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IT OUTSOURCING CONFIGURATION: THE SPANISH SITUATION

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Abstract

Information Systems outsourcing is a growing phenomenon in present-day firms that has generally been characterised with an insufficient level of detail and analysis. This is mainly due to the fact that outsourcing has been studied as a set of homogeneous services, failing to distinguish that there is a variety of contracts and ways to implement the outsourcing relationship. That is why this paper seeks to focus on all the aspects which define outsourcing contracts and relationships through the results of a survey carried out among the largest Spanish firms. An in-depth study has been performed, not only of the most often outsourced activities, but also of other attributes which capture the essence of the different outsourcing contract: the IT Outsourcing Configuration. A longitudinal study of many of these attributes is proposed that will help to foresee the future of IT outsourcing.

Keywords: Information Systems, Outsourcing, Survey, Spain.
1 INTRODUCTION

Information Systems (IS) outsourcing has become a basic strategy to manage the unstoppable changes introduced by Information Technologies (IT) (Hoecht and Trott, 2006) that gives IS managers the opportunity to concentrate their resources on core competitive power (Leem and Lee, 2004). For this reason, among others, IS outsourcing has experienced a considerable growth in the last few years.

Many studies on IS outsourcing have reached contradictory conclusions, providing both reasons for the growth of this trend (Alner, 2001; Ang and Straub, 1998; Gonzalez, Gasco and Llopis, 2005) and for its decline, based in the latter case on the various risks that IT outsourcing practices entail (Barthélemy, 2001; Earl, 1996; Tafti, 2005; Willcocks, Lacity and Kern, 1999). This is mainly due to the fact that outsourcing has been studied as a set of homogeneous services, failing to distinguish that there is a variety of contracts and ways to implement the outsourcing relationship. This is why the purpose of the present paper is basically to offer a more detailed description of IT outsourcing through the results of a survey carried out in the largest Spanish firms. An in-depth study has been performed, not only of the most often outsourced activities, but also of other attributes which capture the essence of the different outsourcing contracts, i.e. what Cullen, Seddon and Willcocks (2005) call “the IT Outsourcing Configuration”. A longitudinal study of many of these attributes is proposed that will help to foresee the future of IT outsourcing, particularly in the case of Spain.

2 METHODOLOGY

Based on the assumption that the largest firms are also the most prone to outsourcing (Lee, Miranda and Kim, 2004) a decision was made to administer the questionnaire to the largest Spanish firms. The directory “Las 5,000 mayores empresas” (The 5,000 largest firms) of the Actualidad Económica magazine —later collated with other databases largely used in business studies served to determine the target population, selecting the firms with highest sales. As in many cases the telephone numbers and addresses were the same, it was determined that some firms belonged to the same group, thus reducing the final data base from 5,000 firms to 4,107.

The questionnaire largely stems from a previous one prepared by the same authors in 2001 which, the same as this one, was constructed taking as a reference the literature on this issue, and has additionally been analysed by a number of experts on IS management. 8 out of 9 questions in the final questionnaire refer to the characteristics of outsourcing contracts and relationships (IT Outsourcing Configuration) derived mainly from the study of Cullen, Seddon and Willcocks (2005) - Cronbach’s Alfa for this group of variables is 0.832-, according to which the attributes defining an outsourcing relationship are: 1) The relationship scope; 2) The number of providers; 3) The financial scale -this issue will be presented together with those corresponding to the first attribute-; 4) The price structure; 5) The contract duration; 6) The resource ownership; 7) The commercial relationship between client and provider. The remaining question requests the interviewees’ opinion about outsourcing’s future.

<table>
<thead>
<tr>
<th></th>
<th>Year 2001</th>
<th>Year 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Spain</td>
<td>Spain</td>
</tr>
<tr>
<td>Population</td>
<td>4,416 largest Spanish business (by sales)</td>
<td>4,107 largest Spanish business (by sales)</td>
</tr>
<tr>
<td>Sample size</td>
<td>357 valid answers (8.08%)</td>
<td>329 valid answers (8.02%)</td>
</tr>
<tr>
<td>Sampling error</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Survey date</td>
<td>June-October, 2001</td>
<td>September-December, 2006</td>
</tr>
</tbody>
</table>

Table 1. Study Technical Specifications.

The questionnaire’s addressee was the IS manager or CIO –Chief Information Officer- of the firms included in the final database. The information obtained in the questionnaire was later elaborated using the statistical program SPSS for Windows and treated with univariant and multivariant statistical methods. Table 1 shows the study specifications.

329 valid answers were obtained, which represents an 8% ratio. This ratio may seem low, but similar or even lower ratios are found in other studies about IT Outsourcing (Bahli and Rivard, 2005; Ma,
Pearson and Tadisina, 2005; Shi, Kunnathur and Ragu-Nathan, 2005). In fact, the ratio is quite acceptable bearing in mind that it is problematic to obtain an answer in surveys carried out among executives, and particularly so if they are IS executives (Poppo and Zenger, 1998). Since part of this study focuses on analysing the evolution over time of the answers provided by our interviewees, Table 1 shows the basic characteristics not only of this survey but also of the previous one, carried out in 2001. The firms which answered the questionnaire correctly are representative of the total population in terms of size (sales and number of employees) and sector.

3 RESULTS

3.1 IT Outsourcing Configuration

3.1.1 Scope

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>National Outsourcing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>51</td>
<td>14.3</td>
</tr>
<tr>
<td>Yes</td>
<td>306</td>
<td>85.7</td>
</tr>
<tr>
<td>Global Outsourcing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 2. Outsourcing Level.

As can be seen in Table 2, outsourcing has become a widespread phenomenon in large Spanish firms: 83.6% of them outsource some IS function on a national scale. However, a comparison with previous years reveals a certain degree of stagnation, that is, outsourcing levels have not increased in the last few years. Additionally, Spanish firms still show a ‘shy’ approach to global or international outsourcing, where the service provider and the client are not in the same country (Gonzalez, Gasco and Llopis, 2006; Kumar, 2006). Since global outsourcing levels are so low and insignificant, this paper will not even analyse which activities have been outsourced on a global scale, as even the most commonly outsourced activities show negligible degrees of outsourcing (for instance, software maintenance has an average outsourcing level of 5.38% and client telephone attention and data introduction, which are very often outsourced internationally, only reach the extremely low figures of 2.58% and 1.28% in Spain).

![Outsourced Activities (longitudinal)](image)

Figure 1. Outsourced Activities (longitudinal).

Figure 1 offers the percentage mean for each outsourced IS activity. Attention is paid to the activities that are specific to an IS department and to their outsourcing percentages in the interviewed firms. Hardware and software maintenance, systems installation and programming are the activities in which
the help of an external provider is most often sought. The opposite case corresponds to staff service and training, e-business solutions, support to end users and systems operation, which are rarely outsourced. In any case, except for hardware maintenance, the firms under examination do not outsource a large proportion of their IS activities. Instead, they carry out what can be defined as “selective outsourcing” (Lacity, Willcocks and Feeny, 1996). Furthermore, it is easier to justify which activities are the most commonly outsourced. They are the least specific and the ones requiring less special attention to the characteristics of clients. In other words, they tend to be rather standard activities. On the one hand, it is common for hardware and software maintenance to be carried out by external providers as an additional updating service. On the other hand, during work peaks at systems development, it is common to outsource the most routine part of that development, i.e. programming or systems installation.

Figure 1 allows a longitudinal comparison between the data of 2006 and 2001. On the whole, a similar outsourcing scheme is identified in these two dates; in fact, the outsourcing-related variables for the different activities in 2006 and 2001 are dependent in nearly all cases, especially for the activities which are outsourced the most often. It is also worthy of mention that, although hardware maintenance continues to be the most commonly outsourced activity, the outsourcing level has diminished in recent years. The same has happened in the case of programming. Nevertheless, other activities have largely increased their outsourcing levels, e.g. network services; the importance acquired by the connections to the Internet as well as to other public and private networks has made this value grow. The security service increases in parallel with the preceding variable, as the connection to networks reinforces the need to strengthen system security. Special mention must be made of e-business solutions outsourcing, because the growing importance of electronic businesses might be the reason for the growth of outsourcing levels. It is also important to highlight that training, one of the most often outsourced activities in 2001, when it ranked fifth on the outsourcing list, is the least outsourced according to the 2006 survey. This may indicate either a lesser need for training due to the increased knowledge on the part of end users or a greater capability of IS departments to carry out these tasks internally.

As shown in Figure 2, when the largest Spanish firms outsource, they usually (in 56% of the cases) do so on an organisation-wide scale. In a smaller percentage of cases, outsourcing is carried out differentiating the various divisions existing within the firm and it is much less uncommon to outsource functions which only affect one department (this happens in only 7% of the cases).

3.1.2 Number of Providers

In keeping with the advice of the literature on this aspect, firms still tend to resort to more than one provider when it comes to outsourcing their IS activities (see Figure 3). With the option of multiple providers, the client firm can negotiate outsourcing contracts with multiple providers differentiated by competence, experience and market position (Cross, 1995), thus making the different providers’ skills complementary. However, this option has its risks too, such as the difficulty to manage and coordinate the work of several providers (Currie and Willcocks, 1998) and even to specify the responsibility corresponding to each provider (Loh and Venkatraman), especially when the outsourced processes are interdependent. A comparison between 2001 and 2006 reveals that more than one provider was used for
the same activities in 2001. It can therefore be said that the strategy has been maintained until the present day.

![Diagram](image1.png)

**Figure 3. Number of Providers.**

Nevertheless, it can be observed (see Figure 4) that, although the tendency to have multiple providers still prevails, it is no longer as strong as it used to be. Except for the cases of IT security and systems operation, in the rest of activities, the tendency to look for several providers was stronger in 2001 than in 2006. This is probably due to the strengthened relationships with some providers derived from contract maturity, which can reflect a degree of confidence in certain providers that could lead to a relationship adopting the format of a partnership or a true alliance.

![Diagram](image2.png)

**Figure 4. Several Providers (longitudinal).**

3.1.3 Price Structure

It becomes visible, in Figure 5, that Spanish firms prefer to have a fixed price as a way to guarantee what outsourcing is going to bring them. This method of establishing prices is appropriate when the outsourcing client’s level of demand can be predicted (Cullen, Seddon and Willcocks, 2005). The number of cases in which contracts are based on the service units received (for example, the number of payrolls processed by the provider) is smaller. This second method implies that clients only pay for what they consume. There is a third method in which the contract price depends on the costs that providers must incur in order to supply services to their clients. This option can generate a certain degree of opportunism on the part of the provider (Lacity and Willcocks, 1995), who can decide inflate costs totally out of proportion. For this reason, it is the least commonly used way to finance outsourcing.
The least often used structure

![Diagram showing the least and most often used structures]

The most often used structure

![Diagram showing the least and most often used structures]

**Figure 5. Price Structure.**

### 3.1.4 Duration

The duration of most contracts is less than one year, with a smaller group of them being made for a period of 1 to 5 years and, finally, another group where the duration is not defined because it depends on the project (see Figure 6). However, longer-duration contracts —between 5 or 10 years and more than 10 years— are less frequent. In fact, none of the firms in the 2006 survey claims to have contracts lasting over 10 years, which means that the firms interviewed follow the postulates of the literature, according to which the signature of short-term contracts appears as the best option to reduce the risks associated with outsourcing (Currie, 1998, Earl, 1996; Hurst and Hanessian, 1995, Lacity, Willcocks and Feeny, 1995). This gives more flexibility to clients, who can credibly maintain the threat that, should they not be satisfied with the provider’s performance at the end of the contract, they will look for another provider, something that becomes more difficult in a long-term contract. Previous surveys have equally confirmed the tendency to give priority to short-term contracts (Cullen, Willcocks and Seddon, 2001), but the debate about the convenience of short- or long-term contracts still continues. For instance, Kepler and Jones (1998) argue that long-term contracts make it possible to establish a mutual agreement between the parties as well as a shared learning process, and Lee, Miranda and Kim (2004) point out that in some cultures, such as the Korean one, long-term contracts are a reflection of the value that the culture in question assigns to stable relationships.

![Diagram showing outsourcing contract period (longitudinal)]

**Figure 6. Outsourcing Contract Period (longitudinal).**

Additionally, regarding contract duration, a similar behaviour scheme is observed in 2006 and 2001¹. The only outstanding difference that could deserve to be mentioned refers to the preference for

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¹ Tests have been performed to detect the statistical dependency in interviewees’ answers for this question in 2001 and 2006, and except for the case of contracts of up to one year, the rest of answers show a statistical dependency for responses in both years. A Student’s T-test for the difference of means and a non-parametric Mann-Whitney’s U-Test were carried out to that end.
contracts of either 1 to 5 years or 5 to 10 years in 2006, whereas shorter-term contracts (of up to one year) or those the duration of which depends on the contract (both of them the most flexible ones for the client) were somewhat more frequent in 2001. This can once again be interpreted as a reflection of the greater maturity or expertise of many firms in outsourcing contracts, which makes them more likely to sign longer-term contracts based on their wider knowledge and their confidence with respect to the provider.

3.1.5 Resource Ownership

<table>
<thead>
<tr>
<th>The client firm is never the owner</th>
<th>1 2 3 4 5 6 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities are never developed at the client’s facilities</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

The client firm is always the owner
Activities are always developed at the client’s facilities

<table>
<thead>
<tr>
<th>The client firm owns the hardware</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
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<td>5.9</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The client firm owns the software</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.4</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>The outsourced activities are developed at the client’s facilities</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.6</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Resource Ownership.

The complexity of the outsourcing decision not only affects the functions being outsourced but also the definition of the ownership status for the resources incorporated to the outsourced IS functions (Dibbern, Goles, Hirscheeim and Jayatilaka; 2004). Table 3 shows that the client owns both the hardware and the software in the outsourcing contracts signed by the largest Spanish firms (the mean and the mode are 7 with respect to both aspects). Additionally, the outsourced services can be delivered on-site (at the client’s facilities) or off-site (at the provider’s facilities) and, in the case of Spanish firms, a preference is identified for service delivery at the client’s facilities. This means that the provider’s employees go to the client firm’s premises, which very often leads to the creation of work and trust links between the staff of both organisations and benefits the outsourcing relationship (Zufiria, 2006).

3.1.6 Commercial Relationship

A final characteristic of the outsourcing contract would refer to the determination of the commercial relationship existing between the client and the provider firm. This link can range between total independence of the firms —with only a market-based contractual relationship— and a rather strong mutual dependency, which partly eliminates the risk of opportunism and ensures the quality conditions in the service received by the client —as in the case where the provider is an affiliate or subsidiary of the client firm. Nevertheless, some authors claim that this is really a “quasi-outsourcing” relationship rather than an outsourcing one (Barthélemy and Geyer, 2005).
The interviewees were asked to define their relationships with their providers, Figure 7 showing that the link is often confined to the outsourcing contract. Although this is not common, there are cases in which, despite the absence of ownership relationships, some initiatives are shared. This represents a first step toward the maturity of outsourcing contracts, as joint initiatives can lead to a partnership type of relationship which adds more value to the services hired. Less common are the cases in which either the client owns part of the social capital of the provider or the latter is an affiliate or a subsidiary of the client firm.

3.2 The Future of Outsourcing

Figure 8 reflects the interviewees’ opinion about the future of outsourcing in large Spanish firms. The answers are conservative, since most of the interviewees indicate that they will maintain the internal-external service ratio. It also stands out that a growth of outsourcing on a national scale is identified, based on the sacrifice of the IS internal services of firms, which will be either reduced or, in a smaller number of cases, eliminated. The answers related to the future of international outsourcing are not very significant, which clearly indicates that this type of outsourcing is far from being consolidated in Spain. Finally, the reduction or elimination of outsourcing, either nationally or globally, seems much less likely.

The longitudinal study (Figure 9) shows that the proneness to reduce or eliminate internal services in favour of outsourcing is greater in 2006 than in 2001.
4 SUMMARY AND CONCLUSIONS

IS outsourcing is a widespread phenomenon, both internationally and in the specific context of large Spanish enterprises. Nevertheless, the IS outsourcing rate in Spanish firms seems to have decreased in recent years and Spain has clearly been left behind in the field of global outsourcing, which still has a very limited presence in this country. Selective outsourcing is still preferred by Spanish firms, which outsource the most specific activities requiring a lesser degree of adaptation to each client’s special features. The outsourcing of activities is mostly applied on an organisation-wide scale, not on a division or department level.

Following the advice of the literature on this matter, the interviewed firms choose more than one provider in their outsourcing contracts, thus avoiding the dependency on a single provider and reducing the risk of opportunism on the part of the latter. However, the tendency to have several providers has become less marked during the last few years, which can suggest a greater degree of confidence with certain providers that can lead to partnerships or alliances.

Fixed prices and short duration prevail in the IS outsourcing contracts signed in Spain. This has as its aim to avoid being tied to a single provider which might deliver a poor service. The number of longer-term contracts has increased in recent years, though. And this again indicates a higher degree of maturity or experience on the part of the client, who dares to become more closely tied to providers, based on the higher experience and confidence levels.

Firms prefer outsourced activities to be carried out at their own facilities and with their own hardware and software. Although they do not usually have ownership links with their outsourcing providers, both organisations share joint initiatives in some cases, thus taking the first step toward a closer client-provider relationship.

The future of outsourcing in Spain seems guaranteed, because the firms analysed confirm a greater proneness to reduce or eliminate external services in favour of national outsourcing. However, international outsourcing still finds itself at a very incipient stage of development in Spain, its prospects for the future not being too bright either, at least in the short term.

IS outsourcing is a complex decision which not only refers to whether or not it is advisable to outsource and to the choice of activities that should be outsourced. We hope that the present paper could contribute to deepen on the level of detail required for the comprehension of IT outsourcing and particularly to understand the development of outsourcing practice in Spanish firms.

References


