Information systems contracts and relationships: A Spanish perspective ☆

Reyes Gonzalez *, Jose Gasco [1], Juan Llopis [1]

Business Organization Department, University of Alicante, Campus Sant Vicent del Raspeig, s/n. postcode 03080, Alicante, Spain

ARTICLE INFO

ABSTRACT

Despite the proliferation of academic research on information systems outsourcing, not many studies analyze the characteristics of outsourcing contracts. This research aims to provide an in-depth description of information systems outsourcing. An additional objective is to examine how these characteristics evolve over time. Finally, this study reports on the usefulness of measuring such characteristics over time to assess the maturity level of the information systems outsourcing. This study gathers the data from the responses of the information systems managers of the largest Spanish firms to a questionnaire. This longitudinal study covers 12 years of research and compares authors' previous research results with the results of this study.

© 2015 Published by Elsevier Inc.

1. Introduction

Although extensive academic research exists on information systems (IS) outsourcing, few studies focus on the characteristics of outsourcing contracts. Researchers very often address outsourcing as a set of homogeneous services and do not analyze the outsourcing of specific activities. This study offers a comprehensive description of IS outsourcing through the responses to a survey of the IS managers of the most important Spanish firms. This research also draws on Cullen et al.'s theoretical scheme (2005) about the essence of outsourcing contracts (i.e., outsourcing configuration). The method section delves into techniques and empirical work, along with the most important outcomes of this research. This research offers a longitudinal comparison of the results of this study and the previous research.

2. IS outsourcing configuration

Outsourcing configuration refers to a high-level, comprehensive description of a set of structural decisions that firms adopt while organizing outsourcing agreements. That configuration includes a thorough analysis of outsourcing agreements. According to Cullen, Seddon, and Willcocks (2005), the attributes that define an outsourcing relationship are: (1) relationship scope, which includes the contract's financial scale or magnitude; (2) number of providers; (3) price structure; (4) contract duration; (5) resource ownership; and (6) commercial relationship between client and provider.

(1) The relationship scope and the financial scale deal with the description of the outsourced services (e.g., development, programming, maintenance, etc.), with whom the addressees of such services are (i.e., the whole firm, one or several divisions, one or several departments, etc.), with the geographical scope of contracts (whether providers are national or foreign), and with the financial magnitude or degree of outsourcing; that is, whether total or selective outsourcing applies.

Thus, making a very careful selection of the IS functions firms want to outsource is very important. A function must be: not excessively complex or strategically critical for the business, well understood and under control before the outsourcing, and available in the competitive market at an equally competitive price (Fisher, Hirschheim, & Jacobs, 2008). Furthermore, firms are more prone to outsource IS functions if the latter have little specificity, if measuring them is not too problematic, and if transactions do not occur very often (Ali & Green, 2012; Thouin, Hoffman, & Ford, 2009).

In addition, a growing tendency to look for providers in foreign countries exists (Peslak, 2012; Varadarajan, 2009). Although a certain pressure exists in several western countries such as the United States, the United Kingdom, or France to slow down this movement toward offshore outsourcing, some studies (Khan & Lacity, 2012) reveal that firms, in fact, plan to continue with their offshore policy.

Regarding outsourcing degree, total insourcing allows the firm to own the IS infrastructure and to assume the responsibility for delivering services to users. The firm has employees who are in charge of providing IS services, with little involvement of external parties.

Selective outsourcing allows external providers to complement IS internal capabilities. Even though the firm has an almost total control over IS services, the firm can subcontract an external provider for specific IS activities (Gulla & Gupta, 2012; Kang, Wu, Hong, & Park, 2012).

Total outsourcing means that the client firm has a low IS asset ownership rate and the seller has an agreement to deliver certain service levels to clients. The client firm receives an IS service without having to worry about the practical aspects of the creation of that service. Lacity, Willcocks, and Feeny (1996) claim that total outsourcing takes place if the client spends over 80% of its computing budget on IS outsourcing.

Previous studies suggest IS selective outsourcing as a better option than total insourcing or total outsourcing (Lacity et al., 1996; Lee, Miranda, & Kim, 2004; Shi, 2010; Väyrynen & Kinnula, 2012).

(2) Number of providers. Having only one provider is excessively risky, because that provider's negotiation power increases, which keeps the client with no capacity to react in case of bad service. Having multiple providers depending on their knowledge and skills is interesting (Leem & Lee, 2004), but the firm would also need to consider the coordination costs resulting from having to deal with all the providers (Currie & Willcocks, 1998). Selective outsourcing with several IS providers turns out to be suitable when the outsourced activities are not interdependent (Kishore, Rao, Nam, Rajagopalan, & Chaudhury, 2003).

(3) Price structure can be either fixed or dependent on the services the firm receives, or based on costs. Because many online sourcing markets for the development of online software services often fix prices, the client already knows the price of outsourcing (Gefen & Carmel, 2013). Nevertheless, these fixed prices somehow go against the philosophy of outsourcing because outsourcing is a tool for transforming fixed costs into variable ones. Contracts that depend on performance or on the service units that the firm receives (e.g., number of payrolls that the provider processes) guarantee flexibility, because the outsourcing party only pays for what the firm receives (Gellings, 2007). The third option consists in making the price depends on the costs that the provider has to assume to deliver the services to the client. However, this option may lead the provider to adopt an opportunistic position by disproportionately inflating costs (Lacity & Willcocks, 1995).

(4) Contract duration. Previous research highlights that short contracts are most common in successful outsourcing solutions (Gellings, 2007). Numerous authors, additionally, state that short contracts allow more flexibility to the client, who can look for another provider if the service is not satisfactory (Currie, 1998; Earl, 1996). In any case, the controversy between short-term or long-term contracts still exists. For example, authors such as Kepler and Jones (1998) argue that long-term contracts permit a mutual agreement between the parties as well as reciprocal learning.

(5) Resource ownership. The complexity of the outsourcing decision requires the correct definition of the owner the resources resulting from the outsourcing (i.e., hardware, software, and even working hours) (Dibbern, Goles, Hirschheim, & Jayatilaka, 2004). This complexity also requires specifying where the provider will implement their services (i.e., at the provider's or at the client's facilities). Providers very often move their own workers to the client firms, thus creating work and trust ties between the staff of both firms, which means that the client and the provider must focus on the complementariness of their resources so that both firms create synergies (Wang, Gwebu, Wang, & Zhu, 2008).

(6) Commercial relationship between client and provider. That relationship can vary greatly because service providers may have different degrees of responsibility and ownership over their clients' IT. Such relationships can range from total independence with the possibility of sharing some business or ownership initiatives (as in the event that the client should own a part of the provider's capital), to a very strong dependence (e.g., when the provider is an affiliate or subsidiary company of the client). These relationships very often depend on the level of outsourcing (Kishore et al., 2003).

3. Method

This study uses the directory Las 5.000 Mayores Empresas [The 5000 Largest Firms] of the magazine Actualidad Económica—later collated with Duns & Bradstreet's database Las 50.000 Principales Empresas Españolas [The 50,000 most important Spanish firms]—to determine the study population. The study left out 45 firms that shared address and telephone number with others, which suggested that those firms were affiliates or subsidiaries. The remaining 4955 firms received a questionnaire in two formats, first electronic and then in paper. The valid responses amounted to 398 (8.03%).

This study, which is a part of a wider research on different aspects of IS outsourcing, uses 12 out of the 28 survey questions available. Three of these questions define the firms' characteristics, the firms' IS departments, and the firms' managers; the remaining 9 questions deal with IS outsourcing configuration (i.e., characteristics of outsourcing contracts and relationships).

For the 9 questions about outsourcing configuration, this study draws on Cullen et al.'s study (2005). Because these 9 questions measure different characteristics of the same concept, the study analyzes the questions joint Cronbach's alpha, which is 0.79, thus confirming the reliability of this scale. The survey addressees were the firms' Chief Information Officer (CIO).

Table 1 shows the study's technical specifications. This study analyzes the evolution of the interviewees' answers over time through three different surveys. Table 1 reflects the information both from the most recent survey and from the two previous ones. However, whether the firms that answered the questionnaire and the preceding ones are the same is impossible to ascertain. Previous longitudinal studies (e.g., Casadesús & Karapetrovic, 2005) also focus on the same population. The profile of firms answering is representative of the total population in terms of size (i.e., firms with the highest turnover) and activity sector.

4. Results

4.1. Relationship scope

Only 54 firms (13.6%) do not outsource, whereas 344 (86.4%) do outsource nationally or internationally. The chi-square statistic shows that the variables indicating outsourcing levels are independent. This independence owes to the firms' ability to outsource internationally regardless of their level of national outsourcing and vice versa. However,

Table 1
Studies' technical specifications.

	2001	2006	2013
Scope	Spain	Spain	Spain
Population	4416 largest Spanish firms	4107 largest Spanish firms	4955 largest Spanish firms
Sample size	357 valid answers (8.08%)	329 valid answers (8.02%)	398 valid answers (8.03%)
Sampling error	5%	5%	4.7%
Survey date	June–October, 2001	September–December, 2006	October 2012–February 2013