated by the chain

-*Franchising experience* = number of years since the chain opened its first franchised unit

***, **, * and (*) indicate p-values of ≤ 0.01 , ≤ 0.05 , ≤ 0.1 and ≤ 0.15 (two-tailed). Standard errors are in parentheses.

^a We imputed the median for the small number of missing values for certain control variables (median size chain = 60 units (4 missing values), median franchising experience = 19 years (10 missing values), median proportion company-owned units = 9% (9 missing values)).

Table 10: Results cluster analysis contract items (N = 81)

Panel A: Means of contract items across clusters of contracts						
	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Anova F
Number of observations	29	18	13	12	9	
Delegation factor score	-0.57	-0.21	0.14	1.05	0.66	21.95***
Financial outcome monitoring factor score	0.43	0.43	-2.26	0.43	0.43	70019.39***
Objective nonfinancial outcome monitoring	1.55	0.44	0.46	1.25	0.22	15.94***
Subjective nonfinancial outcome monitoring	0.28	0.17	0.23	0.17	0.67	1.83(*)
Behavior monitoring	1.21	1.22	0.54	1.00	0.78	2.74**
Incentives	0.10	0.00	0.15	0.42	0.33	3.30**
Partner selection	1.31	0.39	1.15	0.67	1.89	13.34***
Obligated training	1.34	0.33	0.38	0.17	1.33	24.32***
Panel B: Distribution of clusters across chains with low – medium – high customization						
	<u>Low customization</u> (Customization = 1 or 2)	<u>Medium customization</u> (Customization = 3)	<u>High customization</u> (Customization = 4 or 5)			
Group 1: Low delegation – high financial outcome monitoring- high behavior monitoring - low incentives						
Cluster 1	43.59%	22.22%	33.33%			
Cluster 2	30.77%	27.78%	4.17%			
Sum	74.36%	50.00%	37.50%			
Group 2: High delegation – high financial outcome monitoring – low to medium behavior monitoring – high incentives						
Cluster 4	10.26%	27.78%	12.50%			
Cluster 5	0.00%	0.00%	37.50%			
Sum	10.26%	27.78%	50.00%			
Group 3: Medium delegation –low financial, nonfinancial, behavior monitoring – low to medium incentives – low to medium input control						
Cluster 3	15.38%	22.22%	12.50%			
Sum	15.38%	22.22%	12.50%			

-*Delegation factor score* = factor score representing the extent to which the franchisor delegates decision rights to the franchisees with regard to investments, supplier selection, size and qualification of staff, local marketing and unit design

-*Financial outcome monitoring factor score* = factor score representing the extent to which financial outcome monitoring rights are mentioned in the contract (franchisee obligation to provide revenue number, franchisee obligation to provide other accounting data, franchisor right to audit accounting data)

- *Objective nonfinancial outcome monitoring* = the extent to which objective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

- *Subjective nonfinancial outcome monitoring* = the extent to which subjective nonfinancial outcome monitoring rights are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Behavior monitoring* = the extent to which field visits are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Incentives* = 1 if the contract contains a decreasing fixed periodical fee and/or a decreasing periodical royalty percentage in function of the attainment of performance thresholds; 0 otherwise

-*Partner selection* = the extent to which partner selection criteria are mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

-*Obligated training* = the extent to which obligated training is mentioned in the contract (0 if item not mentioned in the contract; 1 if item mentioned to some extent in the contract; 2 if item mentioned to a high extent in the contract)

***, **, * and (*) indicate p-values of ≤ 0.01 , ≤ 0.05 , ≤ 0.1 and ≤ 0.15 (two-tailed).

APPENDIX

Coding scheme franchise contracts and variable measurement

1. Decision rights ^a

	0 = decided by the franchisor or the franchisor has a strong influence 1 = decided by the franchisee or not mentioned in the contract
Investments	0/1
Supplier selection	0/1
Size and qualification unit personnel ^b	0/1
Local marketing ^b	0/1
Unit design ^b	0/1

^a All decisions were coded on a scale from 0 to 2 (0 = decided by the franchisee or not mentioned in the contract, 1 = franchisor has a strong influence and the decision is made in consultation with the franchisee, 2 = decided by the franchisor). The codes were transformed to 0/1 variables, i.e. scores of 1 and 2 were transformed to 0 and a score of 0 was converted to 1.

^b Size unit personnel / qualification unit personnel, investments local marketing / content local marketing, and decoration unit (e.g. signboard, logo) / internal organization unit (e.g. unit plans) / unit equipment and furniture were coded separately on a scale from 0 to 2 (analogous as mentioned in remark ^a) and are transformed to one score for 'size and qualification unit personnel', 'local marketing' and 'unit design' by adding up the scores for these two or three items and by rescaling this sum to a scale from 0 to 2. For 'size and qualification unit personnel' and 'local marketing' the sum ranges from 0 to 4, where 0/1 were coded as 0, 2 as 1, and 3/4 as 2. For 'unit design' the sum ranges from 0 to 6, where 0/1/2 were coded as 0, 3/4 as 1 and 5/6 as 2. Hereafter, the measures were converted to 0/1 variables in the same way as stated under remark ^a.

2. Outcome monitoring

Financial outcome monitoring

	0 = item not mentioned in the contract 1 = item mentioned to some extent in the contract 2 = item mentioned to a high extent in the contract
Financial outcome monitoring	0/1/2
	0 = item not mentioned in the contract 1 = item mentioned in the contract
Franchisee obligated to provide revenue number	0/1
Franchisee obligated to provide other accounting data	0/1
Right to audit accounting data	0/1

Objective nonfinancial outcome monitoring

	0 = item not mentioned in the contract 1 = item mentioned to some extent in the contract 2 = item mentioned to a high extent in the contract
Objective nonfinancial outcome monitoring	0/1/2
	0 = item not mentioned in the contract 1 = item mentioned in the contract
Right to monitor objective nonfinancial performance measures (e.g. stock levels, number of sold products, number of customers, number of employees, quality score based on field visits, number of days of operation / opening hours)	0/1

Subjective nonfinancial outcome monitoring

	0 = item not mentioned in the contract 1 = item mentioned to some extent in the contract 2 = item mentioned to a high extent in the contract
Subjective nonfinancial outcome monitoring	0/1/2
	0 = item not mentioned in the contract 1 = item mentioned in the contract
Right to monitor customer complaints or obligation to report customer reactions	0/1

3. Behavior monitoring	
	0 = item not mentioned in the contract 1 = item mentioned to some extent in the contract 2 = item mentioned to a high extent in the contract 0/1/2
Field visits (e.g. site inspections, visits by franchise consultants, mystery shopping, etc.)	0 = item not mentioned in the contract 1 = item mentioned in the contract 0/1
Right to visit/monitor the franchisee's premises	0/1
4. Incentives	
	0 = item not mentioned in the contract 1 = item mentioned in the contract 0/1
Fixed periodical fee varying ^c	0/1
Royalty percentage varying ^c	0/1
^c 'Fixed periodical fee varying' and 'royalty percentage varying' equal 1 when the remuneration scheme (i.e. a periodical fixed fee or periodical royalty payment as a percentage of the franchisee's revenue number) is characterized by decreasing fixed fees or royalty percentages in function of the attainment of performance thresholds	
5. Input control	
	0 = item not mentioned in the contract 1 = item mentioned to some extent in the contract 2 = item mentioned to a high extent in the contract 0/1/2
Partner selection criteria	0/1/2
Obligated training ^d	0/1/2
^d 'Obligated initial training' and 'obligated additional training' were coded separately on a scale from 0 to 2 and are transformed to one score for obligated training by adding up the scores for these two items and by rescaling this sum to a scale from 0 to 2. This sum ranges from 0 to 4, where 0/1 were coded as 0, 2 as 1, and 3/4 as 2.	