

SUB-CONTRACTING POLICIES: THE CASE OF THE CONSTRUCTION FIRMS IN BRAZIL

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Construction projects in Brazil are more and more undertaken by sub-contractors under the direction of a major contractor, in common with to what is happening in different parts of the world (Cardoso 1996). Construction projects are executed by general contractors who retain the services of special trade sub-contractors (Eccles, 1981). This paper documents the results of an exploratory study about the level of integration found in a sample of 60 building companies of Florianópolis, a city of some 300,000 inhabitants in the south of Brazil. An analysis was conducted on the contractual relationships between general contractors and sub-contractors of 20 companies. The paper initially investigates the issues general contractors have to face when they decide to integrate their business with those of the sub-contractors. In order to do so corporate and operational strategies concepts are brought into light. It then investigates the process of organization and management of sub-contractors in these companies focusing on the contractor's and sub-contractor's perceptions. An analytical framework describes the contractor and sub-contractor relationships including the selection criterion, partnering development, conflict resolution, process control and legal contracts. The data was collected through structured questionnaires. Differences found between the two groups, general contractors and sub-contractors are discussed.

Keywords: construction firms, partnering, sub-contracting, vertical integration.

INTRODUCTION

Presently, companies have been searching for new ways of managing and organizing their production in order to increase their competitiveness and productivity (Endoh 1990). There is a growing tendency for low levels of vertical integration which has been drawing attention to the outsourcing and sub-contracting theories.

Within this context, the building industry is referred to as one of the most significant contemporary examples in which outsourcing and sub-contracting are the focus of the productive process (Beardsworth 1988).

This paper, part of a broader work, aims at identifying and analysing the levels of integration in a sample of building companies in a city located in the South of Brazil, and at investigating the contractors' and sub-contractors' perceptions about aspects such as selection, process control, partnership, problems and conflicts, and legal arrangements.

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METHODOLOGY

The experimental research was carried out in two stages. In the first stage, an exploratory study on the integration levels of a sample of 60 building companies was conducted in Florianópolis, a city in the south of Brazil (Brandli *et al.* 1997). A structured questionnaire was chosen for this purpose. Such questionnaire was structured around previous literature references on potential activities that might be outsourced and sub-contracted by building companies.

In the second stage, 6 building companies from the total of 60 were selected among those that declared their entire productive process to be sub-contracted (Brandli 1998). These contractor companies appointed their sub-contractors, performing a total of 14 companies comprising general sub-contractors and special trade sub-contractors. The sample of the second stage of the research is shown in Figure 1, which illustrates the actors and the relationship between them.

At this stage the data was collected through semi-structured interviews carried out with the companies' engineers and with the owners/founders of the sub-contractor companies.

A GENERAL VIEW OF SUB-CONTRACTING IN 60 BUILDING COMPANIES

The level of vertical integration in the companies

The 60 building companies are not specialized in any particular field of the industry, but the construction of residential buildings was predominant, reaching around 90%, followed by the construction of commercial, services and institutional buildings (49%), public buildings (31%) and, in lower proportion, the construction of industrial buildings and others (23%). Percentages do not add to 100% because companies usually reported two or more areas of work.

The amount of construction work performed per year gives an indication of the size of the companies under investigation. The building companies showed a variation between 2,500 and 150,000 square meters built during 1996.

Table 1 shows the impact of sub-contracting with regard to the functional areas of design, administrative support, technical advice, building maintenance, industrial relations, transport, equipment hiring, sales/marketing, computing services and legal advice. The figures refer to maintaining these activities within the company itself, outsourcing and/or externalizing (the company offers services to third parties).

All the 60 companies studied indicated outsourcing some kind of activity.

The companies do not perform all the administrative tasks in-house. Most of them employ directly only industrial relations and computing staff. On the other hand 76% outsource sales and marketing services, 72% outsource legal advice and 52% outsource technical advice. It was observed that 74% of the companies outsource architectural, structural and building services design. In such cases, professionals are hired by the companies for each specific new development.

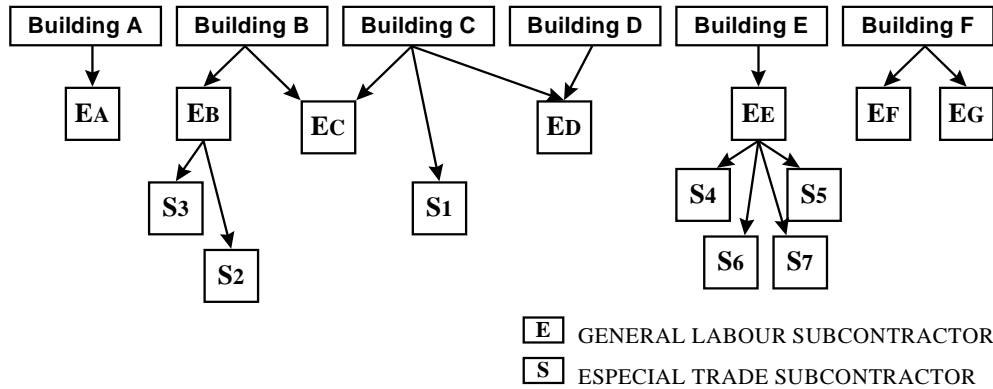


Figure 1: Sample of the contractor and subcontractor companies.

Table 1: Strategies used by building companies

Activities	Ou	Ow	Ex	Ow+Ou+Ex	Ow+Ou	Ow+Ex	None
Projects	73%	10%	2%	-	10%	4%	1%
Administrative support	4%	77%	-	-	-	-	19%
Technical advice	51%	22%	4%	-	4%	6%	13%
Building maintenance	18%	43%	6%	2%	2%	-	29%
Human resource services	12%	59%	-	-	2%	-	27%
Transportation	30%	47%	2%	-	6%	-	15%
Equipment' hiring	47%	26%	4%	-	10%	-	13%
Sales/marketing	75%	2%	2%	-	10%	-	11%
Computing services	35%	53%	-	-	4%	-	8%
Legal advice	71%	6%	4%	-	10%	-	8%

Ou: outsourcing **Ow:** owning **Ex:** externalizing

The fact that 48% of the companies indicated that they outsource hiring equipment suggests that companies look for investing the least possible in fixed assets.

Most companies, about 60% of them, informed that they do not externalize any activity. A lower proportion of them indicate the externalization of advising activities, equipment hiring and building maintenance. It is believed that such strategy is used by the companies that, having special abilities to perform certain jobs, focus on such activities and start to offer them to external companies.

As for the operational labour, about 20% of the companies sub-contract all the stages of the construction through general sub-contractors and specific sub-contractors. Less than 10% does not work with sub-contracting at any time, keeping a permanent staff of workers.

Figure 2 show the strategies employed by the companies studied in matters concerning the finish, structure and plumbing and electrical.

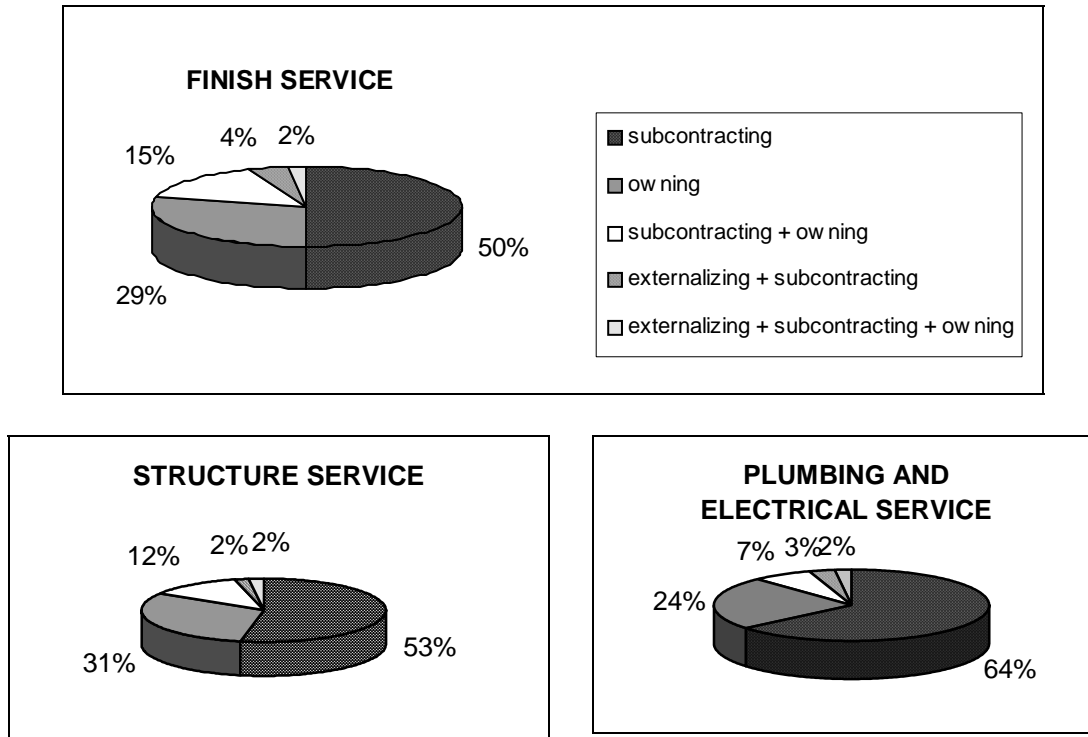


Figure 2: Strategies adopted at the finish service, structure service and plumbing and electrical services.

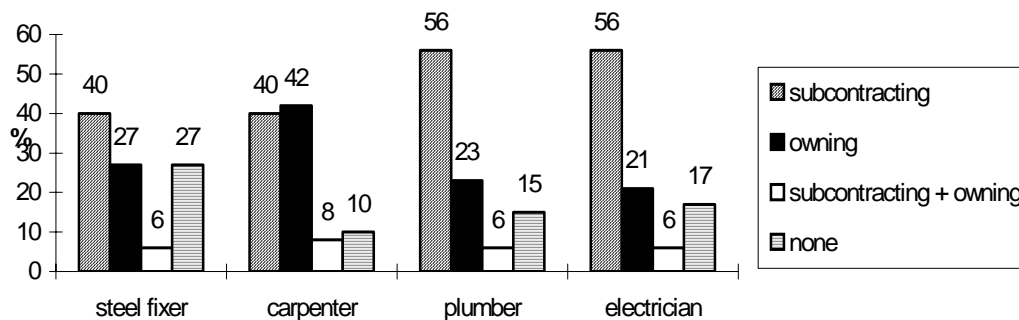


Figure 3: Relationship with the steel fixer, the carpenter, the plumber and the electrician.

IN DEPTH STUDY OF 20 SUB-CONTRACTORS

Organization of the companies with regard to labour

The building companies studied at this stage sub-contract their entire productive process as shown in Figure 5. The general sub-contractor supplies labour to execute most of the work. Some services that are not executed by him are either arranged by the sub-contractor himself or by the main contractor through special trade sub-contractors. The special trade sub-contractors are companies that supply labour for certain activities, which in this sample refer to electricity, plumbing, painting and plastering. Note that sub-contractors which provide building materials are not considered in this paper.

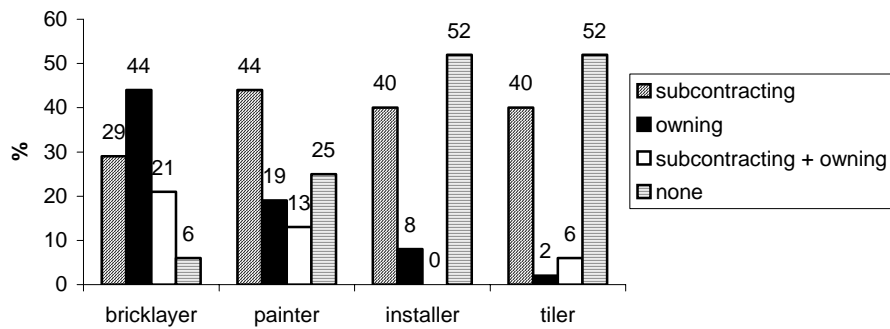


Figure 4: Relationship with the bricklayer, the painter, the installer, and the tiler.

General characteristics of the sub-contractors

The sub-contractors, whether general sub-contractors or special trade sub-contractors, are small companies with no site planning, no formalization of operational procedures, lack of staff technical qualification and poorly taken administrative decisions.

They have their origins in building labourers who establish their own company along with other workmen. After they get some practice in construction work. They recruit labour in an informal way, relying on indications made by their own workforce. On the job knowledge acquisition prevails. There is also an informal way of tendering for new jobs, with prices being fixed based upon the experience of the owner of the sub-contractor company. They do not perform detailed cost estimates for each new job.

Reasons pointed out by the companies for sub-contracting

The predominance of sub-contracting at the building site is the consequence of several influencing factors that are related to the companies strategies, the market and the characteristics of the sector. The main reasons for sub-contracting pointed out by the companies are as follows:

Subcontracting as a strategy of the company.

In these cases, sub-contracting enables the building company to concentrate its efforts in the feasibility and development stages of the projects from their beginning up to their delivery to the client. The connection between the building company and the construction work is restricted to the supplying of materials as well as recruiting, managing and co-ordinating sub-contracted workers.

Variability on the real estate demand.

Subcontracting is a mechanism for the companies to adapt themselves to the market conditions, tackling the variability and uncertainties of projects. They state the difficulty in keeping a permanent staff with a variable market demand.

Costs of the management structure in order to keep a permanent staff.

Subcontracting implies smaller fixed costs. This is due to the elimination of both the maintenance of equipment and the costs associated with idle or underused labour on the construction site, as well as the decrease in managerial costs associated with smaller manning.

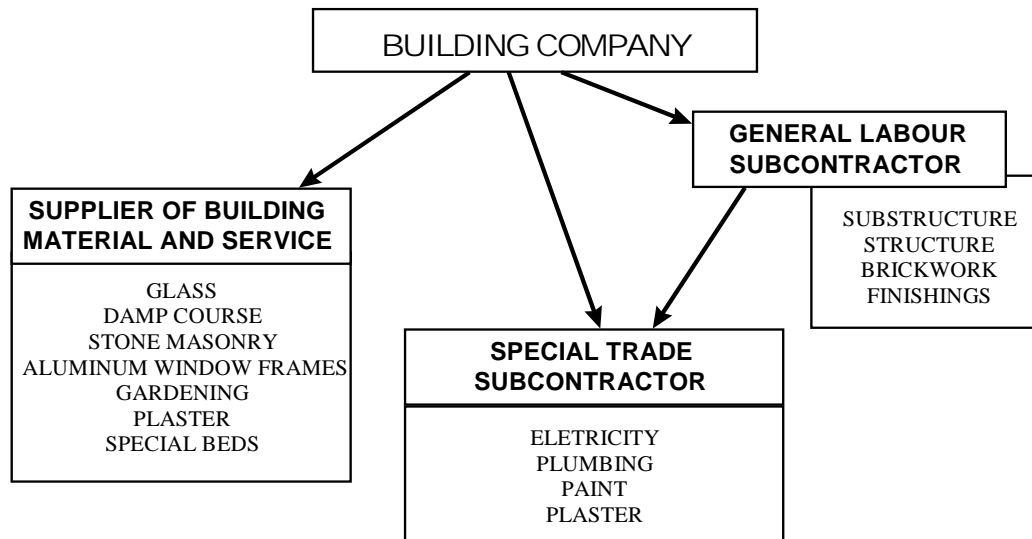


Figure 5: Organization of the buildings companies

Punctual services.

Subcontracting solves the problems concerning the required presence of certain trades only at special points in time throughout the building schedule.

Building constructions with specific characteristics.

The singularity of projects requires a unique combination of workers and building materials to be co-ordinated and assembled at the construction site. sub-contracting enables the combination of a much greater variety of building specifications.

Industrial relations conflicts between the building company and the workers

The companies admit that there is a better relationship between the sub-contractors and the workers; it is a closer relationship.

Legal issues.

Subcontracting minimises the expenditures with workers concerning the labour laws and the lawsuits brought by them. In actual fact these lawsuits are faced in the first moment by the sub-contractors and only failing them will recall on the major contractor.

The contractor–subcontractor relationship

In order to describe the relationship between contractors and sub-contractors, the investigation included the selection process of sub-contracting and the supervising of the work. In addition, this study observed whether or not the actors involved developed a relation of partnership. For such purpose, the meaning of partnership for each one of them and the perception about its existence (or not) were investigated.

The existing problems between them have also been investigated under the perspective of both contractors and sub-contractors. Finally, the existence of legal contracts, their practical application and contents have been analysed.

Selection criteria

As for the sub-contractors selection, the results confirm an inconsistent and informal process which takes place in a market where price is at the end the main argument. Initially price and quality are the most frequently cited criteria by contractors, but the

sub-contractors, on the other hand, maintain that the companies undertake their services based on their tender being the lowest price among competitors.

The technical profile, recommendation by third parties and previous experience of a sub-contractor are attributes that indicate the quality of the services a company is capable of providing and they should be more emphasized. The companies mention that only little attention is being paid to these attributes, with few cases in which the contract was awarded following, for example, a third party indication.

It seems that the attitudes of the companies are changing very slowly. They are beginning to highlight the quality of the services provided by sub-contractors, their reliance and their experience.

Process control

One of the inherent problems of sub-contracting is that the companies face difficulties and even lose control of the process. However, the results of this study pointed out that contractors do not feel losing control, they maintain that responsibility is transferred, which is a different way of exercising control. The contractor companies justify it by declaring that the development of the work is controlled by the supply of the necessary building materials and that the quality control is carried out by their own technical team responsible for the work.

As for labour control, although it is under the sub-contractors entire responsibility, there are contractual clauses that enables the contractor to intervene and to dismiss a worker whenever it is justified. However, the contractor does not have a direct control over the workers in terms of recruiting, allocation and size of the teams. In a way such aspect may be thought of as a positive one since the contractor company does not have to worry about it. The contractors, however, complain about the lack of flexibility in allocating the workers.

Partnering

There is normally a great difficulty for the organizations, and for the sub-contractors in particular, to define the expression “partnership”. In the sub-contractors’ understanding the words confidence, mutual aid and dialogue are enough in order to express a partnership relation.

Although it is an everyday expression for them, it is not a homogeneous concept. It is certainly a concept that may be understood without difficulties, but the lack of both a unique definition and a common consent about it may be contributing for a situation in which the daily practice does correspond to the statements made.

Most companies do not keep long-term relationship with their sub-contractors, although they admit the importance of them. This fact confirms the existence of strictly commercial connections, where the emphasis given by the companies on sub-contractors prices and the strong competition prevent the formation of mature relationships. This attitude also justifies the fact that the companies do not work with the same sub-contractor in all their works.

A partnership also implies the exchanging of abilities and ways of qualifying labour, within a co-operative attitude. However, when asked about the activities taken in order to qualify the sub-contractors, the companies did not refer to training and to the development of joint social and cultural events. There are actions only towards exchanging technology but conflicts might arise in this area too. The sub-contractors

reported that the main contractor might impose them to disclose their way of doing things.

The contractors also do not attempt to engage the sub-contractors earlier in the projects for planning purposes, and, most of the time there are no common goals.

Problems and conflicts

The study reveals the existence of problems and conflicts between the contractors and the sub-contractors companies, which contribute to the lack of a close partnership relation.

The problems identified by the contractors show their dissatisfaction with the sub-contractors characteristics, like lack of commitment and incapacity to follow the schedule.

The sub-contractors, in their turn, indicate problems related to the lack of support from the contractors, excessive changes in the projects, unfair competition and payment problems.

Legal Contracts

All the companies under investigation assured that do enter into legal contracts with their sub-contractors. However, it was observed that the existence of contracts was dependent upon both the kind and the amount of work, as well as upon the sub-contractor itself. Several times there is only a verbal agreement between the builder and the sub-contractor.

The general contractors normally establish contracts with the company, whereas as for the sub-contractors, such attitude varies. There is a relationship between the existence of a contract and the reliance between the parties.

The building company comes out to be the enforcing agent of the contracts, although it seems that the sub-contractors have been more and more interested in entering into formal arrangements due to the market uncertainties. The sub-contractors would like to have formal contracts due to its extra reassurance in terms of the financial agreements made by the parties.

The companies state that the contracts are established only after they have been approved by both parties. Nevertheless, there is dissatisfaction among the sub-contractors concerning some conditions imposed by the company which, endowed with bargainness power, enforce the contracts to their benefit.

When asked about the practical application of the contract both parties affirmed that it generally works fine, except for some changes which get out of control, normally related to the working schedule. The contracts analysed do not have many differences in terms of their formalities and terms.

CONCLUSIONS

The results confirm the low level of vertical integration in the building industry, in which sub-contracting is a strategic choice of the companies, and is especially adopted because it reflects a higher adapting capability of the company to the variations of the market demand, to the unique characteristics of each work, and to the difficulties in facing fixed costs which are inherent to having its own workers (social benefits, equipment and tools).

Subcontracting is established by means of two kinds of sub-contractors: the general sub-contractors and the special trade sub-contractors, whose basic difference is the extent of the service they offer.

The primary characteristic of the sub-contracting process is the total submission of the majority sub-contractors to the building companies, since the contractual relationships are influenced and dominated by the major party.

The results show several points of discontentment between contractors and sub-contractors, which do not lead to a relation of partnership. Both parties are still in a stage of resentment due to each other business practices, where expectations are not fulfilled. Despite the great exposure to media exhortations, seminars and conferences, availability of technical and consulting advice, partnering concepts did not make yet their way through the building companies under investigation.

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