



Universidad de Valladolid

TESIS DOCTORAL

Forma organizativa, género de los franquiciados y desempeño de los establecimientos de las cadenas de franquicias: Evidencias de los sectores de la restauración, la distribución de moda y los supermercados

Pericles Ramón Mejía Vásquez

Valladolid, 2022

ÍNDICE

I	INTRODUCCIÓN.....	5
II	ARTÍCULOS.....	15
	II.1 ORGANISATIONAL FORM AND QUALITY, SERVICE AND CLEANLINESS INSPECTION SCORES IN RESTAURANT FRANCHISE CHAINS: EVIDENCE FROM SPAIN.....	17
	II.2 ORGANISATIONAL FORM AND PERFORMANCE IN FASHION RETAILING.....	45
	II.3 GENDER'S MODERATING ROLE IN THE RELATIONSHIP BETWEEN ORGANISATIONAL FORM AND PERFORMANCE IN THE SPANISH SUPERMARKET INDUSTRY.....	75
III	CONCLUSIONES.....	123
IV	BIBLIOGRAFÍA.....	127

I INTRODUCCIÓN

La franquicia como modelo de negocio ha facilitado el crecimiento de muchas empresas. Esta forma organizativa ha permitido la incursión de muchas empresas en nuevos mercados a través de la creación de redes de establecimientos que comparten un mismo sistema y en donde se replican cada uno de los aspectos relevantes que conforman la identidad de la marca, lo que permite a los nuevos establecimientos franquiciados beneficiarse de la reputación de las cadenas ya establecidas.

Dentro de las cadenas de franquicias se puede optar por dos alternativas de conformación organizacional: una en la que los establecimientos agregados a la cadena están gestionados directamente por la empresa franquiciadora y la otra en donde el franquiciador cede a un franquiciado los derechos de uso de su marca a cambio de un aporte económico y regalías (royalties), que pasará a gestionar y ser dueño de ese nuevo establecimiento.

La elección de la forma organizacional de los establecimientos de una cadena de franquicias representa una decisión estratégica y dependerá de los objetivos que se plantee la empresa franquiciadora, que es la propietaria de los derechos de la idea de negocio.

En los establecimientos propios de la cadena, el franquiciador conserva el control total sobre todas las actividades de dichos establecimientos y también sobre las ganancias obtenidas; pero también asume todas las obligaciones sobre ese mismo manejo organizacional y además asume en exclusividad el riesgo ante el posible fracaso de estos establecimientos.

Por su parte, en los establecimientos franquiciados, el franquiciador no tiene el control total sobre las decisiones adoptadas en tales establecimientos; sin embargo, se comparten los riesgos del negocio entre franquiciador y franquiciado.

Así, la decisión de la forma organizacional de los establecimientos de una cadena de franquicias, en donde coexisten establecimientos propios y franquiciados, puede influir en el desempeño de estos establecimientos.

Debido a que se ha optado por la modalidad de *compendio de publicaciones*, esta tesis doctoral está integrada por tres artículos, además de esta Introducción y las Conclusiones. En cada uno de estos artículos se estudian los efectos que tiene sobre diferentes indicadores del desempeño, la forma organizativa de los establecimientos de varias cadenas de franquicias pertenecientes a los sectores de la restauración, la venta de moda al por menor y los supermercados, respectivamente. Estas tres investigaciones han sido aceptadas para su publicación como artículos en sendas revistas de investigación del ámbito de la Administración de Empresas (*Managerial and Decision Economics; Journal of Fashion Marketing and Management* y *Journal of Retailing and Consumer Services*), todas ellas incluidas en los listados de *Journal Citation Reports* (JCR).

El primer artículo de esta tesis estudia el impacto de la forma organizativa de los restaurantes de dos cadenas de franquicias españolas en tres indicadores del desempeño usados habitualmente en esta industria: las valoraciones de la calidad, el servicio y la limpieza de los restaurantes. El primer indicador del desempeño, la calidad, mide aspectos operativos relacionados con el cumplimiento, por parte de cada restaurante, de la normativa sobre seguridad y salud alimentaria, el seguimiento de los procedimientos de preparación de alimentos fijados por la cadena, y la calidad de las materias primas utilizadas en la preparación de los platos, entre otros. El segundo indicador del desempeño, el servicio proporcionado por los restaurantes, mide aspectos como la amabilidad del personal, la adecuada velocidad con la que se presta el servicio y el mantenimiento

adecuado de los recursos relacionados con el servicio, entre otros. Por último, el tercer indicador del desempeño, la limpieza de los restaurantes, mide aspectos vinculados con la higiene interior y exterior de estos establecimientos en diferentes ámbitos, como las áreas de almacenamiento, los procesos de producción de los alimentos, el comedor, los baños de los clientes, y las ventanas y puertas, entre otros.

En esta primera investigación se ha utilizado un conjunto de datos de panel de carácter bimensual a nivel de restaurante, correspondiente al período que va desde enero de 2015 a diciembre de 2016.

Dado que las empresas franquiciadoras deciden, en cada caso, la forma organizativa de cada uno de los establecimientos de sus cadenas, no se puede considerar que las formas organizativas de los restaurantes de la muestra se han asignado al azar. Por lo tanto, en los análisis empleados para estimar el efecto de las diferentes formas organizativas se han corregido los problemas de endogeneidad característicos de este tipo de situaciones.

Las comparaciones realizadas a nivel agregado revelan diferencias sustanciales en los indicadores del desempeño estudiados entre los restaurantes franquiciados y los establecimientos gestionados directamente por los franquiciadores. Sin embargo, tras la endogeneización de la selección de la forma organizativa de los restaurantes, tales diferencias dejan de ser estadísticamente significativas.

El segundo artículo de esta tesis estudia si la forma organizativa (franquicia o gestión directa por parte de franquiciador) de 384 tiendas de moda pertenecientes a una cadena de franquicias española influye en el desempeño a nivel de establecimiento de esas tiendas, medido a través de tres indicadores comúnmente utilizados en la literatura económica y de gestión: las ventas por metro cuadrado, las ventas por empleado y la calidad de servicio

ofrecida. Hasta el momento, no se han publicado investigaciones sobre las diferencias de desempeño entre los establecimientos franquiciados y los establecimientos gestionados directamente por los franquiciadores en el sector de la venta minorista de moda.

Se ha analizado esta cuestión de investigación mediante un análisis bivariante y multivariante, a partir de un conjunto de datos de panel que incluye información trimestral a nivel de establecimiento, correspondiente al período que va desde enero de 2018 a diciembre de 2019.

Los análisis realizados a nivel agregado revelan un peor desempeño de los establecimientos franquiciados en comparación con los integrados verticalmente. Sin embargo, después de controlar por diferentes variables relacionadas con las características de las tiendas de moda y los mercados locales en los que operan, se ha observado que los establecimientos franquiciados registran mayores ventas por metro cuadrado y por empleado que las tiendas integradas verticalmente. Los resultados también revelan que los establecimientos franquiciados registran un nivel de calidad de servicio inferior al de los establecimientos gestionados directamente por los franquiciadores.

El tercer artículo de esta tesis estudia si la forma organizativa (franquicia o gestión directa por parte de franquiciador) de 305 supermercados pertenecientes a una cadena de franquicias española influye en el desempeño de estos establecimientos, estimado a través de tres indicadores comúnmente utilizados en la literatura de gestión: las ventas por metro cuadrado, las ventas por empleado y la calidad de servicio ofrecida. Adicionalmente, se analiza el papel moderador del género de los máximos responsables de esos supermercados en la relación entre la forma organizativa de tales establecimientos y su desempeño.

Hasta el momento, no se han publicado investigaciones sobre las diferencias de desempeño entre establecimientos franquiciados y establecimientos integrados verticalmente en la industria de los supermercados. Tampoco se han publicado investigaciones sobre el papel moderador del género de los responsables de los establecimientos de las cadenas de franquicias en la relación entre la forma organizativa de dichos establecimientos y su desempeño, a pesar de que la presencia creciente de mujeres en puestos de dirección atrae cada vez más el interés de los investigadores.

Las cuestiones de investigación planteadas en el tercer artículo de esta tesis se han analizado utilizando un análisis multivariante realizado a un conjunto de datos de panel que incluye información trimestral a nivel de establecimiento, correspondiente al período que va desde enero de 2017 a diciembre de 2019.

Se ha observado que los supermercados franquiciados registran mayores ventas por metro cuadrado y por empleado que los supermercados integrados verticalmente. Este efecto positivo es menor en los establecimientos gestionados por mujeres que en los gestionados por hombres. Los resultados también revelan que los supermercados franquiciados registran un nivel de calidad de servicio inferior al de los supermercados gestionados directamente por los franquiciadores, y este efecto negativo es igualmente menor en los establecimientos dirigidos por mujeres que en los dirigidos por hombres.

Los resultados de los tres artículos incluidos en esta tesis doctoral contribuyen a clarificar un tema de estudio que ha despertado gran atención en el ámbito de la literatura sobre franquicias: el efecto de la forma organizativa de los establecimientos de las cadenas de franquicias sobre el desempeño de tales establecimientos.

Uno de los objetivos de la investigación en el ámbito de la administración de empresas es obtener conclusiones sobre la superioridad de ciertas formas organizativas sobre otras con el fin ayudar a los gestores a mejorar el desempeño de sus negocios. Este asunto es crucial, ya que las decisiones organizativas que afectan al desempeño de los negocios también influyen en su probabilidad de supervivencia a largo plazo (Forbes y Lederman, 2010; Novak y Stern, 2008). En este ámbito de la investigación no es sencillo obtener conclusiones, ya que las empresas eligen deliberadamente las formas organizativas que utilizan en cada caso, en función de las circunstancias concretas de cada situación, con el fin de obtener los mejores resultados posibles. Esto supone que las estimaciones empíricas sobre la importancia de las elecciones organizativas en el desempeño de los negocios con frecuencia son engañosas debido a los problemas de endogeneidad característicos de este tipo de situaciones (Masten 1993; Shaver, 1998).

La coexistencia de establecimientos franquiciados y establecimientos integrados verticalmente dentro de las cadenas de franquicias es un tema de estudio relevante para los investigadores especializados en emprendimiento y en la gestión de pequeños negocios (Brand y Croonen, 2010). A nivel de cadena, se han estudiado las sinergias entre los puntos de venta franquiciados y los integrados verticalmente dentro de una misma red de franquicias (Bradach 1997, 1998). A nivel de establecimiento, se han examinado las diferencias de rendimiento entre los puntos de venta franquiciados y los gestionados directamente por el franquiciador, con hallazgos mixtos (Kosová et al., 2013; Shelton, 1967). Uno de los objetivos de la investigación en este campo es descubrir si alguna de estas dos opciones organizativas produce un desempeño superior a la otra. Como se ha explicado más arriba, este es un tema clave, ya que cualquier factor que influya en el

desempeño de un negocio afecta tanto a su eficiencia como a su probabilidad de supervivencia a largo plazo.

II ARTÍCULOS

II.1 ORGANISATIONAL FORM AND QUALITY, SERVICE AND CLEANLINESS INSPECTION SCORES IN RESTAURANT FRANCHISE CHAINS: EVIDENCE FROM SPAIN

ABSTRACT

This study investigates how the organisational form (company ownership vs. franchising) of individual restaurants of a large Spanish restaurant company influences their inspection scores in terms of quality, service and cleanliness (QSC). The research uses a panel dataset that includes bimonthly restaurant-level data on QSC inspection scores. The aggregate data initially reveal substantial differences between company-owned and franchised restaurants. Nevertheless, after controlling for other variables, we observe that such differences are in fact minor, or even non-existent. In addition, when we endogenise the selection of the restaurants' organisational form, the differences become statistically insignificant.

Keywords: Company ownership, Franchising, Performance, QSC inspections, Restaurant industry.

INTRODUCTION

The restaurant industry is very important to the Spanish economy. According to the NPD market research company (NPD Group, 2017), restaurant sales in 2016 were estimated to amount to 35,131 million euros. This industry overall accounts for 3.14% of Spain's GDP, and provides jobs for more than 1.17 million people. The restaurant industry is highly visible, with 76,492 outlets throughout Spain at the end of 2016. This industry's huge contribution to the economy renders it expedient to investigate the elements that help keep it strong.

Over a quarter of all Spanish restaurant sales in 2016, around 10 billion euros, corresponded to restaurant chains (NPD Group, 2017)¹. With year-on-year growth of 7.8% in 2016, these restaurants' revenue not only quadrupled that of the restaurant industry as a whole (up 2.1% in 2016 over 2015), as it also underpins the industry-wide increase in turnover in that same year. Sales of other establishments (i.e., those that do not belong to a restaurant chain) stagnated, with a 0.3% drop in income (NPD Group, 2017).

One of management researchers' goals is to draw conclusions about the superiority of one organisational choice over another to help managers improve firm performance. This matter is very important, as whatever influences performance also affects a firm's competitiveness and long-term survival (Novak and Stern, 2008; Forbes and Lederman, 2010). It is difficult, nonetheless, to draw such conclusions because firms deliberately choose their organisational form according to what they expect to produce the best outcome in a given situation. That is, given that firms self-select the organisational choices we observe, we are unable to compare organisational forms in an experimental setting in which such choices are randomly assigned. This means empirical estimates of how important organisational choices are to firm performance are often misleading due to the endogeneity problems that arise when evaluating the effects an organisational form has on outcomes (Masten 1993; Shaver, 1998). In fact, the different outcomes across transactions organised in a different way in situations in which companies may freely choose how they are managed poses an enigma: if one organisational form is preferable to another, why doesn't a company always use that same form? Some companies repeatedly choose different organisational forms clearly on the basis of "horses for

¹ Franchise chains invoiced 5.45 billion euros in 2016 (Spanish Franchise Association, 2017).

courses". These decisions will not negatively affect firm performance, otherwise the company would manage its transactions in a different way.

This research uses a panel dataset of a large Spanish restaurant company to analyse the influence each individual restaurant's organisation has on its performance. The company, whose identity we cannot disclose for reasons of confidentiality, manages various restaurant chains and has provided us with information on two of them.² Our data involve all the restaurants in these two chains the company operates in Spain. The data provided are complete, comprising bimonthly restaurant-level figures for three typical performance indicators in the restaurant industry, namely, inspections scores involving quality, service and cleanliness (QSC). We also know whether each restaurant is company-owned or franchised, together with its age, size, and many other details. Furthermore, we have data on the local markets in which each restaurant operates, whereby we can control for many parameters that are likely to have an impact on each one's performance. These panel data also permit correcting for the usual self-selection bias in this kind of research; that is, the likelihood that unobserved restaurant features (e.g., unobserved market peculiarities) may influence both the choice of a certain organisational form and the restaurant's performance.

The research is structured as follows. In section 2, we debate why one might expect outcome differentials between a given chain's company-owned and franchised outlets, as well as the key issue of selection that hinders any assessment of the performance effects of organisational choice. Section 3 presents the data and describes the initial evidence on performance differentials. Section 4 presents the empirical model used and the results. Section 5 concludes.

² We thank this company for providing these data for analysis. The overall number of chains it manages remains confidential.

FRANCHISING AND COMPANY OWNERSHIP

Little interest has been paid to the subject of whether company boundaries empirically matter for business behaviour and other outcomes. Specifically, restaurant franchise chains may decide to operate their outlets either through their own in-house staff, who are paid a salary, or through franchisees.

There is little research to date on the question of the relative performance of the former company-owned restaurants versus the latter franchised outlets. This issue is pertinent because the incentives of hired managers and franchisees differ, potentially prompting them to apply different levels of effort that could have a bearing on their outlet's performance (Brickley and Dark, 1987; Lafontaine, 1992; Bradach, 1998; Sveum and Sykuta, 2018).

Theories inform diverse predictions depending on the kind of behaviour or outcome of interest. The standard principal-agent model proposes that company-owned units should perform worse than their franchised counterparts because of agency problems (Rubin, 1978). Company managers are usually paid a salary, so it is rarely possible to draw up a contract that emulates the high-powered incentives stemming from unit ownership. Due to franchisees' greater incentives, average variable costs are expected to be higher and demand lower in company-owned restaurants than in franchised establishments.

Other academics, however, have hypothesised that company units should perform better than franchised outlets because franchisors choose to open their own stores in more profitable locations, leaving franchisees to open in less lucrative sites (Chaudhuri, Chakrabarty, and Spell, 2002). Franchising may also lead to free-riding on the brand value, which might lead to lower levels of quality and, therefore, higher demand in company-owned restaurants than in franchised ones.

Economic theory predicts different performance levels according to whether the behaviour of interest is impacted more by the problem of a subpar effort (with the solution being for a franchisee to own its unit), or by the fact that franchisees seeking to maximise their profits can do so through free-riding (Brickley and Dark, 1987; Lafontaine and Shaw, 2005).

Shelton (1967) was the first to address this issue in the restaurant industry by examining the earnings of 22 restaurants that moved from franchising to company ownership, or vice versa. In 19 cases, the business was less profitable under company ownership. The average profit margin for franchisee ownership was 9.5%, whereas under company management it was only 1.8%. Shelton also found that revenues did not differ according to organisational choice, but that costs in the franchised restaurants were lower and led to higher profits. The particular design of Shelton's research constitutes its main advantage, keeping market and restaurant characteristics unchanged when the organisation of the business altered. Its main shortcoming is that the restaurants in the chain he analysed were under company management solely during transition periods, as franchising was the preferred organisational form, and company ownership was only a temporary measure at any given restaurant. Under these conditions, it is not so remarkable that franchising was a higher-performance organisational form. Likewise, Shelton used accounting data that are somewhat problematic considering that franchisees, as independent entrepreneurs, may make accounting decisions to suit their own interests.

Krueger (1991) found that employees in company-owned establishments belonging to franchised fast-food chains received slightly higher wages and had to deal with somewhat steeper earning profiles than their counterparts in franchised outlets. He contended that, compared to franchisees, the lesser incentives of managers in company-owned

establishments rendered it expedient to provide employees with higher ones in the form of performance-based wages and steeper earning profiles.

Additionally, Bradach (1998, 109) has concluded that both franchised and company-owned restaurants record “similar levels of uniformity”. The two chains in his sample used independent evaluators for assessing quality, with the average result being 93.9 (out of 100 points) for company-owned restaurants and 94.6 for their franchised restaurants in one case, and 90.6 and 89.7, respectively, in the other one. Nevertheless, using data on public quality ratings, Michael (2000) has shown that quality is positively related to company ownership, indicating that free-riding is a major issue for restaurant chains. However, Kalnins and Mayer (2004) have found almost identical failure rates for franchised and company-owned restaurants within the chains studied. Beheler et al. (2008) have used the scores recorded by health departments to measure quality through inspections, with franchisee-owned outlets performing better than company-owned ones. They contend that franchisees work harder and record better outcomes than company units. Nonetheless, Jin and Leslie (2009) have observed that hygiene records (a measure of cleanliness and quality) are lower among franchised outlets than corporate ones in the same restaurant chains. Finally, Sveum and Sykuta (2018) have studied the US restaurant industry, finding that franchisee ownership has a strong and robust effect on productivity at outlet level in full-service restaurants, but not so among limited-service restaurants.

However, while existing evidence has found a diverse relationship between the use of franchising and outlet performance in restaurant chains, this direct comparison is appropriate only if outlets’ organisational choices are randomly selected, yet the selection of a particular organisational form is dependent upon various factors. That is, any unobserved factors affecting the organisational choice and performance of individual restaurants will involve a self-selection bias, and misleading normative implications may

be drawn from these analyses (Masten, 1993). Any unobserved heterogeneity in performance models may bias the variables used to measure the impact of a restaurant's organisational choice, as franchisors select the form of their own maximising analyses (Rubin, 1978; Brickley and Dark, 1987; Vázquez, 2007). In other words, outlets in equilibrium will reflect the most efficient organisational choices.

Based on this reasoning, this research sets out to prove that an individual restaurant's organisational form does not influence its inspection scores in terms of QSC.

DATA

We use a dataset provided by a large Spanish restaurant company that includes bimonthly restaurant-level data on QSC inspection scores covering the period from January 2015 to December 2016, with a total of 12 observations for most of the 198 restaurants in our sample. The minimum number of observations per restaurant is seven, and the average number of observations per outlet is 11.24, so our panel data are reasonably well balanced. All the establishments in our sample belong to two restaurant chains operated by the company in question.

For each restaurant, we know whether it is company-owned or operated by a franchisee. We also have information on the restaurants and the chains to which they belong.

The dataset contains information about each restaurant's location, so we can measure how far it is from the franchisor's headquarters (Distance). When a franchise chain enters markets that are geographically far-removed from its headquarters, franchisee monitoring costs increase because the number of personnel required and their associated travel expenses grow (Carney and Gedajlovic, 1991). Moreover, distant outlets can also lead franchise systems into unknown markets where it is more difficult to evaluate the quality of local decision-making (Minkler, 1990).

We also have data on the type of service offered (Service provided). One of the restaurant chains analysed caters for fast-food, and the other provides a full service. The former has a limited product range, and customers have to collect their own orders; by contrast, the latter provides table service and a larger selection of dishes. For a given size of restaurant, a full-service outlet is more labour-intensive than a self-service one (Sveum and Sykuta, 2018). As capital is easier to control than labour, one can expect monitoring costs to be higher in full-service restaurants than in self-service ones.

Our data also contain the number of restaurants each chain is operating in each town at the end of bimester t (Density). We assume that the risk of free-riding increases when the density of outlets is high in a local market (Carney and Gedajlovic, 1991), given that the investments franchisees make in the brand name yield more spillover benefits for other franchisees in the same market.

We use a dummy variable that takes the value 1 for restaurants in popular tourist areas (Tourism), and zero otherwise. In Spain, these areas are delimited by regional governments because of their popularity. A popular tourist area may be a part of a town or all of it. We assume the risk of free-riding is higher in restaurants located in these tourist areas because the bulk of their custom does not involve repeat clients (Minkler, 1990; Kidwell, Nygaard, and Silkoset, 2007). In other words, the fact that a “one-shot” client will probably not return to the restaurant renders it understandable that the restaurant operator will not strive to lower costs, unconcerned about whether this behaviour might influence that client’s future patronage. However, such action may negatively affect the restaurant chain elsewhere.

In addition, we use information on the restaurant’s age (Outlet age) at the end of bimester t and restaurant size (Outlet size), estimated by the number of seats at the end of bimester t . Larger restaurants have greater agent risk, not because there is more risk in the market,

but simply because more capital is exposed to the same level of risk. Outlet size may therefore make it more difficult to attract franchisees. In addition, monitoring costs promote company ownership among chains with large restaurants, and the marginal cost of direct observation is lower among them than among small restaurants because greater economies of scale can be achieved in monitoring with large outlets (Lafontaine, 1992). Considering that the aim here is to investigate whether different organisational forms prompt different outcomes, we apply a trio of performance variables widely used in the restaurant industry: QSC inspection scores.

Most restaurant chains use control systems to evaluate their performance. These controls are often called QSC inspections (Bradach, 1998; Blair and Lafontaine, 2006), and they have several goals. These inspections regularly assess the operational performance of the chain's restaurants (Love, 1985; Kroc and Anderson, 1987). They are also designed to rate outlet managers for incentives such as promotion (DiPietro et al., 2007), regular bonus plans (Raith, 2008), and disciplinary measures (Sorenson and Sorensen, 2001; Raith, 2008).

The restaurants analysed are inspected every two months to rate their operational status on a scale of 0-100%. The inspection questionnaire consists of 150 items divided fairly equally across QSC. In this study, scores of 90% or higher are viewed as *exceptional*; 80-89% percent is considered *acceptable*; 70-79% is considered *critical* (requiring both an explanation and a remedial plan); and 69% or less is flagged as a *failure* (calling for immediate and major corrective action). As regards the restaurant chains analysed here, managers must score 80% or more in QSC to qualify for performance bonuses.

The research into restaurant inspections has usually been restricted to data on food safety controls involving public health departments (Harris et al., 2015). Generally speaking,

restaurants are inspected two or three times a year. These controls are designed to minimise or eliminate food safety risks (Reske et al., 2007). QSC controls, however, are conducted by franchisors from six times a year (every two months) to 52 (weekly), and are conceived as indicators of restaurant performance.

The quality section of a typical QSC control assesses, among other aspects, compliance with food health and safety standards, the observance of the restaurant chain's food preparation procedures and recipes, and the quality of raw and prepared products. The service side of a QSC control evaluates, among other operational aspects, the accuracy of the orders, the friendliness of staff, the speed of the service, and the proper maintenance of service-related equipment. Finally, the cleanliness side of QSC assesses operational aspects related to the internal and external hygiene of the restaurant chain, such as storage, production and food service areas, dining room, service counters, customer toilets, walk-in coolers, freezers, dry storage, inside menu boards, recycling areas, enter/exit signage, parking facilities, windows, doors, and store front.

Given that QSC inspections are conducted internally, and their results are usually kept confidential, this type of information is rarely disclosed (DiPietro et al., 2011).

Table 1 shows descriptive statistics for all the above variables. This table treats each restaurant as a single observation. The panel is well balanced, so the descriptive statistics are largely the same regardless of whether we use a restaurant or bimester as our observation unit.

INSERT TABLE 1 ABOUT HERE

Given our interest in the effect of organisational form on restaurant performance, Table 2 compares the characteristics of company-owned and franchised restaurants, showing

that QSC scores are on average higher among franchised restaurants. These differences are statistically significant.

In addition, company-owned restaurants are on average much larger than franchised outlets. The data in Table 2 also show that franchised restaurants operate in local markets tend to be at a longer way away from headquarters, and where both (1) tourism intensity and (2) the density of outlets belonging to the same chain are, on average, lower.

INSERT TABLE 2 ABOUT HERE

The patterns for these aggregate data suggest that the two organisational forms record very different performances, but simple mean comparisons do not consider the impact of market or restaurant factors, or unobserved heterogeneity at restaurant level. The following section uses regression analyses for a more systematic approach to discover whether organisational form really causes differences in restaurant performance.

METHOD AND RESULTS

The aim of this research is to study the link between organisational choice and restaurant performance outcomes, measured according to the three different QSC scores. We assume restaurant and market characteristics to influence these performance outcomes not only directly, but also indirectly via their effect on organisational choice. Following the methodology used by Kosova et al. (2013) in the hotel industry, we therefore begin the analysis by formulating this equation:

$$Y_{it} = f(F_{it}, X_{it}, Z_i, \varepsilon_{it})$$

where i and t index restaurant and bimesters (1 to 12), respectively. Y_{it} represents the (log) of each outcome variable; that is, QCS scores. F_{it} depicts each restaurant's organisational form, where each outlet in a particular bimester can either be company-owned ($F_{it} = 1$)

or franchised ($F_{it} = 0$). X_{it} stands for time-varying restaurant and market characteristics, and Z_i for time-invariant ones.

We take $\varepsilon_{it} = \mu_i + \mu_{it}$ to be a composite error term, where μ_i stands for restaurant-level unobserved heterogeneity, which for the time being we assume is not correlated with observed characteristics, and μ_{it} stands for an idiosyncratic error term. We control for restaurant-level unobserved and uncorrelated heterogeneity (μ_i) in all the empirical specifications, either by correcting standard errors for restaurant-level clusters, or by relying on standard random effects (RE) model specifications. The difference between an RE specification and clustering in OLS estimations is that the RE model accepts an ‘equal correlation’ structure between restaurant observations, while clustering provides for flexible correlations. If the ‘equal correlation structure’ supposition is inappropriate, more robust results are provided by OLS with clustered standard errors, while the RE model gives more efficient estimates. Tables 3, 4 and 5 report the results from both specifications.

Additionally, we correct the standard errors for potential heteroscedasticity in both cases using the White/Huber estimator of the variance-covariance matrix. All the continuous variables are in logarithmic form in our regressions, which means the coefficient estimates can be interpreted directly as elasticities. This also caters for non-linear relationships across variables, diminishing the potential effect of outliers or skewed regressors, and thereby providing more robust coefficient estimates.

The results for the three dependent variables (i.e., QSC scores), estimated by OLS, are presented in column 1 in Tables 3, 4 and 5.

INSERT TABLE 3 ABOUT HERE

INSERT TABLE 4 ABOUT HERE

INSERT TABLE 5 ABOUT HERE

One possible problem with the OLS estimation is that even though we explicitly control for the effect that several restaurant and market characteristics have on restaurant performance, as well as for restaurant unobserved heterogeneity in the error term, some of this heterogeneity (e.g., the quality of restaurant management) might correlate with the choice of organisational form or other regressors, which means our random effects and OLS results would be biased. To tackle the problem of possible correlated unobserved restaurant heterogeneity, as well as correcting standard errors for uncorrelated restaurant heterogeneity, we control for restaurant fixed effects following Mundlak (1978), who confirms that the results from standard fixed-effects models can be obtained through random effects estimations when firm-level means of time-varying regressors are used as additional controls. Accordingly, we use these means both in RE specifications and in our standard OLS estimations; OLS specifications with clustered standard errors cater for more robust correlation structures among restaurant-level observations. We use this procedure because our main variable of interest (the organisational choice of restaurants) and many other outlet characteristics change very little in our data over time.

Columns 2 and 3 in Tables 3, 4 and 5 present the results for each one of our three dependent variables, and they are consistent with the OLS results. In all cases, we find that company-owned restaurants record lower QSC scores than franchised ones.

The results in Tables 3, 4 and 5 highlight the fact that larger restaurants tend to record lower QSC scores, with the same occurring at restaurants in popular tourist areas.

The regressions presented in Tables 3, 4 and 5 control for several observed restaurant and market parameters, together with unobserved ones whenever possible. Nevertheless our procedure may not control for all the possible causes of correlation between the

idiosyncratic shock (μ_{it}) and organisational form. For instance, restaurant-specific demand shocks and other variations in unobserved restaurant-level characteristics over time will probably affect both performance and organisational form. Therefore, Table 6 shows the results obtained when we endogenise the organisational form of restaurants and estimate the performance equations through the application of an instrumental variable (IV) methodology. The aim is to resolve the endogenous dummy issue. Heckman (1978, 1990) and Wooldridge (2002) discuss how the performance equations can be estimated by standard 2SLS (or IV method) through the application of a linear probability model for the first-stage.

INSERT TABLE 6 ABOUT HERE

We use distance from the franchisor's headquarters in these regressions as the instrument for the organisational form of restaurants. Theoretically, this variable should influence organisational form decisions, as it modifies monitoring costs. Specifically, agency theory predicts that those restaurants closest to the franchisor's headquarters should be company-owned. Statistically, these statements are corroborated in our data: distance from the franchisor's headquarters has both a negative and statistically significant impact on company ownership in the first-stage regression.³ Additionally, there is no reason to believe that this distance directly influences restaurant performance. In theory, being close to or far from the franchisor's headquarters should not affect a restaurant's QSC scores. This was also corroborated empirically in our data, as this variable had no effect when we included it directly in the performance equations (see the results in Tables 3, 4 and 5).

³ The first-stage regression results are available upon request.

We control for both correlated and uncorrelated unobserved restaurant heterogeneity by presenting the results from the IV estimations, where we also control for restaurant-specific effects (using the methodology previously used) and for correlations between observations via restaurant-level clusters.

The results in Table 6 show that once we endogenise the organisational form decision, franchised restaurants no longer record better or worse performance outcomes than company-owned restaurants, as the negative correlations between company-ownership and the QSC scores observed in Table 2 disappear. In addition, the results in Table 6 show that although the effect of company-ownership is rendered insignificant in statistical terms, the estimated coefficients for other independent variables are analogous to those shown in Tables 3, 4 and 5.

The negative differences in QSC scores for company-owned restaurants in our descriptive statistics (Table 2) were smaller after we had addressed the omitted variable bias using controls for observed and unobserved restaurant and market characteristics (Tables 3, 4 and 5), being statistically insignificant when the organisational form decision is endogenised. In other words, the differences between company-owned and franchised restaurants shown in Tables 3, 4 and 5 are not due to the choice of form per se, but instead they reflect the remaining endogeneity bias that is probably due to the correlation between unobserved time-varying market or restaurant variables and organisational form decisions.

Although we have observations for all 12 bimesters for most of the restaurants in our sample (the average number of observations per restaurant is 11.24), there are 19 restaurants with an incomplete time series. The number of observations in some of these cases is as low as seven. We have confirmed that the presence of restaurants with very short time series does not have a bearing on the results by replicating Tables 2, 3, 4, 5 and

6 for the sub-sample of 179 restaurants with data for full time series.⁴ The results show that our findings are not affected by the presence or absence of this small number of restaurants.

In sum, the results confirm that organisational form differences among the outlets in our two restaurant chains do not lead to differences in the three performance measures studied. This contradicts other findings in the hospitality literature, where authors have observed differences in performance between company-owned and franchised restaurants (Shelton, 1967; Krueger, 1991; Michael, 2000; Beheler et al., 2008; Jin and Leslie, 2009; Sveum and Sykuta, 2018). These different results may be due to the fact that the performance variables used in some of these studies (Shelton, 1967; Krueger, 1991; Sveum and Sykuta, 2018) are different to our study's performance variables. The differences regarding the studies that have used similar performance variables to ours (Michael, 2000; Beheler et al, 2008; Jin and Leslie, 2009) may be attributable to the different methodologies used to study the differences in performance between franchised and corporate outlets.

Nevertheless, Bradach (1998) has reported similar results to our own, whereby the organisational form of restaurants does not lead to significant differences in quality. Kalnins and Mayer (2004) have also found almost identical failure rates for company-owned and franchised restaurants within the chains they studied. In the hotel industry, Kosová et al. (2013) have also reported findings analogous to our own.

Our findings, informed by observed and unobserved market and company characteristics, show that when franchisors are free to choose how to organise their businesses, they record similar performance results across all their outlets. This is probably to be expected

⁴ These results are available upon request.

when a franchisor finds, for instance, that a certain company-owned restaurant's performance is below par. It could turn this situation around by operating the restaurant as a franchised outlet. Franchisors in the restaurant industry can proceed to the early discharge of franchise contracts if a franchisee underperforms. The fact there have been very few modifications in the organisational form of restaurants during the two years covered here indicates that the franchisor is satisfied with its results.

CONCLUSIONS AND LIMITATIONS

This article uses proprietary data from a multi-chain restaurant company to study the impact of organisational form, specifically company ownership and franchising, on outlet-level performance measured by restaurants' QSC scores.

We have observed significant differences in the performance variables in our descriptive summaries. Without controlling for restaurant and market characteristics, the mean comparisons of these performance variables between the two organisational forms suggest poorer outcomes among company-owned restaurants compared to franchised outlets.

After controlling for restaurant and market characteristics, but before we endogenise the organisational form choice, we again observe evidence of performance differences between company-owned and franchised restaurants. Nevertheless, all these differences became statistically insignificant when the choice of the outlets' organisational form is endogenised.

One way to interpret our findings is that the restaurant franchise company in question here has carefully decided which establishments to manage directly and which to franchise. We therefore assume that restaurant franchise companies select which outlets

to run in a corporate manner and which ones to franchise, whereby according to establishment and market characteristics it achieves better results.

How restaurant franchise companies organize their establishments (company ownership vs. franchising), and what effect this has on their performance, are fundamental issues in the hospitality literature. Yet we know little about the effect that these organisational form choices can have on restaurant performance. This may seem surprising given the core interest in evaluating the use of various contractual options. In fact, what ultimately matter are changes in performance: is there a difference in performance between restaurants that are vertically integrated and those that are franchised?

Unfortunately, there are relatively few studies on the effects that the organisational form of individual restaurants have on performance, and there is a reason for this: organisational form's effects are difficult to identify empirically because restaurant franchise companies do not make these decisions on a random basis. Indeed, these companies choose several options based on what they expect to provide the best outcome in a given situation. Unfortunately, this also raises issues of endogeneity when evaluating the effects of organisational form.

A shortcoming here is that our empirical setting is a limited number (two) of restaurant chains belonging to a Spanish franchise company. A further limitation is the small number of performance variables and time periods studied. Our results cannot therefore be extrapolated to other restaurant franchise chains, other industries in which franchising is used, other countries, or longer-term performance measures. Given these shortcomings, further research is needed to verify whether the results observed hold more generally for other performance variables, and whether our findings apply to other restaurant franchise chains, other industries, and other countries.

REFERENCES

- Beheler, R., Norton, S. W., and Sen, K. C. 2008. "A comparison of company owned and franchised fast food outlet performance: Insights from health inspection scores". *Strategy and Governance of Networks*, 113–125.
- Blair, R. D., and Lafontaine, F. 2006. *Economics of Franchising*. Cambridge University Press, Cambridge.
- Bradach, J. L. 1998. *Franchise Organizations*. Harvard Business School Press, Boston.
- Brickley, J. A., and Dark, F. H. 1987. "The choice of organizational form: The case of franchising." *Journal of Financial Economics*, 18: 401-420.
- Carney, M., and Gedajlovic, E. 1991. "Vertical Integration in Franchise Systems: Agency Theory and Resource Explanations". *Strategic Management Journal*, 12: 607-629.
- Chaudhuri, A., Chakrabarty, G., and Spell, C. 2002. "Information Structure and Contractual Choice in Franchising". *Journal of Institutional and Theoretical Economics*, 158: 638-663.
- DiPietro, R. B., Murphy, K. S., Rivera, M., and Muller, C. C. 2007. "Multi-unit management key success factors in the casual dining restaurant industry: a case study". *International Journal of Contemporary Hospitality Management*, 19 (6/7): 524-536.
- DiPietro, R. B., Parsa, H. G., and Gregory, A. 2011. "Restaurant QSC inspections and financial performance: an empirical investigation." *International Journal of Contemporary Hospitality Management*. 23 (7): 982-999.
- Forbes, S. J., and Lederman, M. 2010. "Does Vertical Integration Affect Firm Performance? Evidence from the Airline Industry". *RAND Journal of Economics*, 41 (4): 765-790.
- Harris, K. J., Murphy, K. S, DiPietro, R.B. and Rivera, G.L. 2015. "Food safety inspections results: A comparison of ethnic-operated restaurants to non-ethnic-operated restaurants". *International Journal of Hospitality Management*, 46: 190–199
- Heckman, J. 1978. Dummy endogenous variables in a simultaneous equation system. *Econometrica*, 46 (6): 931-959.
- Heckman, J. 1990. "Selectivity bias: New developments. Varieties of selection bias". *AEA Papers and Proceedings*, 80 (2): 313-318.

- Jin, G., and Leslie, P. 2009. "Reputation incentives for restaurant hygiene". *American Economic Journal: Microeconomics*, 1 (1): 237-267.
- Kalnins, A., and Mayer, K. J. 2004. "Franchising, Ownership, and Experience: A Study of Pizza Restaurant Survival". *Management Science*, 50: 1716-1728.
- Kidwell, R. E, Nygaard, A., and Silkoset, R. 2007. "Antecedents and Effects of Free Riding in the Franchisor-Franchisee Relationship". *Journal of Business Venturing*, 22: 522-544.
- Kosová, R., Lafontaine, F., and Perrigot, R. 2013. "Organizational Form and Performance: Evidence from the Hotel Industry". *The Review of Economics and Statistics*, 95 (4): 1303-1323.
- Kroc, R., and Anderson, R. 1987. *Grinding it Out: Making of McDonald's*. Contemporary Book, Chicago, IL.
- Krueger, A. B. 1991. "Ownership, Agency, and Wages: An Examination of Franchising in the Fast Food Industry". *The Quarterly Journal of Economics*, 106 (1): 75-101.
- Lafontaine, F. 1992. "Agency Theory and Franchising: Some Empirical Results". *RAND Journal of Economics*, 23: 263-283.
- Lafontaine, F., and Shaw, K. L. 2005. "Targeting Managerial Control: Evidence from Franchising". *RAND Journal of Economics*, 36: 131-150.
- Love, J. F. 1985. *McDonald's: Behind the Golden Arches*. Bantam Publications, New York, NY.
- Masten, S. E. 1993. "Transaction Costs, Mistakes and Performance: Assessing the Importance of Governance". *Managerial and Decision Economics*, 14 (2): 119-129.
- Michael, S. C. 2000. "The Effect of Organizational Form on Quality: The Case of Franchising". *Journal of Economic Behavior and Organization*, 43: 295-318.
- Minkler, A.P. 1990. "An Empirical Analysis of a Firm's Decision to Franchise". *Economic Letters*, 34: 77-82.
- Mundlak, Y. 1978, "On the Pooling of Time Series and Cross Section Data". *Econometrica*, 46 1: 69-85.
- Novak, S., and Stern, E. 2008. "How Does Outsourcing Affect Performance Dynamics? Evidence from the Automobile Industry". *Management Science*, 54, 1963-1979.

- NPD Group. 2017. Consumer panel NPD-CREST® of the Spanish Restaurant Industry.
- Raith, M. 2008. “Specific knowledge and performance measurement”. *RAND Journal of Economics*, 39 (4): 1059-79.
- Reske, K. A., Jenkins, T., Fernandez, C., VanAmber, D., and Hedberg, C.W. 2007. “Beneficial effects of implementing an announced restaurant inspection program”. *Journal of Environmental Health*, 69 (9): 27-34.
- Rubin, P. H. 1978. “The Theory of the Firm and the Structure of the Franchise Contract”. *Journal of Law and Economics*, 21: 223–233.
- Shaver, M. 1998. “Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival?” *Management Science*, 44: 571-585.
- Shelton, J. P. 1967. “Allocative Efficiency vs. ‘X-Efficiency’: Comment”. *American Economic Review*, 57: 1252-1258.
- Sorenson, O., and Sorensen, J. B. 2001. “Finding the right mix: franchising, organizational learning, and chain performance”. *Strategic Management Journal*, 22 (6/7): 713-724.
- Spanish Franchise Association. 2017. Franchise in Spain – Report 2017. <http://www.franquiciadores.com/wp-content/uploads/2018/02/Franchise-in-Spain-Report-2017-en.pdf>
- Sveum, M., and Sykuta, M. “The Effect of Franchising on Establishment Performance in the U.S. Restaurant Industry”. *Cornell Hospitality Quarterly*, June 2018 (<https://doi.org/10.1177/1938965518777970>)
- Vázquez, L. 2007. “Proportion of Franchised Outlets and Franchise System Performance”. *The Service Industries Journal*, 7: 907-921.
- Wooldridge, J. M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge MA: MIT Press.

TABLE 1 – DESCRIPTIVE STATISTICS, BY RESTAURANT

Variable	Description	Mean	Standard deviation	Maximum	Minimum
Quality scores	Operational aspects related to, among others, compliance with food health and safety standards, the follow-up of the restaurant chain's food preparation procedures and recipes, and the quality of raw and prepared products	88.06	9.81	96.00	66.00
Service scores	Operational aspects such as the accuracy of the orders, the friendliness of staff, the speed of service, and the proper maintenance of service-related equipment	82.79	11.35	94.00	68.00
Cleanliness scores	Operational aspects related to the restaurants' indoor and outdoor cleanliness, such as storage, production and food service areas, dining room, customer toilets, windows, doors and store front	85.19	7.37	98.00	74.00
Company ownership	Takes value 1 for company-owned restaurants, and 0 otherwise	0.75	0.44	1	0
Distance	Geographical distance between each restaurant and firm headquarters (Km)	226.14	172.34	624.6	0
Service provided	Takes value 1 for full-service restaurants, and 0 for fast-food outlets	0.45	0.50	1	0
Density	Number of restaurants each chain has in a local market (town)	13.63	15.59	38	1
Tourism	Takes value 1 for restaurants located in popular tourist areas, and 0 otherwise	0.34	0.47	1	0
Outlet size	Number of seats in each restaurant	114.17	39.91	175	85
Outlet age	Outlet's age in years	12.62	19,54	29	1
	Number of observations	2,226			
	Number of restaurants	198			

TABLE 2
FRANCHISED AND COMPANY-OWNED RESTAURANTS, MEANS (STANDARD DEVIATIONS)

	Franchised: 50 out of 198 = 25%	Company-owned: 148 out of 198 = 75%	Difference in means
Quality scores	92.26 (11.64)	86.64 (7.96)	***
Service scores	86.04 (12.43)	81.69 (9.71)	***
Cleanliness scores	90.83 (10.58)	83.28 (6.89)	***
Distance	298.69 (173.09)	201.63 (168.52)	***
Service provided	0.42 (0.50)	0.46 (0.50)	
Density	8.19 (18.96)	15.47 (12.77)	***
Tourism	0.22 (0.42)	0.38 (0.49)	***
Outlet size	102.20 (40.37)	118.21 (35.92)	***
Outlet age	12.22 (16.74)	12.76 (18.60)	

Significance levels: * 10%, ** 5%, *** 1%

TABLE 3
RESTAURANT ORGANISATION (TREATED AS EXOGENOUS) AND QUALITY SCORES

	Dependent variable = log (Quality scores)	Dependent variable = log (Quality scores)	Dependent variable = log (Quality scores)
		Controlling for restaurant fixed effects	Controlling for restaurant fixed effects
	OLS (cluster)	OLS (cluster)	RE
Company ownership	-0.038*** (0.015)	-0.040*** (0.014)	-0.041*** (0.013)
Distance	0.009 (0.027)	0.014 (0.020)	0.006 (0.016)
Service provided	0.032 (0.036)	0.026 (0.030)	0.022 (0.029)
Density	-0.003 (0.005)	-0.002 (0.006)	-0.003 (0.005)
Tourism	-0.044*** (0.019)	-0.039*** (0.013)	-0.047*** (0.012)
Outlet size	-0.002*** (0.001)	-0.002*** (0.001)	-0.001*** (0.001)
Outlet age	0.002 (0.012)	0.004 (0.008)	0.005 (0.014)
Constant	0.298*** (0.175)	0.384*** (0.141)	0.412*** (0.163)
Observations	2,226	2,226	2,226
Number of restaurants	198	198	198
R^2	0.41	0.43	0.49

Significance levels: * 10%, ** 5%, *** 1%

TABLE 4
RESTAURANT ORGANISATION (TREATED AS EXOGENOUS) AND SERVICE SCORES

	Dependent variable = log (Service scores)	Dependent variable = log (Service scores)	Dependent variable = log (Service scores)
		Controlling for restaurant fixed effects	Controlling for restaurant fixed effects
	OLS (cluster)	OLS (cluster)	RE
Company ownership	-0.035*** (0.012)	-0.037*** (0.011)	-0.032*** (0.014)
Distance	0.004 (0.008)	0.009 (0.010)	0.014 (0.019)
Service provided	0.015 (0.017)	0.021 (0.011)	0.014 (0.026)
Density	-0.002 (0.003)	-0.001 (0.002)	-0.003 (0.005)
Tourism	-0.039*** (0.019)	-0.035*** (0.014)	-0.042*** (0.011)
Outlet size	-0.001** (0.001)	-0.001*** (0.000)	-0.002*** (0.001)
Outlet age	-0.009 (0.010)	-0.004 (0.007)	-0.013 (0.017)
Constant	0.329*** (0.187)	0.513*** (0.224)	0.480*** (0.196)
Observations	2,226	2,226	2,226
Number of restaurants	198	198	198
R^2	0.46	0.47	0.54

Significance levels: * 10%, ** 5%, *** 1%

TABLE 5
RESTAURANT ORGANISATION (TREATED AS EXOGENOUS) AND CLEANLINESS SCORES

	Dependent variable = log (Cleanliness scores)	Dependent variable = log (Cleanliness scores)	Dependent variable = log (Cleanliness scores)
		Controlling for restaurant fixed effects	Controlling for restaurant fixed effects
	OLS (cluster)	OLS (cluster)	RE
Company ownership	-0.053*** (0.019)	-0.057*** (0.015)	-0.060*** (0.017)
Distance	0.008 (0.015)	0.018 (0.018)	0.007 (0.009)
Service provided	0.018 (0.014)	0.009 (0.011)	0.012 (0.008)
Density	-0.004 (0.007)	-0.003 (0.008)	-0.003 (0.006)
Tourism	-0.057*** (0.021)	-0.062*** (0.017)	-0.051*** (0.016)
Outlet size	-0.003*** (0.001)	-0.004*** (0.002)	-0.003*** (0.002)
Outlet age	-0.018 (0.024)	-0.007 (0.018)	-0.011 (0.013)
Constant	0.364*** (0.209)	0.305*** (0.126)	0.277*** (0.140)
Observations	2,226	2,226	2,226
Number of restaurants	198	198	198
R^2	0.38	0.41	0.45

Significance levels: * 10%, ** 5%, *** 1%

TABLE 6
RESTAURANT ORGANISATION (TREATED AS ENDOGENOUS) AND QSC SCORES

	Dependent variable = log (Quality scores)	Dependent variable = log (Service scores)	Dependent variable = log (Cleanliness scores)
Company ownership	-0.078 (0.102)	0.033 (0.071)	-0.088 (0.092)
Service provided	0.027 (0.028)	0.019 (0.012)	0.009 (0.010)
Density	-0.002 (0.004)	-0.001 (0.003)	-0.003 (0.006)
Tourism	-0.038*** (0.011)	-0.037*** (0.013)	-0.059*** (0.016)
Outlet size	-0.002*** (0.001)	-0.001*** (0.000)	-0.004*** (0.002)
Outlet age	0.004 (0.006)	-0.004 (0.006)	-0.008 (0.020)
Constant	0.463*** (0.172)	0.397*** (0.253)	0.362*** (0.159)
Observations	2,226	2,226	2,226
Number of restaurants	198	198	198

Significance levels: * 10%, ** 5%, *** 1%

II.2 ORGANISATIONAL FORM AND PERFORMANCE IN FASHION RETAILING

ABSTRACT

This research seeks to discover how the organisational form (franchising vs. vertical integration) of 384 fashion stores belonging to a Spanish franchise chain influences unit-level performance measured through three key indicators commonly used in the retail literature: sales per square metre, sales per employee, and service quality scores. We have analysed this research question using bivariate and multivariate analyses, with a panel dataset that includes quarterly establishment-level data covering the period from January 2018 to December 2019. The aggregated data initially reveal weaker outcomes among franchised establishments. However, after controlling for other variables related to the fashion stores and their local markets, we have found that franchised establishments record higher sales both per square metre and per employee than vertically integrated stores. The findings also reveal that franchised establishments record lower service quality scores than their company-owned counterparts. Nothing has been published on the differences between franchising and company ownership in terms of establishment-level performance in fashion retailing.

Keywords: company ownership, fashion retailing, franchising, performance, sales per employee, sales per square metre, service quality.

INTRODUCTION

The coexistence of franchised and company-owned establishments in the same franchise chain is a very important matter for researchers studying entrepreneurship and small business management (Brand and Croonen, 2010). At network level, scholars have analysed the synergies between franchised and company-owned outlets in the same chain (Bradach, 1997, 1998). At establishment level, researchers have examined the

performance differences between franchised and company-owned outlets with mixed findings (Kosová *et al.*, 2013; Shelton, 1967; Vázquez-Suárez *et al.*, 2020). One of the goals of research in this field is to discover whether one of these two organisational choices outperforms the other. This is a key issue, as whatever influences a business's performance also affects its efficiency and long-term survival.

Nothing has been published on the differences between franchised and vertically integrated stores in terms of establishment-level performance in fashion retailing. This research addresses this lacuna by focusing on the relationship between a fashion store's organisational form and an establishment's performance estimated through three key performance indicators (KPIs) commonly used in the retail literature: sales per square metre, sales per employee, and service quality scores.

This study is based on a panel dataset that corresponds to a Spanish fashion retailing chain, whose identity cannot be revealed for reasons of confidentiality.⁵ The data provided are comprehensive, consisting of quarterly unit-level figures for the KPIs studied. The data also show whether each fashion store is franchised or vertically integrated, as well as sundry other characteristics (e.g., individual establishment's age and size). We also have data on local markets, which means we can control for several variables with an impact on the KPIs studied. Since its creation in the 1980s, this fashion chain has been revolutionising Spain's ready-to-wear market by launching innovative concepts. The company has deployed a fast response strategy that shortens the time between a store's order and its dispatch. This allows the company to respond rapidly to both their clients and market trends. The company thus has the flexibility needed to react to changes in the specialised clothing market, making it possible to adjust its business to

⁵ We thank this firm for providing these data.

the orders placed by the retail chain and respond in a timely manner to new fashions and market needs. This chain's success has driven its expansion, first nationally and then internationally.

This paper is structured as follows. Section 2 reviews the literature and develops our hypotheses. Section 3 introduces the data and the empirical model used. Section 4 presents the results of our analyses, and Section 5 concludes

LITERATURE REVIEW

Franchising in the fashion industry

Franchising is an effective operating model in business expansion and has made a significant contribution to the development of the global business (Combs et al., 2011). The franchising business in 2019, for example, reported a turnover of 26.11 billion euros in Spain, accounting for approximately 2.1% of Spain's GDP (Spanish Franchise Association, 2020).

The fashion industry is one of the world's biggest, with a total value of US\$ 3 trillion in 2017 (Fashion United, 2018). Franchising has also been advocated by many brands as the premier strategy to enter a new market (Märzheuser-Wood and Chatwood, 2015). Fourteen fashion companies are on the list of the top 100 global franchisors, with PVH Corp., Iconix Brand Group, and Authentic Brands Group ranked third, sixth and tenth, respectively, with annual retail sales of US\$ 18 billion, US\$ 7 billion and US\$ 5.3 billion (License Global, 2017). There were 1,381 franchise chains operating in Spain at the end of 2019, and the sector with the highest number of chains was "Fashion", with a total of 242 chains and 9,297 stores, with a turnover of 2,364 million euros and employing 23,226 workers (Spanish Franchise Association, 2020).

The volatility of consumer preferences towards fashion products leads to a joint increase in the heterogeneity of production, marketing and supply management activities in the clothing industry. The aggregation of these operations makes it possible to provide the market with fast responses to new fashion trends. Accordingly, all the information disseminated throughout the market requires a specific orientation. This orientation will be more successful in step with the higher level of coordination in fashion franchise chains. In other sectors in which franchising is used, such as hospitality, the need for coordination between members of the chain is not so important because of the lower variation in demand. This idiosyncrasy of fashion chains is relevant because the level of coordination they require affects each outlet's choice of organisational form (franchising vs. vertical integration). Specifically, the higher the level of coordination required in a franchise chain, the more likely it is that its stores will be vertically integrated (Michael, 2002).

Organisational form and performance in franchise chains

Clothing franchise chains may choose to run their establishments either through their own employees, or by outsourcing them in the form of franchisees. This is a relevant matter because franchisees and managers of vertically integrated establishments have different incentives, which could affect their establishment's performance (Brickley and Dark, 1987; Lafontaine, 1992; Bradach, 1998; Sveum and Sykuta, 2017).

The joint presence of two different organisational forms within the same business structure creates hiring and incentive problems that have been studied by agency theory. The argument here is that managers of vertically integrated establishments will underperform the franchisees because franchising avoids the former's moral hazard issues (Carney and Gedajlovic, 1991; Jensen and Meckling, 1976). Agency theory reasons that franchisees have greater incentives to keep a close eye on their employees, as their own

wealth depends heavily on the establishment's performance (Rubin, 1978). In theory, this incentive should prompt franchisees to invest more effort than the company's own managers, and thereby prompt different levels of unit performance. In our case, it may be argued that managers of vertically integrated stores have fewer incentives to work harder than franchisees, thereby reducing an establishment's performance. Although the management literature has not studied this issue in the clothing retailing, previous research has analysed this topic of differential performance in the hospitality literature, with mixed outcomes. The following paragraphs provide a review of the literature.

Shelton (1967) compares the performance of franchised and vertically integrated fast-food restaurants that have changed from franchising to vertical integration, or vice versa. In 19 of the 22 restaurants studied, the establishments were more profitable under franchising. Shelton's focused research is its main advantage, with no change in market and unit characteristics when the business's organisation shifted from one form to the other. Ackermann (2019) has also addressed this issue in a US casual dining chain called Applebee's by examining the revenues of 60 units that moved from company ownership to franchising. At the beginning of 2007, there were 93 Applebee's establishments operating in Texas, 33 of which were franchised. A corporate sell-off strategy launched in 2007 meant that every company-owned unit had been franchised by the end of 2008. By observing these units' revenues before and after they had been franchised, Ackermann has estimated the effect of franchising on unit performance, finding that this organisational form increased unit sales in Applebee's case.

Beheler, Norton, and Sen (2008) have studied the differences in performance in the restaurant industry between franchised and company-owned establishments, finding that the latter record significantly lower scores in health inspections, thereby supporting the premise that they record a weaker performance. Krueger (1991) backs this claim by

finding that the differential effect of contractual arrangements provides the managers of vertically integrated establishments with fewer incentives to mentor and supervise their staff, whereby employees in those units belonging to fast-food chains earn slightly more and have steeper earning profiles than their peers in franchised units. Krueger also contends that managers' lesser incentives in company-owned establishments render it advisable to be more generous in performance-linked wages and provide steeper earning profiles.

Sveum and Sykuta (2017) have studied the US restaurant industry and found that franchisee ownership has a major and lasting impact on performance in full-service restaurants, but not so in the case of limited-service units. Anderson (1984) has addressed performance differences across franchised and company-owned establishments in 17 business areas, with 11 recording differences. In seven of these 11 business areas, company-owned units post a sharper increase in average sales than their franchised counterparts, although in some cases this has been attributed to more favourable locations.

Agency theory might argue that, as part of a franchise network, franchisees could free-ride on the brand, and consequently provide less quality. Considering that a franchisee is part of a larger chain, positive spillover means it can free-ride on the parent brand (Brickley and Dark, 1987), diminishing quality compared to company-owned outlets. Franchisees base their turnover on serving their own customers, so they increase their profit margin by delivering lower cost/quality, but this means spreading the costs of dissatisfied customers across all the other franchisees in the chain (Brickley and Dark, 1987). Franchising lowers monitoring costs, encouraging franchisees to make a greater effort than the franchisor's own managers, although this may encourage individual free-riding that undermines coordination (Michael, 2002) and weakens the brand's reputation (Kidwell *et al.*, 2007; Lafontaine and Shaw, 2005; Michael, 2000). Jin and Leslie (2009)

support this argument in the restaurant industry by finding lower hygiene scores in franchised establishments than in company-owned ones within the same chain. Michael (2000) provides more support for franchisee free-riding, finding lower customer quality ratings for predominantly franchised networks.

Even though evidence has supported results consistent with the higher performance of both franchised and vertically integrated establishments, some scholars have not found any outcome differences that favour either one or the other. A qualitative study of franchise systems in the restaurant industry by Bradach (1998) has not reported any differences between the two types of establishments. In turn, Kalnins and Mayer (2004) have also observed similar failure rates for franchised and vertically integrated establishments. Furthermore, recent investigations have not observed any significant performance differentials between vertically integrated and franchised outlets (Kosová *et al.*, 2013; Lawrence and Perrigot, 2015; Vázquez-Suárez *et al.*, 2020). In short, the empirical evidence is diverse. Some scholars have observed that performances differ, but others have found that organisational form has no impact whatsoever.

In view of the above, franchisees may be encouraged to work more than the managers of vertically integrated stores (Rubin, 1978). Agency theory states that franchisees are likely to monitor efficiently their employees, as their own wealth depends largely on their business's performance. Corporate employees require close monitoring, which means franchisors can save on costs by incentivising franchisees through residual profits. Franchise agreements to some extent resolve the issue of motivating company managers, as they might relax their effort because their own particular interests are not so directly linked to the performance of their stores. A franchisee's capital investment should decrease shirking compared to company managers, whereby franchisees should perform better than the managers of vertically integrated stores in terms of staff monitoring.

Therefore, on measures such as sales per square metre and sales per employee, which are directly related to labour productivity and managerial supervision, franchised stores should outperform company-owned establishments. We may therefore expect the following when controlling for those variables linked to the demographics of stores and the nature of their local markets:

H1: Franchised clothing stores will outperform their company-owned counterparts in sales per square metre and sales per employee.

As well as explaining the weaker performance of vertically integrated establishments, agency theory can also be used to argue that franchised outlets will, in turn, underperform them, as franchisees share their brand with the rest of the network, so they might want to reduce costs and free-ride accordingly (Lafontaine and Shaw, 2005), in the knowledge that they will not bear the full brunt of customer dissatisfaction because the ensuing costs are shared both by the franchisor and by the other franchisees. Franchisees might therefore free-ride on the brand and skimp on quality. As franchisees are part of a chain, they can free-ride on the brand's overall reputation (Brickley and Dark, 1987), thereby providing lower levels of service quality. When controlling for a series of variables linked to the demographics of the stores and the nature of their local markets, we may therefore expect the following:

H2: Franchised clothing stores will underperform their company-owned counterparts in service quality scores.

DATA AND RESEARCH METHODOLOGY

Dataset and sample

The dataset used includes quarterly establishment-level data covering the period from January 2018 to December 2019, with a total of eight observations for the majority of the

384 fashion stores located in Spain belonging to the franchise chain studied. Economic performance is a dynamic process, so the data need to be longitudinal. The minimum number of observations per store is six, and the average number of observations per establishment is 7.62, which mean our panel data are fairly well balanced. We have performed descriptive and multivariate analyses to explore the combined effect that the explanatory variables have on performance in each case.

Dependent variables

This research uses two common indicators to measure retail productivity: sales per square metre and sales per employee computed on a quarterly basis (Nicasio, 2015; Reynolds *et al.*, 2005; Vidya *et al.*, 2015).

Additionally, store performance is measured through service quality scores, which are also computed on a quarterly basis in each case. Service quality is a vital part in fashion retailing and it is clear that the shopping experience becomes more enjoyable for the customer and more profitable for the retailer when staff members are well trained and understand the consumer. It has been proven that staff interaction with customers, alongside the physical appearance of store personnel can enhance the shopping experience and this, combined with store policy, creates the strongest impact on consumers (Siu and Cheung, 2001; Yu-Sum and Leung, 2009). Academic research has demonstrated that sales personnel are critical to the store experience and indeed these factors also help customers to decide whether they will return to the store; that is, the shopping experience can create competitive advantage for the retailer (Jackson and Shaw, 2008). A number of models have been developed to conceptualise and measure service quality in fashion retailing. The bulk of the studies have been adopted, modified, or informed by the SERVQUAL model (Parasuraman *et al.*, 1988) to measure context-specific services (Leung and Fung, 1996; Leung and To, 2001; Patten *et al.*, 2020). These

investigations have relied mainly on service quality ratings provided by customers. Our research, by contrast, uses a dataset provided by a fashion retailing franchise company that includes quarterly unit-level data on service quality inspection scores. Among other aspects, these inspections assess service convenience (i.e., the suitability of payment methods), staff attitudes and efficiency (i.e., whether they are quick to respond to customers' needs, inquiries and complaints, informing customers about the services provided; whether they are engaged with their work, polite, courteous and well informed, and never being too busy to attend to customers' requests), reliability (i.e., customers' perceptions of how well the store fulfils its promises and how willingly the establishment deals with returns, exchanges and complaints), cleanliness of the premises (i.e., internal and external hygiene, such as toilets, enter/exit signage, windows, doors, and shop front), tangibles (i.e., modern equipment, physical facilities, and store materials; the décor, the ease of locating clothes and moving around; the ambient temperature and ventilation), and convenient business hours. Service quality inspections are mostly conducted for internal purposes, and so they are usually treated as confidential, with this type of information rarely being disclosed. The fashion stores analysed here are inspected on a quarterly basis to assess their operational status on a scale of 0 to 100.

Independent variable

The independent variable, namely, the store's organisational form at the start of each quarter, takes a value of 1 for franchised establishments, and 0 otherwise. Hence, company ownership serves as the yardstick in our model.

Control variables

Our model isolates the impact that an individual establishment's organisational form has on the KPIs studied. The model also avoids spurious relationships between the dependent

and independent variables, and includes eight quarterly dummy variables and a set of control variables to account for the characteristics of the stores and their local markets that may affect their performance. Specifically, the multivariate analysis includes two dimensions that typify each establishment demographically, such as size (measured by the total square metres of retail space at the beginning of each quarter) and age (measured by the number of years in operation, also at the beginning of each quarter). As in other studies in this area (e.g., Xavier, Ferreira-Moutinho and Carrizo-Moreira, 2015), our analysis also includes a variable related to each local market, such as the average net per capita income of the sub-city district (SCD) in which each fashion store in the sample operates. We also use a binary dummy variable that takes the value 1 if the store is located in a shopping mall and 0 otherwise. Table 1 shows all the variables and their measurements, as well as their descriptive statistics, and Table 2 lists the correlations among these variables.

INSERT TABLE 1 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

The regression model

The aim here is to study the link between the organisational form of individual clothing stores and their performance. Our basic assumption is that the characteristics of both the establishments and their local markets influence the KPIs studied. We therefore formulate the following equation:

$$Y_{it} = f (F_{it}, X_{it}, Z_i, \varepsilon_{it})$$

where i and t index establishment and quarters (1 to 8), respectively. Y_{it} is the log of the performance variables studied. F_{it} reflects each one's organisational form, whereby in a specific quarter it can either be franchised ($F_{it} = 1$) or vertically integrated ($F_{it} = 0$). X_{it}

stands for time-varying establishment and local market characteristics, and Z_i for time-invariant ones.

According to the methodology applied by Kosová *et al.* (2013) in the hotel industry, we consider $\varepsilon_{it} = \mu_i + \mu_{it}$ to be a composite error term, where μ_i stands for establishment-level unobserved heterogeneity, which we initially assume is not correlated with observed characteristics, and μ_{it} stands for an idiosyncratic error term. We control for establishment-level unobserved and uncorrelated heterogeneity (μ_i) across all the empirical specifications, either by amending standard errors for store-level clusters, or by using standard random effects (RE) models. The difference between RE specifications and clustering in OLS estimations is that the RE model accepts an ‘equal correlation’ structure between unit observations, while clustering provides for flexible correlations. If the ‘equal correlation structure’ supposition is inappropriate, more robust results are provided by OLS with clustered standard errors, while the RE model gives more accurate estimates. In addition, in both cases, the variance-covariance matrix White/Huber estimator is used to correct the standard errors regarding potential heteroscedasticity (Kosová *et al.*, 2013: 1311). All the continuous variables in our regressions are in logarithmic form, whereby the coefficient estimates can be directly understood as elasticities. This also takes into account non-linear relationships across variables, reducing the potential effect of outliers or skewed regressors, and therefore ensuring that the coefficient estimates are more robust.

RESULTS AND DISCUSSION

Bivariate statistics

In view of our interest in the impact that an individual store’s organisational form may have on its KPIs, Table 3 compares franchised and company-owned establishments.

INSERT TABLE 3 ABOUT HERE

Vertically integrated stores are on average larger than franchised ones, operating in local markets where the average net per capita income is higher. In addition, our KPIs (sales per square metre, sales per employee, and service quality scores) are on average higher among company-owned clothing stores.

The patterns for this bivariate analysis suggest that franchised stores do not perform as well as their company-owned counterparts, although straightforward mean comparisons do not account for the impact of certain characteristics of establishments and their local markets. The next section applies a multivariate model to discovering whether organisational form does indeed prompt differences in our store' KPIs.

Multivariate statistics

The results for our dependent variables estimated by OLS are showed in column 1 in Tables 4, 5 and 6.

INSERT TABLE 4 ABOUT HERE

INSERT TABLE 5 ABOUT HERE

INSERT TABLE 6 ABOUT HERE

A potential issue with the OLS estimations is that although we control for the impact that different establishment and local market features have on store outcomes, as well as for the unobserved heterogeneity of establishments in the error term, some of this heterogeneity (e.g., management quality) might correlate with the organisational form or other regressors. This means our RE and OLS results would be biased, so we addressed this issue and, following Mundlak (1978), corrected standard errors for uncorrelated store heterogeneity by controlling for fixed effects (FE). Mundlak shows that the outcomes from standard FE models can be attained by RE estimations when using establishment-level means of time-varying regressors as supplementary controls. These means are used

accordingly in both our RE specifications and our standard OLS estimations, where clustered standard errors allow for more robust correlation structures among establishment-level observations (Kosová *et al.*, 2013: 1311). This is a suitable procedure because organisational form and many other store features barely change in our longitudinal data. For example, over the course of the two years studied here, there have been just a handful of modifications (11 cases) in the organisational form used by the fashion chain in question.

The outcomes of our performance indicators are showed in columns 2 and 3 in Tables 4, 5 and 6, which in most cases are similar to the ones for the OLS. However, the coefficients' size changes for some variables, indicating the importance of controlling for unobserved correlated heterogeneity.

Firstly, we find that franchised stores always record higher sales both per square metre (SPSM) and per employee (SPE) than company-owned ones (see Tables 4 and 5). The impact of the franchising dummy variable on these performance indicators is positive and statistically significant in all cases. Specifically, franchising raises SPSM on average by around 2.7%, which in our sample corresponds to 21.2 euros more for a mean SPSM of 784 euros. Likewise, franchising increases SPE on average by around 3.21%, which corresponds here to an increase of 2,670 euros for a mean SPE of 83,195 euros. These results support H1, whereby franchisees are prompted to work harder than the managers of vertically integrated establishments (Rubin, 1978). Franchisees therefore have greater incentives to monitor their employees, as their own wealth is tightly linked to store performance. Several researchers support this argument in the franchising literature (Ackermann, 2019; Beheler *et al.*, 2008; Krueger, 1991; Shelton, 1967; Sveum and Sykuta, 2017).

Second, we find that franchised fashion stores always record lower service quality scores than company-owned ones (see Table 6). The impact of the franchising dummy variable on this performance measure is negative and statistically significant in all the specifications. Specifically, franchising decreases service quality scores on average by around 2.44%, which in our sample corresponds to a 2.23 percentage point decrease for a mean service quality score of 91.34. This finding supports H2, which argues that franchisees, as part of a chain, could free-ride on the brand and therefore provide lower service quality than company-owned establishments (Brickley and Dark, 1987). Jin and Leslie (2009) and Michael (2000) support this argument in the hospitality industry.

Our results also show that larger stores tend to record a higher SPSM (see Table 4). Estimated coefficients (elasticities) suggest that increasing establishment size by 10% (which given the mean size of fashion stores in our data corresponds to an increase of roughly 64 square metres) raises SPSM by about 3.08%, which in our sample means 24.15 euros more per square metre. Similarly, larger stores tend to record a higher SPE (see Table 5). Estimated coefficients suggest that increasing store size by 10% increases SPE by about 2.58%, which in our sample means 2,146 euros per employee.

Finally, increasing the annual average net per capita income in the local market by 10% -around 1,299 euros- (1) raises SPSM by about 3.96%, which in our sample means 31 euros per square metre (see Table 4), (2) increases SPE by about 4.43%, which in our sample means 3,685 euros per employee (see Table 5), and (3) raises service quality scores by about 2.93%, which corresponds to 2.68 percentage points (see Table 6).

Tables 4, 5 and 6 show that franchised fashion stores record a different performance to company-owned ones when the regressions control for sundry establishment and local market characteristics. The negative differences in the KPIs studied for franchised stores (see Table 3) change after controlling for such characteristics (see Tables 4, 5 and 6). The

outcomes show that the two different organisational forms in our fashion franchise chain alter the KPIs analysed. This is consistent with other reported findings involving performance differences between franchised and company-owned establishments (Ackermann, 2019; Beheler *et al.*, 2008; Freedman and Kosová, 2014; Krueger, 1991; Shelton, 1967; Sveum and Sykuta, 2017).

CONCLUSIONS AND LIMITATIONS

A fashion retailing franchise chain's own data are used here to investigate the effect of two organisational forms, namely, company ownership and franchising, on unit-level performance estimated by three KPIs over the period 2018-2019: sales per square metre, sales per employee, and service quality scores. There are meaningful divergences in the performance indicators in our bivariate analysis. If establishment and local market features are not controlled, a comparison of the mean performance variables between these two organisational forms reveals weaker outcomes among franchised stores. After controlling for these characteristics, these stores are found to record higher sales both per square metre and per employee than company-owned establishments. We also find in all cases that franchised stores record lower service quality scores than company-owned ones.

Research contributions

Our investigation adds to the franchising literature in the clothing retailing. This is the first article on the differences between franchising and company ownership in terms of sales per square metre and sales per employee at establishment level in this industry. We have addressed this lacuna by examining the relationship between an establishment's organisational form and its performance estimated through these KPIs commonly used in

fashion retailing. We have found that franchised outlets record higher sales both per square metre and per employee than company-owned ones.

Secondly, this study reveals that franchised establishments record lower service quality scores than company-owned outlets. Many studies have measured perceptions of service quality in fashion retailing (Leung and Fung, 1996; Leung and To, 2001; Patten *et al.*, 2020). These investigations have mainly used the assessment of service quality provided by establishment users. There are some issues with using these data sources because respondents often experience self-selection bias. Satisfaction scores may also be influenced by salient reference scores that are visible to the customer. Our research, however, uses a dataset provided by a large Spanish company. This company uses a control system to evaluate their establishments' performance on a regular basis. Given that this control system is conducted for internal purposes, and the generated data are usually treated as confidential in the organisation, this type of information is rarely disclosed.

Thirdly, many of the studies that have analysed the performance differences between franchised and company-owned establishments have adopted a cross-sectional approach (Beheler *et al.*, 2008; Jin and Leslie, 2009; Lawrence and Perrigot, 2015; Michael, 2000). This approach has several limitations and prevents capturing all the dynamics of the performance process. In our case, we have used a panel dataset with quarterly establishment-level data on individual outlets from January 2018 to December 2019.

Lastly, this research deals with the Spanish market. The selection of this specific market, which has a dynamic franchising sector, is consistent with the recommendations issued by Dant (2008) and Dant, Perrigot, and Cliquet (2008), who have stressed the importance of studying franchising issues in non-English-speaking markets.

Managerial implications

This study has several implications for practitioners in fashion retailing. Our findings show that franchised stores record higher sales both per square metre and per employee than company-owned units. Our results also show that the latter provide a better service quality scores than the former. Franchisors can lower these performance differences by implementing control mechanisms and incentives for both franchisees and managers of vertically integrated stores. For instance, franchisors in fashion retailing can use several control devices (audits, mystery shoppers, customer surveys, management information systems) to monitor both the financial situation and the service quality provided by the chain's stores (Sánchez-Gómez et al., 2011; Vázquez, 2008). Audits consist of visits to a chain's establishments by a franchisor's representatives in order to verify compliance with its standards. Mystery shoppers are anonymous, trained observers that visit the chain's stores posing as a customer, and immediately after engaging in what appears to be a normal interaction complete a detailed report on various aspects of the store's service and their shopping experience. Customer surveys provide the franchisor with information about consumers' level of satisfaction with their in-store experience. Management information systems link the chain's stores to the franchisor's headquarters. Franchisors use this control tool to closely monitor the financial situation of the chain's establishments, with on-line data on the evolution of each store's sales and costs. All these instruments of control regularly assess the chain's operational performance (Sorenson and Sorensen, 2001). They are also designed to rate store managers for incentives such as promotion (DiPietro et al., 2007) and regular bonus plans (Raith, 2008), as well as for disciplinary measures (Raith, 2008; Sorenson and Sorensen, 2001).

Our results also show that fashion stores located in shopping malls do not record better performance indicators than those located elsewhere. The past few decades have

witnessed major changes in the strategies for locating clothing stores, whereby many stores have moved from traditionally fashionable streets to shopping malls.

Lastly, franchisors seeking to attract customers that value service quality should understand that this will be better provided if their establishments are vertically integrated rather than franchised, due to free-riding considerations. Our findings support this recommendation. The data in Table 3 show that the average net per capita income in local markets where company-owned stores operate is notably higher than where franchised establishments operate. High-earning fashion store customers are more likely to value service quality, merchandise quality, and a pleasant shopping experience (Baltas *et al.*, 2010).

Limitations and future research

The results and conclusions of our research should be considered in terms of its shortcomings, given that our empirical setting is specifically a fashion retailing franchise chain operating in Spain. Although the focus on a specific network in a given country allows control for external effects, it negatively affects the results' validity. Another shortcoming involves the limited number of KPIs and time periods examined, which mean our outcomes cannot be generalised. In view of these weaknesses, additional investigation is required to discover whether the outcomes hold more generally for other KPIs, and whether our results are valid for other fashion retailing chains, other industrial sectors, and other territories.

REFERENCES

Ackermann, J. 2019. The Effect of Franchising on Store Performance: Evidence from an Ownership Change. *Management Science*, 65 (11).
<https://doi.org/10.1287/mnsc.2019.3358>

- Anderson, E. E. 1984. The growth and performance of franchise systems: company versus franchisee ownership. *Journal of Economics and Business*, 36(4), 421–31.
- Baltas, G., Argouslidis, P. C., & Skarneas. D. 2010. The role of customer factors in multiple store patronage: A cost–benefit approach. *Journal of Retailing*, 86 (1), 37–50.
- Barthélemy, J. 2008. Opportunism, knowledge, and the performance of franchise chains. *Strategic Management Journal*, 29, 1451–1463.
- Beheler, R. L, Norton, S. W., & Sen, K. C. 2008. A comparison of company owned and franchised fast food outlet performance: insights from health inspection scores. In *Strategy and Governance of Networks*, Springer, 113–25.
- Blair, R. D., & Lafontaine, F. 2005. *The Economics of Franchising*, Cambridge University Press.
- Bradach, J. L. 1997. Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*, 276–303.
- Bradach, J. L. 1998. *Franchise organizations*, Harvard Business Press.
- Bradach, J. L., & Eccles, R. G. 1989. Price, authority, and trust: From ideal types to plural forms. *Annual Review of Sociology*, 15(1), 97–118.
- Brand, M. J., & Croonen, E. 2010. Franchised and Small, the Most Beautiful of All; HRM and Performance in Plural Systems. *Journal of Small Business Management*, 48(4), 605–26.
- Brady, M. K., & Cronin, J. J. 2001. Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65, 34–49. <https://doi.org/10.1509%2Fjmk.65.3.34.18334>
- Brickley, J. A., & Dark, F. H. 1987. The Choice of Organizational Form: The Case of Franchising. *Journal of Financial Economics*, 18(2), 401–20.
- Brickley, J. A., Dark, F. H., & Weisbach, M. S. 1991. An agency perspective on franchising. *Financial Management*, 20(1), 27–35.
- Carney, M., & Gedajlovic, E. 1991, Vertical integration in franchise systems: agency theory and resource explanations. *Strategic Management Journal*, 12(8), 607–29.

- Castrogiovanni, G. J., Combs, J. G., & Justis, R. T. 2006. Resource Scarcity and Agency Theory Predictions Concerning the Continued Use of Franchising in Multi-Outlet Networks. *Journal of Small Business Management*, 44(1), 27–44.
- Combs, J. G., & Ketchen, D. J. 1999. Can capital scarcity help agency theory explain franchising? Revisiting the capital scarcity hypothesis. *Academy of Management Journal*, 42(2), 196–207.
- Combs, J. G., Ketchen, D. J., Jr., Shook, C. L., & Short, J. C. 2011. Antecedents and consequences of franchising: Past accomplishments and future challenges. *Journal of Management*, 37(1), 99–126.
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. 1996. A measure of service quality for retail stores: Scale development and validation. *Journal of the Academy of Marketing Science*, 24(1), 3–16.
- Dabholkar, P. A., Shepherd, C. D., & Thorpe, D. I. 2000. A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*, 76(2), 139–173.
[https://doi.org/10.1016/S0022-4359\(00\)00029-4](https://doi.org/10.1016/S0022-4359(00)00029-4)
- Dagger, T. S., & Sweeney, J. C. 2007. Service quality attribute weights. How do novice and longer-term customers construct service quality perceptions? *Journal of Service Research*, 10(1), 22–42. <https://doi.org/10.1177%2F1094670507303010>
- DiPietro, R. B., Murphy, K. S., Rivera, M., & Muller, C. C. 2007. Multi-unit management key success factors in the casual dining restaurant industry: A case study. *International Journal of Contemporary Hospitality Management*, 19(6/7), 524–536.
- Freedman, M., & Kosová, R. 2014. Agency and Compensation: Evidence from the Hotel Industry. *The Journal of Law, Economics, and Organization*, 30 (1): 72–103.
<https://doi.org/10.1093/jleo/ews027>
- Hallowell, R. 1996. The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study. *International Journal of Service Industry Management*, 7(4), 27–42.
- Heckman, J. 1978. Dummy endogenous variables in a simultaneous equation system. *Econometrica*, 46 (6): 931-959.

- Heckman, J. 1990. Selectivity bias: New developments. *Varieties of selection bias*. AEA Papers and Proceedings, 80 (2): 313-318.
- Jackson, T., & Shaw, D. 2008. *Mastering Fashion Buying and Merchandising Management*, Palgrave Macmillan, Hampshire.
- Jensen, M. C, & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–60.
- Jin, G., & Leslie, P. 2009. Reputation incentives for restaurant hygiene. *American Economic Journal: Microeconomics*, 1 (1): 237-267.
- Kalnins, A., & Mayer, K. J. 2004. Franchising, Ownership, and Experience: A Study of Pizza Restaurant Survival. *Management Science*, 50: 1716-1728.
- Kosová, R., & Lafontaine, F. 2012. Much ado about chains: A research agenda. *International Journal of Industrial Organization*, 30(3), 303–8.
- Kosová, R., Lafontaine, F., & Perrigot, R. 2013. Organizational Form and Performance: Evidence from the Hotel Industry. *The Review of Economics and Statistics*, 95 (4): 1303-1323.
- Krueger, A. B. 1991. Ownership, Agency, and Wages: An Examination of Franchising in the Fast Food Industry. *The Quarterly Journal of Economics*, 106 (1): 75-101.
- Lafontaine, F. 1992. Agency Theory and Franchising: Some Empirical Results. *RAND Journal of Economics*, 23: 263-283.
- Lafontaine, F., & Shaw, K. L. 2005. Targeting Managerial Control: Evidence from Franchising. *RAND Journal of Economics*, 36: 131-150.
- Lawrence, B., & Perrigot, R. 2015. Influence of Organizational Form and Customer Type on Online Customer Satisfaction Ratings. *Journal of Small Business Management*, 53 (sup1), 58-74. DOI: 10.1111/jsbm.12184
- Leung, C. & Fung, M. 1996. Assessing perceived service quality of casual-wear chain stores. *Journal of Fashion Marketing and Management*, 1(1): 26-41. <https://doi.org/10.1108/eb022488>
- Leung, C. & To, C. 2001. Measuring perceived service quality of fashion stores: a test-retest reliability investigation. *Journal of Fashion Marketing and Management*, 5(4): 324-329. <https://doi.org/10.1016/j.jretconser.2010.02.005>

- License Global. (2017). Top 150 global licensors, UBM plc.
- Märzheuser-Wood, B., & Chatwood, R. (2015). International franchising in the fashion industry—top five tips for growing overseas. Dentons. <https://www.dentons.com/en/insights/alerts/2015/january/13/international-franchising-in-the-fashion-industry>. Accessed 16 Jun 2021.
- Michael, S. C. 2000. The Effect of Organizational Form on Quality: The Case of Franchising. *Journal of Economic Behavior and Organization*, 43: 295-318.
- Michael, S. C. 2002. Can a franchise chain coordinate? *Journal of Business Venturing*, 17, 325-341
- Minkler, A.P. 1990. An Empirical Analysis of a Firm's Decision to Franchise. *Economic Letters*, 34: 77-82.
- Mundlak, Y. 1978. On the Pooling of Time Series and Cross Section Data. *Econometrica*, 46 1: 69-85.
- Nicasio, F. 2015. Retail metrics: 14 essential KPIs for tracking your business' performance. Link: <https://www.vendhq.com/blog/retail-metrics-and-kpis/>
- Parasuraman, A., Berry, L. L., & Zeithaml, V. A. 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Patten, E., Ozuem, W., Howell, K., & Lancaster, G. 2020. Minding the competition: The drivers for multichannel service quality in fashion retailing. *Journal of Retailing and Consumer Services* 53 (2020) 101974. <https://doi.org/10.1016/j.jretconser.2019.101974>
- Raith, M. 2008. Specific knowledge and performance measurement. *RAND Journal of Economics*, 39(4), 1059–1079.
- Reynolds, J., Howard, E., Dragun, D., Rosewell, B., & Ormerod, P. 2005. Assessing the Productivity of the UK Retail Sector. *The International Review of Retail, Distribution and Consumer Research*, 15 (3): 237-280. DOI: 10.1080/09593960500119416
- Rubin, P. H. 1978. The Theory of the Firm and the Structure of the Franchise Contract. *Journal of Law and Economics*, 21(1), 223–33.
- Sánchez-Gómez, R., Suárez-González, I., & Vázquez-Suárez, L. 2011. Service quality control mechanisms in franchise networks, *The Service Industries Journal*, 31, 713-723.

Shelton, J. P. 1967. Allocative Efficiency vs. 'X-Efficiency': Comment. *The American Economic Review*, 57(5), 1252–58.

Siu, N. Y. M., & Cheung, J. T. 2001. A measure of retail service quality. *Marketing Intelligence & Planning*, 19(2): 88-96. <https://doi.org/10.1108/02634500110385327>

Spanish Franchise Association. 2020. Franchising in Spain – Report 2020. Statistical Service of the Spanish Franchise Association. <http://www.franquiciadores.com/wp-content/uploads/2020/03/Franchising-in-Spain-2020-1.pdf>. Accessed 16 Jun 2021.

Sorenson, O., & Sorensen, J. B. 2001. Finding the right mix: Franchising, organizational learning, and chain performance. *Strategic Management Journal*, 22(6/7), 713–724.

Sveum, M., & Sykuta, M. 2017. The Effect of Franchising on Establishment Performance in the U.S. Restaurant Industry. *Cornell Hospitality Quarterly* (December) 2017 DOI: 10.1177/1938965518777970, June 2018 (<https://doi.org/10.1177/1938965518777970>)

Vázquez, L. 2008. The choice of control devices in franchise chains, *The Service Industries Journal*, 28, (9/10), 1277-1291.

Vidya, M., Saravanan, K., & Jayashankar, M. S. 2015. Estimating the impact of understaffing on sales and profitability in retail stores. *Production and Operation Management*, 24 (2): 201-218. <https://doi.org/10.1111/poms.12237>

Wooldridge, J. M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge MA: MIT Press.

Xavier, J. M., Ferreira-Moutinho, V., & Carrizo-Moreira, A. 2015. An empirical examination of performance in the clothing retailing industry: A case study. *Journal of Retailing and Consumer Services*, 25: 96-105. <http://dx.doi.org/10.1016/j.jretconser.2015.04.002>

Yu-Sum, C., & Leung, C. 2009. Salespersons' service quality and customer loyalty in fashion chain stores: A study in Hong Kong retail stores. *Journal of Fashion Marketing and Management*, 13(1): 98-108. <https://doi.org/10.1108/13612020910939905>

TABLE 1 – Descriptive statistics (by establishment)

Variable	Description	Mean	Standard deviation	Maximum	Minimum
Sales per square metre	Quarterly sales (in euros) per square metre.	784.23	512.37	1,493.73	426.14
Sales per employee	Quarterly sales (in euros) per employee.	83,194.71	18,386.62	148,274.08	42,952.51
Service quality scores	Quarterly assessment of operational aspects related to, among others aspects, service convenience (i.e., the suitability of payment methods), staff attitudes and efficiency (i.e., whether they are quick to respond to customers' needs, inquiries and complaints, informing customers about the services provided; whether they are engaged with their work, polite, courteous and well informed, and never being too busy to attend to customers' requests), reliability (i.e., customers' perceptions of how well the store fulfils its promises and how willingly the establishment deals with returns, exchanges and complaints), cleanliness of the premises (i.e., internal and external hygiene, such as toilets, enter/exit signage, windows, doors, and shop front), tangibles (i.e., modern equipment, physical facilities, and store materials), the décor, the ease of locating clothes and moving around, the ambient temperature and ventilation, and convenient business hours.	91.34	9.03	100.00	71.00
Franchising	Takes value 1 for franchised stores, and 0 otherwise, at the beginning of the quarter.	0.42	0.49	1	0
Establishment size	Number of square metres of retail area at the beginning of the quarter.	642.38	294.15	2000	285
Establishment age	Number of years in operation at the start of the quarter.	9.62	7.79	21.75	0.50
Shopping mall	Takes the value 1 if the store is located in a shopping mall, and 0 otherwise	0.46	0.50	1	0
Average net per capita income	Annual average net per capita income in 2016 of the SCD where the store operates.	12,987.45	3,476.95	42,819	7,849
	Number of observations	2,926			
	Number of stores	384			

TABLE 2 – Correlations among variables

	1	2	3	4	5	6	7	8
1. Sales per square metre	1.00							
2. Sales per employee	0.21 ^{***}	1.00						
3. Service quality scores	0.08	0.13 ^{**}	1.00					
4. Franchising	-0.19 ^{***}	-0.16 ^{***}	-0.14 ^{***}	1.00				
5. Establishment size	0.22 ^{***}	0.31 ^{***}	-0.06	-0.18 ^{**}	1.00			
6. Establishment age	0.03	-0.09	-0.08	-0.04	-0.22 ^{***}	1.00		
7. Shopping mall	-0.05	-0.07	0.04	0.10	0.06	-0.08	1.00	
8. Average net per capita income	0.29 ^{***}	0.19 ^{***}	0.15 ^{***}	-0.27 ^{***}	-0.17 ^{***}	0.05	-0.16 ^{***}	1.00

Significance levels: * 10%, ** 5%, *** 1%

TABLE 3 – Franchised and vertical integrated stores (means and standard deviations)

	Franchised: 161 out of 384 (41.9%)	Vertically integrated: 223 out of 384 (58.1%)	Difference in means
Sales per square metre	714.07 (540.31)	834.89 (478.63)	***
Sales per employee	79,863.02 (20,124.14)	85,600.10 (17,062.86)	***
Service quality scores	87.57 (9.37)	94.06 (8.89)	***
Establishment size	530.46 (372.19)	723.18 (237.15)	***
Establishment age	9.47 (7.59)	9.73 (7.92)	
Shopping mall	0.47 (0.50)	0.45 (0.50)	
Average net per capita income	11,438.63 (3,906.27)	14,105.66 (3,061.33)	***

Significance levels: * 10%, ** 5%, *** 1%

TABLE 4 – Store organisational form and sales per square metre

	log (Sales per square metre)	log (Sales per square metre)	log (Sales per square metre)
		Controlling for store FE	Controlling for store FE
	OLS (cluster)	OLS (cluster)	RE
Franchising	0.0304*** (0.0052)	0.0268*** (0.0039)	0.0237*** (0.0033)
Establishment size	0.2618*** (0.0349)	0.3502*** (0.0430)	0.3143*** (0.0378)
Establishment age	-0.1045 (0.0792)	-0.0810 (0.0692)	-0.0697 (0.0565)
Shopping mall	0.0408 (0.0314)	0.0209 (0.0277)	0.0268 (0.0356)
Average net per capita income	0.3384** (0.0527)	0.4352*** (0.0607)	0.4131*** (0.0570)
Constant	3.0383*** (0.5065)	3.843*** (0.0643)	1.7634*** (0.2651)
Quarterly dummy variables	YES	YES	YES
Observations	2,926	2,926	2,926
Number of fashion stores	384	384	384
R^2	0.57	0.62	0.63

Significance levels: * 10%, ** 5%, *** 1%

TABLE 5 – Store organisational form and sales per employee

	log (Sales per employee)	log (Sales per employee)	log (Sales per employee)
		Controlling for store FE	Controlling for store FE
	OLS (cluster)	OLS (cluster)	RE
Franchising	0.0289 ^{***} (0.0048)	0.0353 ^{***} (0.0046)	0.0321 ^{***} (0.0043)
Establishment size	0.2238 ^{***} (0.0390)	0.2561 ^{***} (0.0327)	0.2935 ^{***} (0.0363)
Establishment age	-0.0143 (0.0201)	-0.0552 (0.0431)	-0.0426 (0.0327)
Shopping mall	0.0227 (0.0264)	0.0319 (0.0360)	0.0319 (0.0360)
Average net per capita income	0.3934 ^{***} (0.0609)	0.4512 ^{***} (0.0565)	0.4832 ^{***} (0.0587)
Constant	3.0147 ^{***} (0.4386)	1.714 ^{***} (0.2958)	0.8976 ^{***} (0.1664)
Quarterly dummy variables	YES	YES	YES
Observations	2,926	2,926	2,926
Number of fashion stores	384	384	384
R ²	0.59	0.66	0.67

Significance levels: * 10%, ** 5%, *** 1%

TABLE 6 – Store organisational form and service quality scores

	log (Service quality scores)	log (Service quality scores)	log (Service quality scores)
		Controlling for store FE	Controlling for store FE
	OLS (cluster)	OLS (cluster)	RE
Franchising	-0.0287*** (0.0039)	-0.0241*** (0.0043)	-0.0203*** (0.0037)
Establishment size	0.0326 (0.0239)	-0.0209 (0.0243)	-0.0135 (0.0160)
Establishment age	-0.1008 (0.0716)	-0.0420 (0.0294)	-0.0673 (0.0475)
Shopping mall	0.0092 (0.0117)	0.0201 (0.0235)	0.0149 (0.0163)
Average net per capita income	0.2644*** (0.0319)	0.3245*** (0.0419)	0.2921*** (0.0376)
Constant	2.1633*** (0.3157)	-3.0821*** (0.4710)	-1.7494*** (0.3127)
Quarterly dummy variables	YES	YES	YES
Observations	2,926	2,926	2,926
Number of fashion stores	384	384	384
R^2	0.52	0.56	0.56

Significance levels: * 10%, ** 5%, *** 1%

II.3 GENDER'S MODERATING ROLE IN THE RELATIONSHIP BETWEEN ORGANISATIONAL FORM AND PERFORMANCE IN THE SPANISH SUPERMARKET INDUSTRY

ABSTRACT

This research seeks to discover how the organisational form (franchising vs. vertical integration) of 305 supermarkets belonging to a Spanish franchise chain influences unit-level performance measured through three key performance indicators commonly used in the retail literature: sales per square metre, sales per employee, and service quality scores. Additionally, we assess the moderating role of the manager's gender in each individual supermarket. We have analysed the research questions using multivariate analyses, with a panel dataset that includes quarterly establishment-level data covering the period from January 2017 to December 2019. We have found that franchised supermarkets record higher sales both per square metre and per employee than vertically integrated ones. This positive effect of franchising is lower in establishments run by females than in those run by males. The findings also reveal that franchised supermarkets record lower service quality scores than their company-owned counterparts, and this negative effect is again lower in establishments managed by females than in those managed by males.

Keywords: company ownership, franchising, gender, performance, service quality, supermarket industry.

INTRODUCTION

The coexistence of franchised and vertically integrated establishments in the same chain is a major topic for researchers studying entrepreneurship and small business

management (Brand and Croonen 2010). At network level, scholars have analysed the synergies between franchised and vertically integrated outlets in the same chain (Bradach 1997, 1998), while at establishment level they have examined the performance differences between franchised and company-owned outlets, with mixed findings (Kosová et al. 2013; Shelton 1967; Vázquez-Suárez et al. 2020). One of the goals of research in this field is to discover whether one of these two organisational choices outperforms the other. This is a key issue, as whatever influences a business's performance also affects its efficiency and long-term survival. In this study, we contend that the gender of each individual outlet's manager may shed some light on these relationships.

Nothing has been published on the differences between franchising and company ownership in terms of establishment-level performance in the supermarket industry. Moreover, no articles have thus far been published on gender's moderating role in the relationship between the organisational form of individual establishments and their performance in franchise chains, although females' move into management positions is now a major academic and practical research stream that is attracting a great deal of attention. There are myriad instances of research that have already used a range of measures to investigate gender differences in business performance, including earnings, turnover, and business failures (Marco 2012; Menicucci et al. 2019; Robb and Watson 2012), but no one has addressed gender and business performance in the supermarket industry. There are even inconsistent findings on this issue in other industries, as we shall see in due course.

This research is based on a panel dataset that corresponds to a Spanish supermarket firm, whose identity cannot be revealed for reasons of confidentiality.⁶ The data provided are comprehensive, consisting of quarterly unit-level figures for the KPIs studied. The data also show whether each supermarket is franchised or vertically integrated, and whether each establishment is run by a male or a female, together with sundry other characteristics (e.g., each establishment's age and size). We also have data on local markets, which means we can control for several variables with an impact on the KPIs studied.

This article is structured as follows. Section 2 reviews the literature and develops our hypotheses. Section 3 introduces the data and the empirical model used. Section 4 presents the results of our analyses, and Section 5 concludes.

LITERATURE REVIEW

Organisational form and business performance in franchise chains

Supermarket franchise chains may choose to run their establishments either through their own employees, or by outsourcing them to franchisees. This is an important matter because franchisees and managers of vertically integrated establishments have different incentives, which could affect their establishment's performance (Bradach 1998; Brickley and Dark 1987; Lafontaine 1992; Sveum and Sykuta 2019; Vázquez-Suárez et al. 2020).

The joint presence of two different organisational forms within the same business structure creates hiring and incentive problems that have been studied by agency theory. The argument here is that managers of vertically integrated establishments will underperform franchisees because franchising avoids the former's moral hazard issues (Carney and Gedajlovic 1991; Jensen and Meckling 1976). Agency theory reasons that

⁶ We thank this firm for providing these data.

franchisees have greater incentives to keep a close eye on their employees, as their own wealth depends heavily on the establishment's performance (Rubin 1978). In theory, this incentive should prompt franchisees to invest more effort than the company's own managers, and thereby prompt different levels of unit performance. In our case, it may be argued that managers of vertically integrated supermarkets have fewer incentives to work harder than franchisees, thereby reducing an establishment's performance. We may also posit accordingly that because franchisees are part of a network, they might free-ride on the franchisor's brand name, in detriment to their service quality (Brickley and Dark 1987). Free-riding is identified in the management literature as withholding effort, whereby an individual will be less engaged in a job-related task (Kidwell and Bennett 1993). Free-riding occurs when a member of a franchise system benefits equally from it without shouldering their fair share of the expense through a contractual relationship designed to lower their costs by opting out of activities that would reinforce the overall chain. This includes, for example, ignoring company procedures in matters of quality or service. The customer therefore receives a substandard product or service, gaining a negative view of the overall brand. Although the management literature has not studied this issue in the supermarket industry, previous research has analysed this topic of differential performance in the hospitality literature, with mixed outcomes. The following paragraphs provide a review of the literature.

Shelton (1967) compares the performance of franchised and vertically integrated fast-food restaurants that have changed from franchising to vertical integration, or vice versa. In 19 of the 22 restaurants studied, the establishments were more profitable under franchising. Shelton's focused research is its main advantage, with no change in market and unit characteristics when the business's organisation shifted from one form to the other. Ackermann (2019) has also addressed this issue in a US casual dining chain called

Applebee's by examining the revenues of 60 units that moved from company ownership to franchising. At the beginning of 2007, there were 93 Applebee establishments operating in Texas, 33 of which were franchised. A corporate sell-off strategy launched in 2007 meant that every company-owned unit had been franchised by the end of 2008. By observing these units' revenues before and after they had been franchised, Ackermann has estimated the effect of franchising on unit performance, finding that this organisational form increased unit sales in Applebee's case.

Beheler, Norton, and Sen (2008) have studied the differences in performance in the restaurant industry between franchised and company-owned establishments, finding that the latter record significantly lower scores in health inspections, thereby supporting the premise that they record a weaker performance. Krueger (1991) backs this claim by finding that the differential effect of contractual arrangements provides the managers of vertically integrated establishments with fewer incentives to mentor and supervise their staff, whereby employees in those units belonging to fast-food chains earn slightly more and have steeper earning profiles than their peers in franchised units. Krueger also contends that managers' lesser incentives in company-owned establishments render it advisable to be more generous in performance-linked wages and provide steeper earning profiles. These same findings have been reported by Freedman and Kosová (2014), stating that differences in pay and HR practices provide backing for agency theory, whereby franchisees monitor their staff more closely.

Sveum and Sykuta (2019) have studied the US restaurant industry and found that franchisee ownership has a major and lasting impact on performance in full-service restaurants, but not so in the case of limited-service units. Anderson (1984) has addressed performance differences across franchised and company-owned establishments in 17 business areas, with 11 recording differences. In seven of these 11 business areas,

company-owned units post a sharper increase in average sales than their franchised counterparts, although in some cases this has been attributed to more favourable locations.

Agency theory might argue that, as part of a franchise network, franchisees could free-ride on the brand, and consequently provide less quality. Considering that a franchisee is part of a larger chain, positive spillover means it can free-ride on the parent brand (Brickley and Dark 1987), diminishing quality compared to company-owned outlets. Franchisees base their turnover on serving their own customers, so they increase their profit margin by delivering lower cost/quality, but this means spreading the costs of dissatisfied customers across all the other franchisees in the chain (Brickley and Dark 1987). Franchising lowers monitoring costs, encouraging franchisees to make a greater effort than the franchisor's own managers, although this may encourage individual free-riding that undermines coordination (Michael 2002) and weakens the brand's reputation (Kidwell et al. 2007; Lafontaine and Shaw 2005; Michael 2000). Jin and Leslie (2009) support this argument in the restaurant industry by finding lower hygiene scores in franchised establishments than in company-owned ones within the same chain. Michael (2000) provides more support for franchisee free-riding, finding lower customer quality ratings for predominantly franchised networks.

Even though the evidence has supported results consistent with the higher performance of both franchised and vertically integrated establishments, some scholars have not found any outcome differences that favour either one or the other. A qualitative study of franchise systems in the restaurant industry by Bradach (1998) has not reported any differences between the two types of establishments. In turn, Kalnins and Mayer (2004) have observed similar failure rates for franchised and vertically integrated establishments. Furthermore, recent investigations have not observed any significant performance differentials between vertically integrated and franchised outlets (Kosová et al. 2013;

Lawrence and Perrigot 2015; Vázquez-Suárez et al. 2020). In short, the empirical evidence is diverse. Some scholars have observed that performances differ, but others have found that organisational form has no impact whatsoever.

In view of the above, franchisees may be encouraged to work harder than the managers of vertically integrated supermarkets (Rubin 1978). Agency theory states that franchisees are likely to closely monitor their employees, as their own wealth depends largely on their business's performance. Corporate employees also require close monitoring, which means franchisors can save on costs by incentivising franchisees through residual profits. Franchise agreements to some extent resolve the issue of motivating company managers, as they might relax their effort because their own particular interests are not so directly linked to their supermarkets' performance. A franchisee's capital investment should decrease shirking compared to company managers, whereby franchisees should perform better than the managers of vertically integrated supermarkets in terms of staff monitoring. Franchised supermarkets should therefore outperform company-owned establishments in measures such as sales per square metre (SPSM) and sales per employee (SPE), which are directly related to labour productivity and managerial supervision. We may therefore expect the following when controlling for those variables linked to supermarkets' demographics and the nature of their local markets:

H1: Franchised supermarkets will outperform their company-owned counterparts in SPSM and SPE.

Besides explaining the weaker performance of vertically integrated establishments, agency theory can also be used to argue that franchised outlets will, in turn, underperform them, as franchisees share their brand with the rest of the network, so they might want to reduce costs and free-ride accordingly (Lafontaine and Shaw 2005), in the knowledge that they will not bear the full brunt of customer dissatisfaction because the ensuing costs

are shared by both the franchisor and other franchisees. Franchisees might therefore free-ride on the brand and skimp on quality. As franchisees are part of a chain, they can free-ride on the brand's overall reputation (Brickley and Dark 1987; Jin and Leslie 2009; Lawrence and Perrigot 2015), thereby delivering lower levels of service quality. When controlling for a series of variables linked to supermarkets' demographics and the nature of their local markets, we may therefore expect the following:

H2: Franchised supermarkets will underperform their company-owned counterparts in service quality scores.

Gender and business's performance in franchise chains

Gender differences in competitive terms have attracted considerable interest, largely because they help to explain the differential success between the genders in the labour market (Booth and Nolen 2012; Buser et al. 2014; Saccardo et al. 2018; Sutter and Rützler 2014). The literature has shown that males are more competitive than females (Almås et al. 2015; Datta et al. 2013; Flory et al. 2015; Wozniak et al. 2014). Research has gauged people's reactions to changes in the competitive nature of compensation schemes, revealing that males perform better than females in a competitive setting (Andersen et al. 2013; Gneezy et al. 2003; Shurchkov 2012). The research also suggests that males are less reluctant than females to engage in competitive interactions, such as tournaments. This means that males' performance is influenced more by the competitiveness of the environment. For instance, Gneezy, Niederle, and Rustichini (2003) report experiments in which females do indeed appear to be less willing to compete. In highly competitive situations, therefore, males make an extra effort, while females do not; in other words, males respond better to competition than females. In short, because (1) franchisees have a more competitive compensation scheme than managers of company-owned supermarkets, as the personal wealth of the former depends heavily on their business's

performance (Rubin 1978), and (2) males perform better than females when they operate in highly competitive settings, we may formulate the following hypothesis:

H3: Franchising's positive effect on SPSM and SPE will be lower in establishments run by females than in those managed by males.

The evidence of gender differences in terms of honesty, compliance and overconfidence –all indicators of the extent to which franchisees uphold their chain's quality standards– support the notion that there may be differences between males and females in their willingness to comply with these standards. Social preferences might explain why some people behave unethically and others ethically in the same circumstances. People with more marked social preferences, such as those that are relatively more prosocial, might incur higher psychological costs when they act in an unethical way that has negative consequences for someone else's payoff (Grosch and Rau 2017). More pronounced social preferences might therefore inform more ethical behaviour to protect another person's payoff. Generally speaking, females seem to be more ethical/honest than males (Buccioli and Piovesan 2011; Dreber and Johannesson 2008), and this difference is associated with gender differences in social preferences (Grosch and Rau 2017). For instance, male groups and mixed groups tend to record more instances of prevarication than all-female groups (Muehlheusser et al. 2015). Females are arguably more ethical and relationship-oriented than males (Gilligan 1982; Healy and Pate 2011; Kuhn and Villeval 2014), hence they are seen as more communal, which has been labelled as “the female advantage” (Eagly and Carli 2003). They therefore look upon their businesses as interconnected systems of relationships, as opposed to separate economic units (Brush 1992). These characteristics enhance the ability to work with others in a group, to collaborate, and to cooperate (Peterson and Seligman 2004), and the people with them tend to be loyal and trustworthy, care for the common good, defer short-term gratification for the group's

long-term benefit, and are high in social responsibility (Seligman 2009). These characteristics are most strongly expressed when the individual feels a sense of solidarity and engage with other group members (Peterson and Seligman 2004). Therefore, the greater inclination towards ethical behaviour by female franchisees should therefore favour stricter compliance with their chain's quality standards. Additionally, it has been reported that females are more reliable than males (Alm et al. 2010, 2012; Cadsby et al. 2006; Karakostas and Zizzo 2016), which would also suggest that female franchisees comply more closely with their chain's quality standards. Finally, there is evidence to suggest that males are more confident than females (Estes and Hosseini 1988; Hmieleski and Baron 2009; Niederle and Vesterlund 2007; Soll and Klayman 2004; Wilson et al. 2007). As a result, they have different perceptions of the probability distribution underlying a given risk. Such overconfidence could well translate into lower compliance with quality standards if male franchisees underestimate their risk of audit by the franchisor.

As noted, franchisees share the brand, so they might want to reduce costs by free-riding, breaching quality standards, and delivering a lower level of service quality. Gender differences in honesty, compliance, and overconfidence point to varying attitudes in the willingness to uphold quality standards and the optimal level of service quality. The following hypothesis is therefore formulated:

H4: The negative impact franchising has on service quality scores will be lower in establishments run by females than in those managed by males.

DATA AND RESEARCH METHODOLOGY

Dataset and sample

The dataset used includes quarterly establishment-level data covering the period from January 2017 to December 2019, with a total of 12 observations for the majority of the 305 supermarkets in our cohort. Economic performance is a dynamic process, so the data need to be longitudinal. The minimum number of observations per supermarket is nine, and the average is 11.39, which mean our panel data are fairly well balanced.

Dependent variables

Academic research on supermarket performance focuses mainly on the operational side (i.e., processes, products, range, layout, and the supply chain) (Hernant et al. 2007; Kumar 2008; Pestana-Barros 2006; Pestana-Barros and Sellers-Rubio, 2008; Saucède et al. 2014; Sellers-Rubio and Mas-Ruiz 2006; Yu and Ramanathan 2008). There is, nonetheless, a major research stream on service quality (Jain and Aggarwal 2018; Kitapci et al. 2013; Min 2010; Vella et al. 2009).

This research uses two common indicators to measure a supermarket's retail productivity (Friebel et al. 2017; Hortaçsu and Syverson 2015; Nicasio 2015; Vidya et al. 2015): SPSM and SPE computed on a quarterly basis. Additionally, supermarket performance is measured through service quality scores, which are also computed on a quarterly basis in each case. A number of models have been developed to conceptualise and measure service quality in the retail industry (Jain and Aggarwal 2018; Kitapci et al. 2013; Min 2010; Vella et al. 2009). The bulk of the studies have been adopted, modified, or informed by the SERVQUAL model (Parasuraman et al. 1988) to measure context-specific services (Jain and Aggarwal 2018, Kitapci et al. 2013; Martinelli and Balboni 2011; Martínez-Ruiz et al. 2010; Orel and Kara 2014). These investigations have relied mainly on service

quality ratings provided by customers. This research, by contrast, uses a dataset provided by a supermarket franchise company operating in Spain that includes quarterly unit-level data on service quality inspection scores. Among other aspects, these inspections assesses service convenience (i.e., the ease of accessing the supermarket and the suitability of payment methods), staff attitudes and efficiency (i.e., whether they are quick to respond to customers' needs, inquiries and complaints, informing customers about the services provided; whether they are engaged with their work, polite, courteous and well informed, and are never too busy to attend to customers' requests), reliability (i.e., customers' perceptions of how well the store fulfils its promises and how willingly the supermarket deals with returns, exchanges and complaints), cleanliness of the premises (i.e., internal and external hygiene, such as toilets, enter/exit signage, parking facilities, windows, doors, and shop front), tangibles (i.e., modern equipment, physical facilities, and store materials; the décor, the ease of locating merchandise and moving around; the proper maintenance of service-related equipment, ambient temperature and ventilation), and product policy (i.e., the quality of goods, and convenient parking and business hours). Service quality inspections are mostly conducted for internal purposes, and so they are usually treated as confidential, with this type of information rarely being disclosed. The supermarkets analysed here are inspected on a quarterly basis to assess their operational status on a scale of 0 to 100. The data on supermarkets' service quality are obtained through audits, which most supermarket franchise chains use to regularly evaluate their operational performance (Vázquez 2008). These audits consist of visits to franchised and company-owned units by franchisor representatives in order to verify the quality of inputs and products and compliance with the chain's standards. The supermarket chain in question here also uses these audits to rate establishment managers for incentives such as promotion and regular bonus plans, as well as for disciplinary measures. Moreover, these

audits constitute an important communicational device because they serve both as a way of listening to franchisees' demands and prompting them to implement programmes organised by the supermarket chain (e.g., new products or new interior decoration).

Independent variable

The independent variable, namely, the supermarket's organisational form at the start of each quarter, takes a value of 1 for franchised establishments, and 0 otherwise. Hence, company ownership serves as the yardstick in our model.

Moderator variable

The impact of one moderator variable, namely, the gender of each individual supermarket's manager, is studied here to discover its effect on the relationship between organisational form and establishment performance. It takes a value of 1 when the supermarket is run by a female at the start of each quarter, and 0 otherwise. Thus, the male gender is the reference in our model.

Control variables

Our model isolates the impact that both an individual supermarket's organisational form and its manager's gender have on the KPIs studied. The model also avoids spurious relationships between the dependent and independent variables, and includes 12 quarterly dummy variables and a set of control variables to account for the characteristics of the supermarkets and their local markets that may affect their performance. Specifically, the multivariate analysis includes two dimensions that typify each establishment demographically, such as size (measured by the total square metres of retail space at the beginning of each quarter) and age (measured by the number of years in operation, also at the beginning of each quarter). The multivariate analysis also includes two variables related to each local market, such as the number of supermarkets of any brand operating

within a radius of 500 metres around each establishment in the sample at the beginning of each quarter and the average net per capita income of the sub-city district (SCD)⁷ in which each supermarket in the sample operates. Table 1 shows all the variables and their measurements, as well as their descriptive statistics, and Table 2 lists the correlations among these variables.

INSERT TABLE 1 ABOUT HERE

INSERT TABLE 2 ABOUT HERE

The model

We tested our hypotheses with a regression involving the moderating role of each manager's gender (female vs. male) on the relationship between the supermarket's organisational form (franchising vs. vertical integration) and the KPIs analysed (see Equation (2) below). An important concern in this model is sample selection bias. The idea that organisational decisions are endogenous to their expected performance outcomes is a recurrent issue in studies analysing the choice of governance mode (Masten 1996; Shaver 1998; Hamilton and Nickerson 2003). Therefore, because supermarkets' organisational form is endogenous, such organisational choices are made systematically and not randomly, so standard ordinary least squares (OLS) estimates could lead to biased coefficients.

We addressed the potential for sample selection bias by endogenising the supermarkets' organisational form and estimating the performance equations through the application of

⁷ Given the significant inequalities within cities in terms of net per capita income levels, the European Urban Audit project has considered the need to provide data for levels lower than the city as a whole. This level, called "Sub-City District" (SCD), corresponds to a subdivision of the city in zones that, in many cases, coincide with existing divisions into administrative districts or neighbourhoods. In Spain, these levels have been defined for all cities with more than 250,000 inhabitants. These SCDs must have a population of between 5,000 and 40,000 inhabitants, a comparable size and internal homogeneity. Another principle that they must fulfil is that of spatial coherence; with clearly defined boundaries.

an instrumental variable (IV) methodology. Heckman (1978, 1979, 1990) discusses how the performance equations can be estimated by standard two-stage least squares (or IV method) through the application of a linear probability model for the first stage. Specifically, we follow the methodology suggested by Papies, Ebbes, and van Heerde (2017, pp. 616-617) to resolve the endogeneity issue when the endogenous variable is binary (in our case, supermarkets' organisational form). The first step involved estimating a treatment model to describe the self-selection decision (Equation (1)). The equation of interest (Equation (2)) was then estimated after being adjusted for self-selection from the first equation.

The treatment equation in this study is a probit model that predicts the probability of choosing a franchised supermarket or a vertical integrated supermarket as follows:

$$Franchising_i^* = \alpha_0 + \alpha_1 Distance_i + \alpha_2 Size_i + \alpha_3 Age_i + \alpha_4 Competition_i + \alpha_5 Income_i + v_i \quad (1)$$

Where v_i is a random error term, and $Franchising_i^*$ represents an underlying index of the supermarkets' organisational form. If $Franchising_i^* \leq 0$, then $Franchising_i^* = 0$ and corresponds to company-owned supermarkets; if $Franchising_i^* > 0$, then $Franchising_i^* = 1$ and corresponds to franchised supermarkets.

The econometric identification of Equation (1) requires introducing into the treatment regression at least one instrument not considered in the performance regression. We use distance between each supermarket and the franchisor's headquarters as the instrument for the supermarkets' organisational form. Theoretically, this variable should influence organisational form decisions, as it modifies monitoring costs. Specifically, agency theory predicts that those supermarkets closest to the franchisor's headquarters will be company-owned (e.g., Brickley and Dark 1987). Statistically, these statements are

corroborated in our data: distance from the franchisor's headquarters has both a positive and a statistically significant impact on franchising in the first-stage regression (see Table 3). Additionally, there is no reason to believe that this distance directly influences the KPIs analysed. This was also corroborated empirically in our data, as this variable had no effect when we included it directly in the performance equations (see the results in the Appendix – Tables 4A, 5A, and 6A).

INSERT TABLE 3 ABOUT HERE

The main equation is as follows:

$$Y_{it} = f(F_i, G_{it}, F_i \times G_{it}, X_{it}, Z_i, \varepsilon_{it}) \quad (2)$$

where i and t denote establishment and quarters (1 to 12), respectively; Y_{it} is the log of the performance variables studied; F_i reflects each one's organisational form, treated as endogenous, whereby it can either be franchised ($F_i = 1$) or vertically integrated ($F_i = 0$); G_{it} represents the gender of each individual supermarket manager, which in a particular quarter is either female ($G_{it} = 1$) or male ($G_{it} = 0$); X_{it} stands for establishment and local market features that vary over time, and Z_i for those that do not. We also consider $\varepsilon_{it} = \mu_i + \mu_{it}$ to be a composite error term, where μ_i stands for establishment-level unobserved heterogeneity, which we initially assume is not correlated with observed features, and μ_{it} stands for an idiosyncratic error term. The variance-covariance matrix White/Huber estimator is used to correct the standard errors regarding potential heteroscedasticity (Kosová et al. 2013). All the continuous variables in our regressions are in logarithmic form.

RESULTS AND DISCUSSION

The results of our regression analyses are displayed in Tables 4, 5 and 6.

INSERT TABLE 4 ABOUT HERE

INSERT TABLE 5 ABOUT HERE

INSERT TABLE 6 ABOUT HERE

Firstly, the results in Tables 4 and 5 show that franchised supermarkets record higher SPSM and SPE than company-owned ones. The impacts of the franchising dummy variable on these KPIs are positive and statistically significant, as seen in Model 1b of Table 4 ($\beta = 0.0165, p < 0.01$) and Model 2b of Table 5 ($\beta = 0.0140, p < 0.01$), respectively. These results support H1, whereby franchisees are prompted to work harder than the managers of vertically integrated establishments (Rubin 1978). Our findings are consistent with the fact that franchisees have higher incentives to monitor their employees, as the owner-manager's wealth is highly dependent on the establishment's financial success. Several studies support this argument in the franchising literature (Ackermann 2019; Beheler et al. 2008; Krueger 1991; Shelton 1967; Sveum and Sykuta 2019).

Our results also suggest that gender moderates the positive effect of franchising on both SPSM and SPE. The negative and significant coefficient of the interaction term *Franchising* \times *Female* ($\beta = -0.0088, p < 0.01$), as shown in Model 1c (Table 4), indicates that the positive impact of franchising on SPSM is less intense in franchised supermarkets run by females than in those run by males. Similarly, the negative and significant coefficient of the interaction term *Franchising* \times *Female* ($\beta = -0.0095, p < 0.01$), as presented in Model 2c (Table 5), implies that the positive impact of franchising on SPE is diminished in female-run franchised outlets. These results support H3, whereby female managers record a weaker performance than male managers when they operate in highly competitive settings (Gneezy et al. 2003; Shurchkov 2012). As already explained,

franchisees have a very competitive compensation scheme, as their own wealth depends largely on their establishment's performance (Rubin 1978).

The findings also show that franchised supermarkets record lower service quality scores than company-owned ones. The impact of the franchising dummy variable on this performance measure is negative and statistically significant ($\beta = -0.0202, p < 0.01$), as seen in Model 3b (Table 6). This finding supports H2, which argues that as part of a chain, franchisees could free-ride on the brand, and therefore provide lower service quality than vertically integrated establishments (Brickley and Dark 1987). Jin and Leslie (2009) and Michael (2000) support this argument in the hospitality industry.

The results also suggest that gender moderates the relationship between the organisational form of individual establishments and their service quality scores. The positive and significant coefficient of the interaction term *Franchising* \times *Female* ($\beta = 0.0099, p < 0.01$), as shown in Model 3c (Table 6), indicates that the negative impact of franchising on service quality is less intense in female-run franchised supermarkets than in those run by males. These findings support H4, whereby gender differences in honesty, compliance, and overconfidence favour the greater fulfilment of the chain's quality standards by female franchisees compared to their male counterparts (Buccioli and Piovesan 2011; Dreber and Johannesson 2008; Karakostas and Zizzo 2016; Niederle and Vesterlund 2007).

Our results also show that increasing establishment size raises both SPSM (Table 4) and SPE (Table 5). Likewise, the increase in the number of supermarkets, regardless of the brand, within a radius of 500 metres around each establishment reduces SPMS (Table 4) and SPE (Table 5), and increases service quality scores (Table 6). Finally, as the average per capita net income of the SCD in which each supermarket operates increases, SPSM (Table 4), SPE (Table 5) and service quality scores (Table 6) also increase.

CONCLUSIONS AND LIMITATIONS

A supermarket company's own data over the period 2017-2019 are used here to study the impact of two organisational forms, namely, company ownership and franchising, on establishment-level performance measured through three KPIs (SPSM, SPE, and service quality scores) commonly used in the supermarket industry. After controlling for establishment and local market features, franchised supermarkets record higher SPSM and SPE than company-owned establishments. We also found that franchised supermarkets record lower service quality scores than vertically integrated establishments.

Our findings also show that gender moderates the relationships between an individual supermarket's organisational form and the KPIs studied. Prior research has reported that females and males differ according to a series of individual traits and behaviours, such as a willingness to compete (Almås et al. 2015; Flory et al. 2015), honesty (Buccioli and Piovesan 2011; Dreber and Johannesson 2008), compliance (Karakostas and Zizzo 2016), overconfidence (Niederle and Vesterlund 2007), and many others (e.g., education, interests, objectives, work experience, attitude to risk, motivation for running a business, management style, and strategy implementation) (Burke and Collins 2001; Dawson and Henley 2015; Eagly and Karau 2002; Schaap et al. 2008; Talbot 2004). Female and male traits may differ, but they are equally valid (Fischer et al. 1993). These different traits and behaviours affect the ways the genders run businesses. Our findings have shown that franchised supermarkets run by females outperform those run by males in service quality scores. In contrast, our results show that female-run franchised establishments do not perform as well as those managed by males in SPSM and SPE, whereby the relationship between female management and performance differs depending on the performance indicator being considered. This does not in any way imply that female managers

undermine business performance, and the related findings do not support theories of female underperformance (e.g., Bosma et al. 2004). We therefore contend that the supposed underperformance of female managers is not due to poor management skills, but instead can be attributed to the use of inappropriate performance measures, whereby females and males are expected to be just as effective managers when proper measures of relative performance are used.

Research contributions

Our investigation adds to the franchising literature in the supermarket industry. This is the first article on the differences between franchising and company ownership in terms of SPSM, SPE, and service quality scores at establishment level in this industry. We have addressed this lacuna by examining the relationship between an establishment's organisational form and its performance estimated through KPIs commonly used in the supermarket management literature. We have found that franchised supermarkets record both higher SPSM and SPE than company-owned establishments, although the former record lower service quality scores. These mixed findings enable us to explain the diversity of results forthcoming on this issue in the franchising literature due to the variety of performance indicators studied.

Many studies have measured perceptions of service quality in the retail industry (Jain and Aggarwal 2018; Kitapci et al. 2013; Martinelli and Balboni 2011; Min 2010; Orel and Kara 2014; Vella et al. 2009). These investigations have mainly used the assessment of service quality provided by establishment users. There are some issues with using these data sources because respondents often experience self-selection bias. Satisfaction scores may also be influenced by salient reference scores that are visible to the customer. Our research, however, uses a dataset provided by a large Spanish supermarket company. This company uses a control system to evaluate their establishments' performance on a regular

basis. Given that this control system is conducted for internal purposes, and the generated data are usually treated as confidential in the organisation, this type of information is rarely disclosed.

This paper also contributes to the state-of-the-art on gender differences and performance. The relationship between managers' gender and supermarket performance has not been previously addressed. This paper is the first to use empirical evidence to test the influence of the manager's gender on supermarket performance. For instance, most empirical research in the field of gender differences in free-riding has relied on lab experiments (e.g., Andreoni and Petrie 2008; Chermak and Krause 2002), providing insights into causal structures with high internal validity. Our study complements previous research by exploring the issue of free-riding in a real-world context.

The literature on gender differences and firm performance mostly involves firms in general, and is not concerned with operations managers. In our case, franchisees and managers of company-owned supermarkets are the ones making the daily decisions at establishment level, not senior executives or board members. Although an analysis of the latter is important, a study of operation management is even more so, as supermarket managers and franchisees have a more direct influence on the KPIs considered. Academia should use operations metrics more often, looking beyond ratios and stock values. Performance indicators should be paired with the people that directly affect those indicators, without correlating performance measures with those with less control over such measures.

Many of the studies that have analysed the performance differences between franchised and company-owned establishments, and between male and female managers, have adopted a cross-sectional approach (Beheler et al. 2008; Jin and Leslie 2009; Lawrence and Perrigot 2015; Michael 2000). This approach has several limitations and prevents

capturing all the dynamics of the performance process. In our case, we have used a panel dataset with quarterly establishment-level data on individual outlets from January 2017 to December 2019, provided by a Spanish supermarket company.

Lastly, this research deals with the Spanish market. The selection of this specific market, which has a dynamic franchising sector, is consistent with the recommendations issued by Dant (2008) and Dant, Perrigot, and Cliquet (2008), who have stressed the importance of studying franchising issues in non-English-speaking markets.

Managerial and policy implications

This study has several implications for practitioners in the supermarket industry and for policymakers. Our research findings show that franchised outlets record higher SPSM and SPE than company-owned units. Our results also reveal that the latter provide a better service quality. Franchisors can avoid these performance differences by implementing more control mechanisms and incentives for both franchisees and managers of vertically integrated supermarkets.

Prior research has shown that female managers underperform male managers in highly competitive settings (Gneezy et al. 2003; Shurchkov 2012). Franchisees have a more competitive compensation scheme than managers of company-owned establishments, so our results reveal that the positive influence that franchising has on both SPSM and SPE is more moderate in franchised supermarkets run by females than in those run by males. The negative impact franchising has on service quality is also shown to be less intense in female-run franchised supermarkets. This evidence is consistent with research showing gender differences in honesty, compliance, and overconfidence (Buccioli and Piovesan 2011; Dreber and Johannesson 2008; Karakostas and Zizzo 2016; Niederle and Vesterlund 2007), favouring stricter compliance with the chain's quality standards by

female franchisees. In other words, females view their businesses as interconnected systems of relationships, as opposed to separate economic units (Brush 1992). Hence, the issues of free-riding are reduced in franchised outlets run by females, so franchisors may prioritise female franchisees in those chains with a high risk of free-riding; for example, when a standardised brand image is important and when operational details and a high level of service quality are key to competitive advantage. Free-riding is one of the more pernicious factors for undermining brand reputation and threatening a franchise system's long-term survival. Safeguarding brand capital is therefore essential for the robustness of franchise systems (Brickley and Dark 1987; Gillis et al. 2020; Kidwell et al. 2007; Michael 2002).

When service quality is very important for the outlet, franchisors should therefore choose female applicants for franchised supermarkets or use company-owned outlets (vertical integration). However, when productivity is a crucial factor, franchisors should choose male applicants for franchised supermarkets. In other words, supermarket franchisors seeking to attract customers that value service quality should understand that this will be better provided if their establishments are vertically integrated or if the franchised stores are run by females. Our findings support this recommendation. The results in Table 3 reveal that the probability of an establishment being franchised (instead of vertically integrated) decreases as the average per capita net income of the local market increases. High-earning supermarket customers are more likely to value service quality, merchandise quality, and a pleasant shopping experience (Baltas et al. 2010). In contrast, low-income consumers tend to travel further in search of better deals (Fotheringham and Trew 1993). Consumers with limited income shop around to secure the best value-for-money (East et al. 1997; Mägi and Julander 2005). A negative relationship between customer income level and the number of stores patronised has been observed (Baltas et

al. 2010), as lower-income shoppers have less opportunity cost in the sense that the time spent on shopping is less of a sacrifice (Ratchford 1982). A lower income therefore raises the need to shop around for better prices and deals (Fox and Hoch 2005). When a supermarket operates in a local market in which potential customers have low incomes, it is important to have low prices, and it should therefore be franchised because franchisees have more incentives to work harder than managers of vertically integrated ones, leading to greater efficiency and productivity, and lower operating costs.

Our results also suggest that the shortage of female leaders in many industries is more than simply a social issue, as it also involves shareholders; in other words, having females in management is the right thing to do socially, as businesses also perform better, or at least no worse, when they have females at the top. Therefore, companies should empower females in their roles as managers. Consequently, our findings support the decisions made by Pepsi and Target, for example, with their Future Fund initiative for a 50/50 distribution of leadership roles (Wells 2018), and encourage other companies to follow suit by applying this type of parity initiative; that is, the glass ceiling blocking females from management on the grounds that they might perform badly needs to be removed (Pizam 2017).

Our findings provide a compelling rationale for continuing to work at improving the status of females in society and in the workforce by, for example, empowering them to reach the highest levels within their organisations. As females are often responsible for their family as well as for their job, they are directly influenced by a country's family policies, such as the provision of day care or parental leave. For example, a regulation on paid parental leave that requires an equitable distribution between parents can encourage females to improve their participation in the labour market. Appropriate health and welfare policies are also needed, including sickness and maternity benefits.

Public policies should also focus on females' equal access to resources, particularly business education and finances, whereby they can develop the skills required for a successful business start-up. For example, public administrations could promote both formal and informal learning experiences for females, mentoring programmes, and cooperative education schemes and internships. Also important are training policies aimed at educators or official agencies that should organise instruction, or at bankers and others who should raise awareness and highlight the particular needs of female entrepreneurs. For example, it is very important to train bank loan officers to prevent them from inadvertently discriminating against females.

Limitations and future research

The results and conclusions of our research should be considered in terms of its shortcomings, given that our empirical setting specifically involves a franchise chain belonging to a large Spanish supermarket company. Although the focus on this franchise chain in a given country allows controlling for external effects, it negatively affects the results' validity. Another shortcoming involves the limited number of performance variables and time periods examined, which mean our outcomes cannot be generalised. In view of these weaknesses, additional investigation is required to discover whether the outcomes hold more generally for other KPIs, and whether our results are valid for other supermarket chains, other industrial sectors, and other territories. For instance, future research should investigate whether female involvement positively or negatively influences different performance indicators in franchise chains, and in what context or under what conditions females record positive or negative results. Scholars should therefore explore various moderating or mediating variables that may provide a more realistic take on the link between gender and performance. By so doing, we could provide more precise management implications and useful advice for businesses.

A further limitation of this article is that we do not have information on the price of the items sold in the supermarkets. We know that prices are systematically different in corporate and franchised units because franchisees and franchisors may have different views on what the optimal prices are at a given outlet (Ater and Rigbi 2015; Kalnins 2003; Kosová et al. 2013; Lafontaine 1999; Lafontaine and Slade 1997; Vroom and Gimeno 2007). Ater and Rigbi (2015) have recently reported that the average price of the Big Mac meal (and other nonreported meals) at franchised outlets is higher than the corresponding average price at corporate outlets. Barron and Umbeck (1984) and Slade (1998) have looked at the effect on prices of legally mandated divestitures (i.e., before and after studies). Muris, Scheffman, and Spiller (1992) also conduct a before-and-after study focusing on the temporal effect on retail prices of soft-drink manufacturers' decisions to buy back some of their bottles. Other studies look at the effect of contract type on prices in a cross-section of contracts under circumstances where no regulatory or market forces are pressuring upstream firms to change their ownership structure (Shepard (1993); Graddy (1995); Lafontaine (1999)). All of these studies find evidence that prices do indeed differ, and that in corporate units they are in fact slightly below those in franchised units. Therefore, two of our KPIs, SPSM and SPE, could be affected by the higher prices of franchised establishments compared to vertically integrated ones. However, the effect of an establishment's price level on SPSM and SPE is not evident, and may positively or negatively affect both KPIs, as a supermarket's turnover depends on both the price level and the quantity of products sold, and the latter increases as the prices of the products sold decrease.

This study has been conducted in Spain, where cultural values might not have a major impact on gender diversity. Some comparative perspectives and different findings will probably be forthcoming if similar studies are carried out in those countries where

sociocultural features may limit female involvement in certain occupations. The “culture” component arguably has one of the most profound impacts on females. Studies on entrepreneurship in the Middle East, Africa, and some Asian countries, for example, have shown how culture has disadvantaged females by preventing them from owning a business due to religion or societal norms, or prioritising their role as wife and mother over any other to which they may aspire (Roomi 2013). Extending the research to these topics would provide additional insights into our existing knowledge of female managers.

REFERENCES

- Ackermann, J., 2019. The effect of franchising on store performance: Evidence from an ownership change. *Management Science*. 65. <https://doi.org/10.1287/mnsc.2019.3358>
- Alm, J., Cherry, T., Jones, M., McKee, M., 2010. Taxpayer information assistance services and tax compliance behavior. *Journal of Economic Psychology*. 31, 577–586.
- Alm, J., Cherry, T.L., Jones, M., McKee, M., 2012. Social programs as positive inducements for tax participation. *Journal of Economic Behavior & Organization*. 84, 85–96.
- Almås, I., Cappelen, A.W., Salvanes, K.G., Sørensen, E.Ø., Tungodden, B., 2015. Willingness to compete: Family matters. *Management Science*. 68, 2149–2162.
- Andersen, S., Ertac, S., Gneezy, U., List, J.A., Maximiano, S., 2013. Gender, competitiveness, and socialization at a young age: Evidence from a matrilineal and a patriarchal society. *Review of Economics and Statistics*. 95, 1438–1443.
- Anderson, E.E., 1984. The growth and performance of franchise systems: company versus franchisee ownership. *Journal of Economics and Business*. 36, 421–31.
- Andreoni, J., Petrie, R., 2008. Beauty, gender and stereotypes: Evidence from laboratory experiments. *Journal of Economic Psychology*, 29, 73–93. <https://doi.org/10.1016/j.joep.2007.07.008>
- Ater, I., Rigbi, O., 2015. Price control and advertising in franchising chains. *Strategic Management Journal*. 36, 148–158. <https://doi.org/10.1002/smj.2212>

- Baltas, G., Argouslidis, P.C., Skarmas, D., 2010. The role of customer factors in multiple store patronage: A cost–benefit approach. *Journal of Retailing*. 86, 37–50.
- Barron, J.M., Umbeck, J.R., 1984. The effects of different contractual arrangements: The case of retail Gasoline Markets. *Journal of Law and Economics*. 27, 313–328.
- Barthélemy, J., 2008. Opportunism, knowledge, and the performance of franchise chains. *Strategic Management Journal*. 29, 1451–1463.
- Beheler, R.L, Norton, S.W., Sen, K.C., 2008. A comparison of company owned and franchised fast food outlet performance: insights from health inspection scores. In *Strategy and Governance of Networks*, Springer, 113–25.
- Blair, R.D., Lafontaine, F., 2005. *The Economics of Franchising*, Cambridge University Press.
- Booth, A., Nolen, P., 2012. Choosing to compete: How different are girls and boys? *Journal of Economic Behavior & Organization*. 81, 542–555.
- Bosma, N., Van Praag, M., Thurik, R., de Wit, G., 2004. The value of human and social capital investments for the business performance of startups. *Small Business Economics*. 23, 227–236. <https://doi.org/10.1023/B:SBEJ.0000032032.21192.72>
- Bradach, J.L., 1997. Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*. 42, 276–303.
- Bradach, J.L., 1998. *Franchise organizations*, Harvard Business Press, Boston.
- Bradach, J.L., Eccles, R.G., 1989. Price, authority, and trust: From ideal types to plural forms. *Annual Review of Sociology*. 15, 97–118.
- Brand, M.J., Croonen, E., 2010. Franchised and small, the most beautiful of all; HRM and performance in plural systems. *Journal of Small Business Management*. 48, 605– 26.
- Brady, M.K., Cronin, J.J., 2001. Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*. 65, 34–49. <https://doi.org/10.1509%2Fjmk.65.3.34.18334>
- Brickley, J.A., Dark, F.H., 1987. The choice of organizational form: The case of franchising. *Journal of Financial Economics*. 18, 401–420.
- Brickley, J.A., Dark, F.H., Weisbach, M.S., 1991. An agency perspective on franchising. *Financial Management*. 20, 27–35.

- Brush, C.G., 1992. Research on women business owners: past trends, a new perspective and future directions. *Entrepreneurship, Theory and Practice*. 16, 5–30.
- Buccioli, A., Piovesan, M., 2011. Luck or cheating? A field experiment on honesty with children. *Journal of Economic Psychology*. 32, 73–78.
- Burke, S., Collins, K., 2001. Gender differences in leadership styles and management skills. *Women in Management Review*. 16, 244–257. <https://doi.org/10.1108/09649420110395728>
- Buser, T., Niederle, M., Oosterbeek, H., 2014. Gender, competitiveness and career choices. *Quarterly Journal of Economics*. 129, 1409–1447.
- Cadsby, C.B., Maynes, E., Trivedi, V.U., 2006. Tax compliance and obedience to authority at home and in the lab: a new experimental approach. *Experimental Economics*. 9, 343–359.
- Carney, M., Gedajlovic, E., 1991. Vertical integration in franchise systems: Agency theory and resource explanations. *Strategic Management Journal*. 12, 607–29.
- Chermak, J.M., Krause, K., 2002. Individual response, information, and intergenerational common pool problems. *Journal of Environmental Economics and Management*. 43, 4770.
- Dabholkar, P.A., Shepherd, C.D., Thorpe, D.I., 2000. A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*. 76, 139–173. [https://doi.org/10.1016/S0022-4359\(00\)00029-4](https://doi.org/10.1016/S0022-4359(00)00029-4)
- Dagger, T.S., Sweeney, J.C., 2007. Service quality attribute weights. How do novice and longer-term customers construct service quality perceptions? *Journal of Service Research*. 10, 22–42. <https://doi.org/10.1177/1094670507303010>
- Dant, R.P., 2008. A futuristic research agenda for the field of franchising. *Journal of Small Business Management*. 46, 91–98.
- Dant, R.P., Perrigot, R., Cliquet, G., 2008. A cross-cultural comparison of the plural forms in franchise networks: United States, France, and Brazil. *Journal of Small Business Management*. 46, 286–311.

- Datta, G.N., Poulsen, A., Villeval, M.C., 2013. Gender matching and competitiveness: Experimental evidence. *Economic Inquiry*. 51, 816–835.
- Dawson, C., Henley, A., 2015. Gender, risk, and venture creation intentions. *Journal of Small Business Management*. 53, 501–515.
- Dreber, A., Johannesson, M., 2008. Gender differences in deception. *Economic Letters*. 99, 197–199.
- Eagly, A.H., Carli, L.L., 2003. The female leadership advantage: an evaluation of the evidence. *The Leadership Quarterly*. 14, 807–834.
- East, R., Harris, P., Lomax, W., Perkins, D., 1997. First-store loyalty to US and British supermarkets. Occasional Paper Series No. 27. England: Kingston Business School, Kingston University.
- Estes, R., Hosseini, J., 1988. The gender gap on Wall Street: An empirical analysis of confidence in investment decision making. *Journal of Psychology*. 122, 577–90.
- Fischer, E.M., Reuber, R.A., Dyke, L.S., 1993. A theoretical overview and extension of research on sex, gender and entrepreneurship. *Journal of Business Venturing*. 8, 151–168.
- Flory, J.A., Leibbrandt, A., List, J.A., 2015. Do competitive workplaces deter female workers? A large-scale natural field experiment on job entry decisions. *Review of Economic Studies*. 82, 122–155.
- Fotheringham, A.S., Trew, R., 1993. Chain image and store choice modeling: The effects of income and race. *Environment and Planning A*. 25, 179–96.
- Fox, E.J., Hoch, S.J., 2005. Cherry picking. *Journal of Marketing*. 69, 46–62.
- Freedman, M., Kosová, R., 2014. Agency and compensation: Evidence from the hotel industry. *The Journal of Law, Economics, and Organization*. 30, 72–103. <https://doi.org/10.1093/jleo/ews027>
- Friebel, G., Heinz, M., Krueger, M., Zubanov, N., 2017. Team incentives and performance: Evidence from a retail chain. *American Economic Review*. 107, 2168–2203. <https://doi.org/10.1257/aer.20160788>.
- Gilligan, C., 1982. *In a different voice*. Cambridge: Harvard University Press.
- Graddy, K., 1997. Do fast-food chains price discriminate on the race and income characteristics of an area. *Journal of Business and Economic Statistics*. 15, 391–401.

- Gillis, W.E., Combs, J.G., Yin, X., 2020. Franchise management capabilities and franchisor performance under alternative franchise ownership strategies. *Journal of Business Venturing*. 35, 105899. <https://doi.org/10.1016/j.jbusvent.2018.09.004>.
- Gneezy, U., Niederle, M., Rustichini A., 2003. Performance in competitive environments: Gender differences. *Quarterly Journal of Economics*. 118, 1049–1074.
- Grosch, K., Rau, H.A., 2017. Gender differences in honesty: The role of social value orientation. *Journal of Economic Psychology*. 62, 258–267. <https://doi.org/10.1016/j.joep.2017.07.008>
- Healy, A., Pate, J., 2011. Can teams help to close the gender competition gap? *Economic Journal*. 121, 1192–1204.
- Hamilton, B.H., Nickerson, J.A., 2003. Correcting for endogeneity in strategic management research. *Strategic Organization*. 1, 51–78.
- Heckman, J., 1978. Dummy endogenous variables in a simultaneous equation system. *Econometrica*. 46, 931–959.
- Heckman, J., 1979. Sample selection bias as a specification error. *Econometrica*. 47, 153–161.
- Heckman, J., 1990. Selectivity bias: New developments. *Varieties of selection bias*. AEA Papers and Proceedings. 80, 313–318.
- Hernant, M., Andersson, T., Hilmola, O.P., 2007. Managing retail chain profitability based on local competitive conditions: preliminary analysis. *International Journal of Retail & Distribution Management*. 35, 912–935.
- Hmieleski, K.M., Baron, R.A., 2009. Entrepreneurs' optimism and new venture performance: a social cognitive perspective. *Academy of Management Journal*. 52, 473–488.
- Hortaçsu, A., Syverson, C., 2015. The ongoing evolution of US retail: A format Tug-of-War. *Journal of Economic Perspectives*. 29, 89–112. DOI: 10.1257/jep.29.4.89
- Jain, P. Aggarwal, V.S., 2018. Developing a service quality scale in context of organized grocery retail of India. *Management Decision*. 56, 1969–1990. <https://doi.org/10.1108/MD-08-2017-0790>.

- Jensen, M.C, Meckling, W.H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*. 3, 305–60.
- Jin, G., Leslie, P., 2009. Reputation incentives for restaurant hygiene. *American Economic Journal: Microeconomics*. 1, 237–267.
- Kalnins, A., 2003. Hamburger prices and spatial econometrics. *Journal of Economics & Management Strategy*. 12, 591–616.
- Kalnins, A., Mayer, K.J., 2004. Franchising, ownership, and experience: A study of pizza restaurant survival. *Management Science*. 50, 1716–1728.
- Karakostas, A., Zizzo, D.J., 2016. Compliance and the power of authority. *Journal of Economic Behavior & Organization*. 124, 67–80.
- Kidwell Jr., R.E., Bennett, N., 1993. Employee propensity to withhold effort: A conceptual model to intersect three avenues of research. *Academy of Management Review*. 18, 429–456.
- Kidwell, R.E., Nygaard, A., Silkoset, R., 2007. Antecedents and effects of free riding in the franchisor–franchisee relationship. *Journal of Business Venturing*. 22, 522–544. <https://doi.org/10.1016/j.jbusvent.2006.06.002>.
- Kitapci, O., Dortyol, I.T., Yaman, Z., Gulmez, M., 2013. The paths from service quality dimensions to customer loyalty. *Management Research Review*. 36, 239–255.
- Kosová, R., Lafontaine, F., 2012. Much ado about chains: A research agenda. *International Journal of Industrial Organization*. 30, 303–308.
- Kosová, R., Lafontaine, F., Perrigot, R., 2013. Organizational form and performance: Evidence from the hotel industry. *The Review of Economics and Statistics*. 95, 1303–1323.
- Krueger, A. B., 1991. Ownership, agency, and wages: An examination of franchising in the fast food industry. *The Quarterly Journal of Economics*. 106, 75–101.
- Kuhn, P., Villeval, M.C., 2014. Are women more attracted to co-operation than men? *Economic Journal*. 125, 115–140.
- Kumar, S., 2008. A study of the supermarket industry and its growing logistics capabilities. *International Journal of Retail & Distribution Management*. 36, 192–211.

- Lafontaine, F., 1992. Agency theory and franchising: Some empirical results. *RAND Journal of Economics*. 23, 263–283.
- Lafontaine, F., 1999. Franchising versus corporate ownership: The effect on price dispersion. *Journal of Business Venturing*. 14, 17–34.
- Lafontaine, F., Shaw, K.L., 2005. Targeting managerial control: Evidence from franchising. *RAND Journal of Economics*. 36, 131–150.
- Lafontaine, F., Slade, M.E., 1997. Retail contracting: theory and practice. *Journal of Industrial Economics*. 45, 1–25.
- Lawrence, B., Perrigot, R., 2015. Influence of organizational form and customer type on online customer satisfaction ratings. *Journal of Small Business Management*. 53:sup1, 58–74. DOI: 10.1111/jsbm.12184
- Mägi, A.W., Julander, C., 2005. Consumers' store-level price knowledge: Why are some consumers more knowledgeable than others? *Journal of Retailing*. 81, 319–2.
- Marco, R., 2012. Gender and economic performance: Evidence from the Spanish hotel industry. *International Journal of Hospitality Management*. 31, 981–989. <https://doi.org/10.1016/j.ijhm.2011.12.002>
- Martinelli, E., Balboni, B., 2012. Retail service quality as a key activator of grocery store loyalty. *The Service Industries Journal*. 32, 2233–2247. <https://doi.org/10.1080/02642069.2011.582499>
- Martínez-Ruiz, M.P., Jiménez-Zarco, A.I., Izquierdo-Yusta, A., 2010. Customer satisfaction's key factors in Spanish grocery stores: Evidence from hypermarkets and supermarkets. *Journal of Retailing and Consumer Services*. 17, 278–285. <https://doi.org/10.1016/j.jretconser.2010.02.005>
- Masten, S.E., 1996. Empirical research in transaction cost economics: challenges, progress, directions. In: Groenewegen, J. (Ed.), *Transaction Cost Economics and beyond*. Kluwer Academic Publishers, Boston, pp. 43–64.
- Menicucci, E., Paolucci, G, Paoloni, N., 2019. Does gender matter for hotel performance? Evidence from the Italian hospitality industry. *International Journal of Tourism Research*. 21, 625–638. <https://doi.org/10.1002/jtr.2286>

- Michael, S.C., 2000. The effect of organizational form on quality: The case of franchising. *Journal of Economic Behavior and Organization*. 43, 295–318.
- Michael, S.C., 2002. Can a franchise chain coordinate? *Journal of Business Venturing*. 17, 325–341.
- Min, H., 2010. Evaluating the comparative service quality of supermarkets using the analytic hierarchy process. *Journal of Services Marketing*. 24, 283–293.
- Minkler, A.P., 1990. An empirical analysis of a firm's decision to franchise. *Economic Letters*. 34: 77–82.
- Muehlheusser, G., Roider, A., Wallmeier, N., 2015. Gender differences in honesty: Groups versus individuals. *Economic Letters*. 128, 25–29. <https://doi.org/10.1016/j.econlet.2014.12.019>
- Muris, T.J., Scheffman, D.T., Spiller, P.T., 1992. Strategy and transaction costs: The organization of distribution in the carbonated soft drink industry. *Journal of Economics and Management Strategy*. 1, 83–128.
- Nicasio, F., 2015. Retail metrics: 14 essential KPIs for tracking your business' performance. Link: <https://www.vendhq.com/blog/retail-metrics-and-kpis/>
- Niederle, M., Segal, C., Vesterlund, L., 2012. How costly is diversity? Affirmative action in light of gender differences in competitiveness. *Management Science*. 59, 1–16.
- Niederle, M., Vesterlund, L., 2007. Do women shy away from competition? Do men compete too much? *Quarterly Journal of Economics*. 122, 1067–1101.
- Orel, F.D., Kara, A., 2014. Supermarket self-checkout service quality, customer satisfaction, and loyalty: Empirical evidence from an emerging market. *Journal of Retailing and Consumer Services*. 21, 118–129.
- Papies, D., Ebbes, P., van Heerde, H.J., 2017. Addressing endogeneity in marketing models. In *Advanced methods for modeling markets* (pp. 581-627). Springer, Cham.
- Parasuraman, A., Berry, L. L., Zeithaml, V. A., 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*. 64, 12–40.

- Pestana-Barros, C., 2006. Efficiency measurement among hypermarkets and supermarkets and the identification of the efficiency drivers. *International Journal of Retail & Distribution Management*. 34, 135–154.
- Pestana-Barros, C., Sellers-Rubio, R., 2008. Analysing cost efficiency in Spanish retailers with a random frontier model. *International Journal of Retail & Distribution Management*. 36, 883–900.
- Peterson, C., Seligman, M.E.P., 2004. *Character strengths and virtues: A handbook and classification*. Oxford University Press, Oxford.
- Pizam, A., 2017. The double bind phenomenon of hospitality female leaders. *International Journal of Hospitality Management*. 60, 142–143. <https://doi.org/10.1016/j.ijhm.2016.11.007>
- Ratchford, B.T., 1982. Cost–benefit models for explaining consumer choice and information seeking behaviour. *Management Science*. 28, 197–212.
- Robb, A.M., Watson, J., 2012. Gender differences in firm performance: Evidence from new ventures in the United States. *Journal of Business Venturing*. 27, 544–558. <https://doi.org/10.1016/j.jbusvent.2011.10.002>
- Roomi, M.A., 2013. Entrepreneurial capital, social values and cultural traditions: exploring the growth of women-owned enterprises in Pakistan. *International Small Business Journal*. 31, 175–191.
- Rubin, P.H., 1978. The theory of the firm and the structure of the franchise contract. *Journal of Law and Economics*. 21, 223–33.
- Saccardo, S., Pietrasz, A., Gneezy, U., 2018. On the size of the gender difference in competitiveness. *Management Science*. 64, 1541–1554. <https://doi.org/10.1287/mnsc.2016.2673>
- Sánchez-Gómez, R., Suárez-González, I., Vázquez-Suárez, L., 2011. Service quality control mechanisms in franchise networks. *The Service Industries Journal*. 31, 713–723. DOI: 10.1080/02642060902833338
- Saucède, F., Fenneteau, H., Codron, J. M., 2014. Department upkeep and shrinkage control. *International Journal of Retail & Distribution Management*. 42, 733–758.

- Schaap, J., Stedham, Y., Yamamura, J.H., 2008. Casino management: Exploring gender-based differences in perceptions of managerial work. *International Journal of Hospitality Management*. 27, 87–97. <https://doi.org/10.1016/j.ijhm.2007.07.004>
- Seligman, M.E.P., 2009. *Authentic Happiness*. Free Press, New York.
- Sellers-Rubio, R., Mas-Ruiz, F., 2006. Economic efficiency in supermarkets: evidences in Spain. *International Journal of Retail & Distribution Management*. 34, 155–171.
- Shane, S.A., 1996. Hybrid organizational arrangements and their implications for firm growth and survival: A study of new franchisors. *Academy of Management Journal*. 39, 216–234.
- Shane, S.A., 1998. Making new franchise systems work. *Strategic Management Journal*. 19, 697–707.
- Shaver, J.M., 1998. Accounting for endogeneity when assessing strategy performance: does entry mode choice affect FDI survival? *Management Science*. 44, 571–585.
- Shelton, J. P., 1967. Allocative Efficiency vs. ‘X-Efficiency’: Comment. *The American Economic Review*. 57, 1252–58.
- Shepard, A., 1993. Contractual form, retail price, and asset characteristics in gasoline retailing. *Rand Journal of Economics*. 24, 58–77.
- Shurchkov, O., 2012. Under pressure: Gender differences in output quality and quantity under competition and time constraints. *Journal of the European Economic Association*. 10, 1189–1213.
- Slade, M.E., 1998. Beer and the tie: Did divestiture of brewer-owned public houses lead to higher beer prices? *Economic Journal*. 108, 1–38.
- Soll, J.B., Klayman, J., 2004. Overconfidence in interval estimates. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. 30, 299–314.
- Sutter, M., Rützler, D., 2014. Gender differences in competition emerge early in life and persist. *Management Science*. 61, 2339–2354.
- Sveum, M., Sykuta, M., 2019. The effect of franchising on establishment performance in the U.S. restaurant industry. *Cornell Hospitality Quarterly*. 60, 104–115. <https://doi.org/10.1177/1938965518777970>

Talbot, M., 2004. Gender stereotypes: Reproduction and challenge. In A. Holmes, & M. Meyerhoff (Eds.), *The handbook of language and gender* (pp. 468–486). Oxford: Blackwell Publishing Ltd.

Vázquez-Suárez L., Mejía-Vásquez P.R., Sánchez-Gómez R., 2020. Organisational form and quality, service, and cleanliness inspection scores in restaurant franchise chains: Evidence from Spain. *Managerial and Decision Economics*. 41, 106–115. <https://doi.org/10.1002/mde.3096>

Vella, P.J., Gountas, J., Walker, R., 2009. Employee perspectives of service quality in the supermarket sector. *Journal of Services Marketing*. 23, 407–442.

Vidya, M., Saravanan, K., Jayashankar, M.S., 2015. Estimating the impact of understaffing on sales and profitability in retail stores. *Production and Operation Management*. 24, 201–218. <https://doi.org/10.1111/poms.12237>

Wells, J., 2018. Food companies are starved for female leadership. *Food Dive*, 31 January, available at: www.fooddive.com/news/grocery-food-companies-are-starved-for-femaleleadership/515971/ (accessed 29 December 2020).

Wilson, F., Kickul, J., Marlino, D., 2007. Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: implications for entrepreneurship education. *Entrepreneurship, Theory and Practice*. 31, 387–406.

Wozniak, D., Harbaugh, W.T., Mayr, U., 2014. The menstrual cycle and performance feedback alter gender differences in competitive choices. *Journal of Labor Economics*. 32, 161–198.

Vroom, G., Gimeno, J., 2007. Ownership form, managerial incentives and the intensity of rivalry. *Academy of Management Journal*. 50, 901–922.

Yu, W., Ramanathan, R., 2008. An assessment of operational efficiencies in the UK retail sector. *International Journal of Retail & Distribution Management*. 36 861–882.

TABLE 1 – Descriptive statistics (by establishment)

Variable	Description	Mean	Standard deviation	Maximum	Minimum
Sales per square metre	Quarterly sales (in euros) of the supermarket per square metre.	1,253.36	478.59	1,931.81	804.22
Sales per employee	Quarterly sales (in euros) of the supermarket per employee.	48,863.82	15,735.34	64,995.04	36,529.55
Service quality scores	Quarterly assessment of operational aspects related to, among others aspects, service convenience (i.e., ease of accessing the supermarket, suitable methods of payment), employee friendliness and efficiency (i.e., if they respond quickly to customer needs, inquiries and complaints, informing customers when services will be provided; if they work with enthusiasm, and are polite, courteous and well-informed, never being too busy to respond to customers' requests), reliability (i.e., customers' perceptions of how well the store fulfils its promises and how willingly the supermarket handles returns, exchanges and complaints), facility cleanliness (i.e., internal and external hygiene, such as client toilets, enter/exit signage, parking facilities, windows, doors, and store front), tangibles (i.e., the modern look of equipment, physical facilities, and store materials; the décor, the ease of locating desired merchandise and moving around; the proper maintenance of service-related equipment, the environment, such as ambient temperature and ventilation), and supermarket policy (i.e., the quality of merchandise, and convenient parking and opening hours).	88.79	8.67	99.00	68.00
Franchising	Takes value 1 for franchised supermarkets, and 0 otherwise, at the beginning of the quarter.	0.57	0.50	1	0
Female management	Takes value 1 when the supermarket is run by a female at the start of each quarter, and 0 otherwise.	0.29	0.46	1	0
Distance	Geographical distance between each supermarket and firm headquarters (km).	198.72	169.65	596.43	0
Size	Number of square metres of retail area in the supermarket at the beginning of the quarter.	597.05	152.93	800	375
Age	Number of years in operation of the supermarket at the start of the quarter.	12.79	9.06	34.83	0.42
Competition	Number of supermarkets of any brand within a radius of 500 metres around the supermarket at the beginning of the quarter.	3.68	1.86	9	1
Income	Annual average net per capita income in 2016 of the SCD where the supermarket operates.	11,378.13	3,633.07	42,819	7,277
	Number of observations	3,473			
	Number of supermarkets	305			

TABLE 2 – Correlations among variables

	1	2	3	4	5	6	7	8	9
1. Sales per square metre	1.00								
2. Sales per employee	0.27***	1.00							
3. Service quality scores	0.11*	0.13**	1.00						
4. Franchising	0.24***	0.21***	-0.17***	1.00					
5. Female management	-0.16***	-0.14**	0.20***	-0.17***	1.00				
6. Distance	-0.09	-0.07	-0.01	0.18***	0.04	1.00			
7. Size	0.18***	0.27***	-0.02	-0.14**	0.07	-0.02	1.00		
8. Age	0.08	0.04	-0.06	-0.07	-0.12**	-0.09	-0.08	1.00	
9. Competition	-0.16***	-0.19***	0.15***	-0.11*	-0.03	-0.07	-0.01	-0.05	1.00
10. Income	0.25***	0.21***	0.18***	-0.22***	0.16***	-0.01	0.04	0.07	0.15***

Significance levels: * 10%, ** 5%, *** 1%

TABLE 3 – Probit model that predicts the probability of choosing a franchised supermarket or a vertically integrated one

	Franchising
Distance	0.0026*** (4.5591)
Size	-0.0009*** (-3.8057)
Age	-0.0012 (-0.5720)
Competition	-0.0107*** (-2.9311)
Income	-0.0006*** (-2.7104)
Constant	0.6843*** (5.1867)
N	305

Significance levels: * 10%, ** 5%, *** 1%

TABLE 4 – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (SPSM)

	Model 1a	Model 1b (basic model)	Model 1c (interactive effects)
Franchising		0.0165*** (0.0032)	0.0214*** (0.0051)
Female management		-0.0083 (0.0083)	-0.0118 (0.0094)
Franchising × Female			-0.0088*** (0.0013)
Size	0.1583*** (0.0294)	0.1309*** (0.0218)	0.1469*** (0.0286)
Age	0.1027 (0.0842)	0.0798 (0.0534)	0.1603 (0.0727)
Competition	-0.1468*** (0.0269)	-0.1374*** (0.0285)	-0.1540*** (0.0231)
Income	0.3227*** (0.0486)	0.3479*** (0.0477)	0.3792*** (0.0505)
Constant	-1.265*** (0.1786)	-0.9682*** (0.1153)	-0.6978*** (0.1089)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R ²	0.63	0.74	0.75

Significance levels: * 10%, ** 5%, *** 1%

TABLE 5 – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (SPE)

	Model 2a	Model 2b (basic model)	Model 2c (interactive effects)
Franchising		0.0140*** (0.0027)	0.0197*** (0.0028)
Female management		-0.0184 (0.0159)	-0.0234 (0.0251)
Franchising × Female			-0.0095*** (0.0017)
Size	0.2262*** (0.0281)	0.3033*** (0.0379)	0.2673*** (0.0316)
Age	0.0403 (0.0462)	0.0283 (0.0372)	0.0160 (0.0238)
Competition	-0.1032** (0.0153)	-0.1244*** (0.0192)	-0.1149*** (0.0182)
Income	0.4174*** (0.0531)	0.3298*** (0.0481)	0.3527*** (0.0516)
Constant	3.4081*** (0.4516)	2.8495*** (0.3637)	3.1058*** (0.5350)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R^2	0.66	0.76	0.77

Significance levels: * 10%, ** 5%, *** 1%

TABLE 6 – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (Service quality scores)

	Model 3a	Model 3b (basic model)	Model 3c (interactive effects)
Franchising		-0.0202*** (0.0031)	-0.0251*** (0.0046)
Female management		0.0152 (0.0160)	0.0114 (0.0098)
Franchising × Female			0.0099*** (0.0018)
Size	-0.0658 (0.0887)	-0.0445 (0.0689)	-0.0305 (0.0511)
Age	-0.1425 (0.1362)	-0.1197 (0.1504)	-0.0885 (0.1071)
Competition	0.0651*** (0.0098)	0.0798*** (0.0129)	0.0718*** (0.0114)
Income	0.2546*** (0.0320)	0.3061*** (0.0374)	0.2713*** (0.0344)
Constant	-0.3024*** (0.0443)	0.6432*** (0.0768)	1.0387*** (0.1238)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R ²	0.54	0.61	0.62

Significance levels: * 10%, ** 5%, *** 1%

APPENDIX

TABLE 4A – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (SPSM)

	Model 1a	Model 1b (basic model)	Model 1c (interactive effects)
Franchising		0.0163*** (0.0032)	0.0211*** (0.0052)
Female management		-0.0086 (0.0079)	-0.0133 (0.0096)
Franchising × Female			-0.0087*** (0.0013)
Distance	-0.0031 (0.0051)	-0.0016 (0.0027)	-0.0023 (0.0035)
Size	0.1603*** (0.0287)	0.1324*** (0.0224)	0.1462*** (0.0291)
Age	0.1104 (0.0710)	0.0746 (0.0471)	0.0981 (0.0776)
Competition	-0.1422*** (0.0272)	-0.1391*** (0.0293)	-0.1516*** (0.0243)
Income	0.3240*** (0.0491)	0.3522*** (0.0481)	0.3820*** (0.0511)
Constant	-1.306*** (0.1816)	-1.0243*** (0.1165)	-0.7183*** (0.1113)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R ²	0.63	0.74	0.75

Significance levels: * 10%, ** 5%, *** 1%

TABLE 5A – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (SPE)

	Model 2a	Model 2b (basic model)	Model 2c (interactive effects)
Franchising		0.0137*** (0.0028)	0.0201*** (0.0029)
Female management		-0.0179 (0.0162)	-0.0234 (0.0251)
Franchising × Female			-0.0093*** (0.0017)
Distance	-0.0009 (0.0017)	-0.0028 (0.0041)	-0.0012 (0.0027)
Size	0.2273*** (0.0284)	0.3024*** (0.0385)	0.2684*** (0.0322)
Age	0.0388 (0.0421)	0.0267 (0.0381)	0.0197 (0.0263)
Competition	-0.0997** (0.0165)	-0.1197*** (0.0198)	-0.1122*** (0.0188)
Income	0.3958*** (0.0552)	0.3324*** (0.0488)	0.3631*** (0.0521)
Constant	3.3720*** (0.4608)	2.9379*** (0.3751)	3.2302*** (0.5537)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R ²	0.66	0.76	0.77

Significance levels: * 10%, ** 5%, *** 1%

TABLE 6A – Moderating role of gender in the relationship between organisational form (treated as endogenous) and log (Service quality scores)

	Model 3a	Model 3b (basic model)	Model 3c (interactive effects)
Franchising		-0.0198*** (0.0033)	-0.0256*** (0.0047)
Female management		0.0146 (0.0151)	0.0107 (0.0094)
Franchising × Female			0.0103*** (0.0019)
Distance	-0.0006 (0.0007)	-0.0003 (0.0004)	0.0001 (0.0001)
Size	-0.0641 (0.0906)	-0.0467 (0.0709)	-0.0319 (0.0526)
Age	-0.1504 (0.1217)	-0.1156 (0.1470)	-0.0910 (0.1103)
Competition	0.0633*** (0.0105)	0.0879*** (0.0144)	0.0741*** (0.0129)
Income	0.2617*** (0.0342)	0.3128*** (0.0401)	0.2803*** (0.0375)
Constant	-0.2859*** (0.0493)	0.4571*** (0.0662)	0.7306*** (0.1050)
Quarterly dummy variables	YES	YES	YES
Observations	3,473	3,473	3,473
Number of supermarkets	305	305	305
R^2	0.54	0.61	0.62

Significance levels: * 10%, ** 5%, *** 1%

III CONCLUSIONES

Los artículos que integran esta tesis doctoral abordan un asunto de gran relevancia en la literatura de la franquicia: el análisis de las diferencias de desempeño entre los establecimientos franquiciados y los gestionados directamente por los franquiciadores.

La mayoría de los artículos que han estudiado este tema han empleado un enfoque transversal (Beheler et al., 2008; Jin y Leslie, 2009; Lawrence y Perrigot, 2015; Michael, 2000). Sin embargo, en los tres artículos que componen esta tesis se ha aplicado un análisis de datos de panel a partir de los datos proporcionados por varias cadenas de franquicias pertenecientes a los tres sectores de actividad anteriormente citados.

Los resultados obtenidos tienen varias implicaciones para los profesionales del ámbito de la franquicia. En el primer artículo de la tesis, realizado a partir de la información proporcionada por dos cadenas de franquicias de restaurantes, se ha observado que, cuando se controla por las características de los establecimientos y sus respectivos mercados locales, y tras endogeneizar la elección de la forma organizativa de los restaurantes, la forma en la que se organizan estos no afecta de forma significativa a los indicadores del rendimiento analizados: las valoraciones de la calidad, el servicio y la limpieza de los establecimientos.

En el segundo y en el tercer artículo de la tesis se ha observado que los establecimientos franquiciados registran mayores ventas (tanto por metro cuadrado como por empleado) que los establecimientos gestionados directamente por los franquiciadores. Los resultados de estos dos últimos artículos también revelan que los establecimientos en gestión directa ofrecen una calidad de servicio superior a la de los establecimientos franquiciados. Por consiguiente, cuando es muy importante que en los establecimientos de una cadena de franquicias se ofrezca una calidad de servicio alta, los franquiciadores deberán priorizar

la gestión directa frente a la franquicia. En otras palabras, los franquiciadores que busquen atraer clientes que valoren mucho la calidad de servicio deben saber que esta se ofrecerá más probablemente si los establecimientos están integrados verticalmente, debido a los problemas de *free-riding* que suelen padecer los establecimientos franquiciados.

Sin embargo, cuando la productividad y la eficiencia son factores cruciales en la gestión de los establecimientos de una cadena de franquicias, los franquiciadores deben saber que aquellas se alcanzan más fácilmente en los establecimientos franquiciados que en los gestionados de forma directa, debido a que los incentivos de los franquiciados son más intensos que los de los gerentes de los establecimientos gestionados directamente por los franquiciadores.

La valoración de los resultados y las conclusiones de los artículos que integran esta tesis doctoral se debe realizar teniendo en cuenta sus limitaciones. La primera de éstas es que dichos artículos se han realizado a partir de la información proporcionada por un reducido número de cadenas de franquicias españolas pertenecientes a los sectores de la restauración, la venta de moda al por menor y los supermercados. Concentrarse en un número limitado de cadenas de franquicias pertenecientes a unos pocos sectores de actividad facilita el control de los efectos externos; sin embargo, afecta negativamente a la validez de los resultados. Una segunda limitación se deriva del reducido número de indicadores del desempeño que se han utilizado, así como del limitado número de periodos de tiempo examinados, lo que afecta negativamente a la generalización de los resultados obtenidos. Teniendo en cuenta estas limitaciones, se requiere investigación adicional para descubrir si los resultados encontrados son válidos de manera más general para otros indicadores del rendimiento, otros sectores industriales y otros territorios.

IV BIBLIOGRAFÍA

- Beheler, R.L, Norton, S.W., Sen, K.C., 2008. A comparison of company owned and franchised fast food outlet performance: insights from health inspection scores. In *Strategy and Governance of Networks*, Springer, 113–25.
- Bradach, J.L., 1997. Using the plural form in the management of restaurant chains. *Administrative Science Quarterly*. 42, 276–303.
- Bradach, J.L., 1998. *Franchise organizations*, Harvard Business Press, Boston.
- Brand, M.J., Croonen, E., 2010. Franchised and small, the most beautiful of all; HRM and performance in plural systems. *Journal of Small Business Management*. 48, 605– 26.
- Forbes, S., y Lederman, M. 2010. Does vertical integration affect firm performance? Evidence from the airline industry. *Rand Journal of Economics*. 41, 765–790.
- Kosová, R., Lafontaine, F., Perrigot, R. 2013. Organizational Form and Performance: Evidence from the Hotel Industry. *The Review of Economics and Statistics*. 95 (4), 1303–1323.
- Jin, G., Leslie, P., 2009. Reputation incentives for restaurant hygiene. *American Economic Journal: Microeconomics*. 1, 237–267.
- Lawrence, B., Perrigot, R., 2015. Influence of organizational form and customer type on online customer satisfaction ratings. *Journal of Small Business Management*. 53:sup1, 58–74.
- Masten, S. E. 1993. Transaction Costs, Mistakes and Performance: Assessing the Importance of Governance. *Managerial and Decision Economics*. 14 (2): 119–129.
- Michael, S. C. 2000. The Effect of Organizational Form on Quality: The Case of Franchising. *Journal of Economic Behavior and Organization*. 43: 295–318.
- Novak, S., and Stern, E. 2008. How Does Outsourcing Affect Performance Dynamics? Evidence from the Automobile Industry. *Management Science*. 54, 1963–1979.
- Shaver, M. 1998. Accounting for Endogeneity When Assessing Strategy Performance: Does Entry Mode Choice Affect FDI Survival? *Management Science*, 44: 571–585.
- Shelton, J. P. 1967. Allocative Efficiency vs. ‘X-Efficiency’: Comment. *American Economic Review*, 57: 1252–1258.