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# Plural forms versus franchise and company-owned systems: A DEA approach of hotel chain performance☆

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**Abstract**

Plural form tends to be the most popular organization form in retail and service networks compared to purely franchised or purely company-owned systems. In the first part, this paper exposes the evolution of researchers' state of mind from the way of thinking which considers franchising and ownership as substitutable organizational forms to theories which analyze the utilization of both franchise and company arrangements. The paper describes the main attempts to explain theoretically the superiority of plural forms. In the second part, the paper discusses the hypothesis which says that there is a relationship between the organizational form of the chain and its efficiency score. It is demonstrated through the application of a data envelopment analysis method on French hotel chains that plural form networks are in average more efficient than strictly franchised and wholly owned chains. The Kruskal–Wallis test which is a distribution-free rank-order statistic is used to statistically verify this relationship. The result does not permit the rejection of the null hypothesis regarding whether an organizational form is more efficient than another one. Hence, this paper opens prospects for researches aiming at testing the organizational form effect on different samples and with other methods.


*Keywords:* Franchise; Company-owned system; Plural form; DEA; Efficiency, Kruskal–Wallis

## 1. Introduction

In service industries, companies have routinely hundreds of sites where their services are created. These geographically dispersed chains have to decide whether to sell their services to consumers themselves or via independent retailers. When a company performs the sales function internally, it owns the physical facilities and operates them by hiring employees managed through a traditional hierarchical structure. When a company does not perform the sales function internally but wants exclusive retailers, it usually contracts with a franchisee who uses the chain's trademark and receives the unit's profits (minus the royalty payment) as he invests capital in the unit and agrees to adhere to certain operating standards [1–3].

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Then, chains are not the cookie-cutter replication of a simple business concept. Beneath a veneer of similarity reside two sharply differing organizational arrangements: company-owned units and franchised units. However, reality is different from the franchising versus company-owned system dilemma [4,5]. Indeed, if we consider various service industries in different countries such as fast-food in the United States [4], hotel and catering, bakeries or cosmetology in France [6,7], most chains are organized through a plural form, i.e. the simultaneous use of company-owned and franchised units.

Some researches recently demonstrated the superiority of plural forms compared to franchised chains or company-owned arrangements. Indeed, company-owned and franchised units complement each other [5]. By having both units together, a chain can leverage some of the strengths and overcome some of the weaknesses associated with each arrangement. For instance, Sorenson and Sørensen [8] argue that chains benefit from balancing the "exploitation" provided by company-owned units with the "exploration" emanating from franchised units. In the same way, franchisors control franchisees' incentive to underinvest in activities that foster brand name value relative to the chain by operating a large percentage of their outlets [9].

Then, it seems that there are many reasons why a mixture of company-owned and franchised units makes the chain stronger than an exclusive reliance on one or the other. However, to our knowledge, no current study has directly addressed how the decision to adopt a plural form impacts efficiency level of the chain. No study measures and compares the efficiency level of a plural form relative to the efficiency level of franchised chains and company-owned arrangements.

Efficiency refers to the technological relationship between inputs and outputs. In contemporary economics, efficiency at the level of the enterprise is a major issue. Indeed, in a competing environment, a company less effective than its competitors generally does not preserve a sufficient market share to survive. Then, if the decision to adopt a plural form increases efficiency, consumers would benefit from firm market share growth and vice versa. In this context, it is interesting to study how the chain arrangement determines the company efficiency.

So, our paper will discuss the hypothesis which says: There is a relationship between the organizational form of the chain and its efficiency score. To test this hypothesis, we use a data envelopment analysis (DEA) approach [10] and implement the Kruskal–Wallis test which is a distribution-free rank-order statistic [11]. We apply this method in the French hotel industry since it is an important and extremely competitive sector in France where there can be different kinds of organizational forms.

Knowing which organizational form is more efficient is good news for retailers or service companies which can then make their chains survive longer than their competitors. However, the stake of this research is not only for retail or service companies. Its results should also interest manufacturers who try to market their products through these chains.

The remainder of the paper is structured as follows. In the next section, the three theoretical approaches, franchising, company-owned arrangement and plural form are described. In this section, we examine why a company would choose a plural form. In Section 3, we expose the method and the empirical results. Section 4 deals with the results and finally in Section 5 we conclude.

## 2. Three theoretical approaches of chains organizational forms

The decision between franchising and ownership has been considered for a long time as a way of substituting one for another. The first subsection above deals with this antagonism. This way of thinking is now replaced by the idea of complementarity between these two organizational forms. The second subsection exposes the main approaches which analyze the concept of plural forms.

### *2.1. Franchising and ownership as a dichotomic approach*

The literature on chains focuses almost exclusively on whether they should own or franchise units [5]. Several answer tracks have been proposed since company-owned and franchised units embody contrasting economic and managerial characteristics [12,13]. The main theoretical contributions that frame this debate are outlined here.

Oxenfeldt and Kelly [14] were among the first to deal with the switch from franchised to company-owned units. They argue that chains have a life cycle which explains their *ownership redirection*. This thesis says that once the initial constraints of financial resource availability, human resource availability and informational resource availability are relatively overcome, the attractiveness of franchising is greatly diminished. Then, franchisors may resort to ownership redirection rather than share revenue streams with their franchisees. Franchising, therefore, is seen as a temporary phenomenon in the life cycle of chains. Certain business