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**To what extent does it pay to be supplier of a powerfull
enterprise? The Petrobras Case**

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INTRODUCTION

Anecdotal evidences show that some multinational enterprises deploy aggressive suppliers development programs arguing that being part of its vendor list is a competitive advantage for the supplier. Building on Transaction Costs Theory and Social Exchange Theory, this study aims to explore to what extend does it really pay to join a multinational network.

The main questions that will guide this work are: Can a powerfull enterprise really add value to its suppliers? What kinds of benefits are involved? How does it happen? Is there a spillover benefit in doing this? Are there specific contexts to get advantage from an important network?

In order to accomplish the objectives, a multiple exploratory, descriptive case study was conducted. The case studied is a fragment of Petrobras supplier network players. For drawing a more comprehensive picture of its dynamics, four suppliers were selected to join the present study. The selection of the cases considered different organizations profiles in order to observe the phenomenon in diverse perspectives and complexities.

THEORETICAL FOUNDATIONS

Transaction Costs Theory

Transaction Cost Theory (TCT) is the dominant theoretical approach to study the interorganizational relationships in supply chains. This theory had its origins in Coase's (1937) work and its main enhancements developed by Williamson (1975, 1981, 1991).

The theory considers firms as governance structures in which some activities should be undertaken by the firm under its hierarchical structure, and others should be done in the market (WILLIAMSON, 1981). The focus of the theory is efficiency. Then, people will seek to governance structures that enable greater cost savings (RINFLEISCH; HEIDE, 1997).

According to Coase (1937), a firm will develop an activity internally until the costs involved become equivalent to the cost of the same transaction in the market. These costs were called transaction costs by Williamson (1975), which suggested that these include both – direct costs (related to the relationships management) and opportunity costs (related to the decision making about the governance structure).

According to Rindfleisch and Heide (1997), transaction costs are the needed costs to ride the system. These costs can be "ex ante" - drafting and negotiation of contracts - and "ex post" - monitoring and implementation. Similarly, Hobbs (1996) understands transaction costs as costs involved in any exchange – between firms or in the transfer of resources between the stages of a firm vertically integrated. The author divides these costs in: (i) information costs, (ii) transaction costs and (iii) monitoring costs.

Grover and Malhotra (2003) also discuss the concept of transaction costs discussed by Clemons et al. (1993), which are composed of the coordination costs and the risk of the transaction.

TCT has received great attention in studies from many fields of knowledge (RINDFLEISCH, HEIDE, 1997). In its beginning, the theory has the individual

transaction between organizations as the unit of analysis (NOTEBOOM, 1992). Later works expanded the unit of analysis and added a point that was overlooked: the temporal dimension of relationships - past transactions may influence future negotiations (GULATI, 1995), predictions about future changes can influence how transactions will be developed (HEIDE, MINER, 1992).

The theory has assumptions about the human behavior (bounded rationality and opportunism) and the transactions dimensions (asset specificity and environmental and human uncertainty).

The bounded rationality addresses that people, despite the intention to make rational decisions, are limited in their cognitive ability to effectively evaluate all possible decision alternatives. This aspect is stressed in an environment of uncertainty, where the ability of people making rational decisions is reduced (HOBBS, 1996; RINDFLEISCH, HEIDE, 1997). In this context, it is not possible to specify "ex ante" circumstances involved in a transaction and easily assess "ex post" its performance (RINDFLEISCH, HEIDE, 1997).

Another aspect of human nature is opportunism - organizations and individuals will seek to exploit the situation to their advantage. The literature highlights that is not a rule, but the risk of opportunistic behavior is always present and it is difficult to know in advance who is reliable (HOBBS, 1996). Thus, it is assumed that if there is an opportunity, decision makers may serve their own interests rather than the other party.

Regarding to the transactions dimensions, asset specificity is observed when one invests in the partner specific resources to the transaction that has little or no value in another relationship (HOBBS, 1996). This situation carries a high risk of opportunistic actions. Thus, asset specificity increases transaction costs (WILLIAMSON, 1991) due to the risk of opportunism.

For environmental uncertainty, the theory discusses its main impact, referring to problems of adaptation - modification of agreements under different circumstances (RINDFLEISCH, HEIDE, 1997). Market aspects may not be easily predicted and monitored, reactive actions may be difficult or impossible to put in place. Regarding to the behavioral uncertainty, Rindfleisch and Heide (1997) address the problem of performance evaluation - difficulties in checking whether the agreements were met. The asymmetry of information increases the uncertainty because the parties involved in the transaction don't have access to the same information. Thus, this uncertainty can increase transaction costs and result in opportunistic behavior in two ways: earlier opportunism (when information is omitted before the transaction) and later opportunism (when activities are not monitored directly) (HOBBS, 1996).

Besides the problems of adaptation and evaluation, the theory still addresses the problem of safeguards. This problem arises when firms have specific assets to the transaction and fear that the partner acts opportunistically. In this context, it is necessary to develop safeguard mechanisms (RINDFLEISCH, HEIDE, 1997).

Grover and Malhotra (2003, p. 460) summarizes the main propositions of the theory:

Bounded rationality and opportunism give rise to transaction costs. These costs are higher under conditions of high asset specificity and high uncertainty. The most efficient governance mechanism (markets or firm) needs to be chosen to organize economic activity. In general, lower transaction costs favor markets, while higher transaction costs favor hierarchies.

Thus, whether the need for adaptation, performance evaluation and safeguard costs is low or nonexistent, the actors will opt for market governance. If these costs

exceed the benefits, the internal production (hierarchical governance) will be preferred (RINDFLEISCH, HEIDE, 1997).

Later works discussed the concept of "hybrid structures" that are in the continuum market-hierarchy (WILLIAMSON, 1991). These hybrid structures are determined by the level of vertical integration and the degree of cooperation in the relationships (GROVER; MALHOTRA, 2003). They can exist without complete vertical integration, with the parties remaining autonomous and bilaterally dependent (WILLIAMSON, 1991).

Although the contributions of the TCT to study the relationships in supply chains, there are limitations on its exclusive use, due to its focus on minimizing costs and not on generating value - benefits of the relationship (ZAJAC; OLSEN, 1993; GOSHAL, MORAN, 1996). By ignoring this value set, TCT assumes that the existence of interorganizational strategies is irrational from the standpoint of efficiency in transaction costs (ZAJAC; OLSEN, 1993).

Social Exchange Theory

Another important theory that is considered one of the most important conceptual paradigms in the study of human behavior in organizations is Social Exchange Theory (SET). Lambe et al (2001) believe that SET may be traced to "one of the oldest theories of social behavior".

Homans (1958) stated that any interaction between individuals is an exchange of resources and that what is exchanged may be not only tangible, such as goods or money, but also intangible, such as social amenities or friendship.

Theoretically, although there are some differences among the principal SET's authors, they converge on the essence of the theory which basic assumption is that parties enter into and maintain relationships with the expectation to be rewarded or to avoid punishment (Homans, 1958, Emerson et AL, 1976; Cropanzano (2005).

Narashiman et al (2009) explained that basic assumptions of SET are (1) people are rational and calculate the best possible means to engage in interaction and seek to maximize profits/returns; (2) most gratification is centered in others; (3) individuals have access to information about social, economic, and psychological dimensions that allows them to assess alternatives, more profitable situations relative to their present condition; (4) people are goal oriented; (5) building social "credit" is preferred to social "indebtedness"; and (6) SET operates within the confines of a cultural context (i.e., norms and behaviors being defined by others).

One factor that may explain the increased use of SET in Management Field is that the other approaches uses are limited, such as the inability of TCT to explain relational governance mechanisms, led many researchers opted to use the SET approach, especially because their wide applicability in the explanation of dealing mechanisms in the relationship between businesses (B2B) (Lamb et al., 2001).

There are some fundamental precepts in SET (called propositions) stated by Homans (1958, 1961). First, the success proposition argues that for all actions taken, the more often a particular action is rewarded the more likely a member to an exchange will perform that action again (Homans, 1961). In the supply chain context, "gain sharing" arrangements between a buyer and a supplier are reflective of this principle. The value proposition argues that the more valuable to a member of an exchange is the result of the member's action, the more likely the member of the exchange is to perform the

action again (Blau, 1964; Emerson, 1976). In the supply chain context, “partnering” between a buyer and a supplier reflects this principle. The reward proposition (also known as the deprivation-satiation proposition) argues that rewards gain value when deprived. The aggression proposition argues that when an exchange member’s action does not receive the expected reward, or receives unexpected punishment, the exchange member will aggressively avoid the action in the future (Homans, 1961). Finally, the rationality proposition argues that in choosing between actions, a member to an exchange will choose the one for which the expected value of the reward is greater.

In order to adapt this theory to this paper’s approach, we will use what Emerson (1976) stated as the two most prominent research topics in SET and emphasized by Narashiman et al (2009): power and justice.

Power and dependence are linked and refer to difference from one social actor toward another within a greater social system.

METHODOLOGY

In order to accomplish the objectives, a multiple exploratory, descriptive case study was conducted. The techniques and data collection instruments were determined and used according to needs of each phase. The researchers conducted a literature review on the main themes relevant to this study using scientific articles, books, newspaper and magazine articles, and other publications aiming to: (a) obtain updated and relevant information about Petrobras supply chain; and (b) search on the Operations Management and Supply chain literature for theoretical models about suppliers relationship management that could be used to guide the analysis of the case studied.

The case studied is a fragment of Petrobras supplier network players. In order to understand to what extent does a multinational suppliers management development guidelines impacts effectively its vendor list, it was decided to analyze it from different perspectives. Firstly, by focal firm perspective followed by the lens of a current supplier (it was decided to split into 2 different profiles – a long term supplier and a newcomer, a brand new supplier). It was also included the perception of a candidate supplier, an organization which is addressing its current process to attend Petrobras guidelines. And finally, the view of an ex-supplier, would be appreciated. The multiple case study is structured as figure 1:

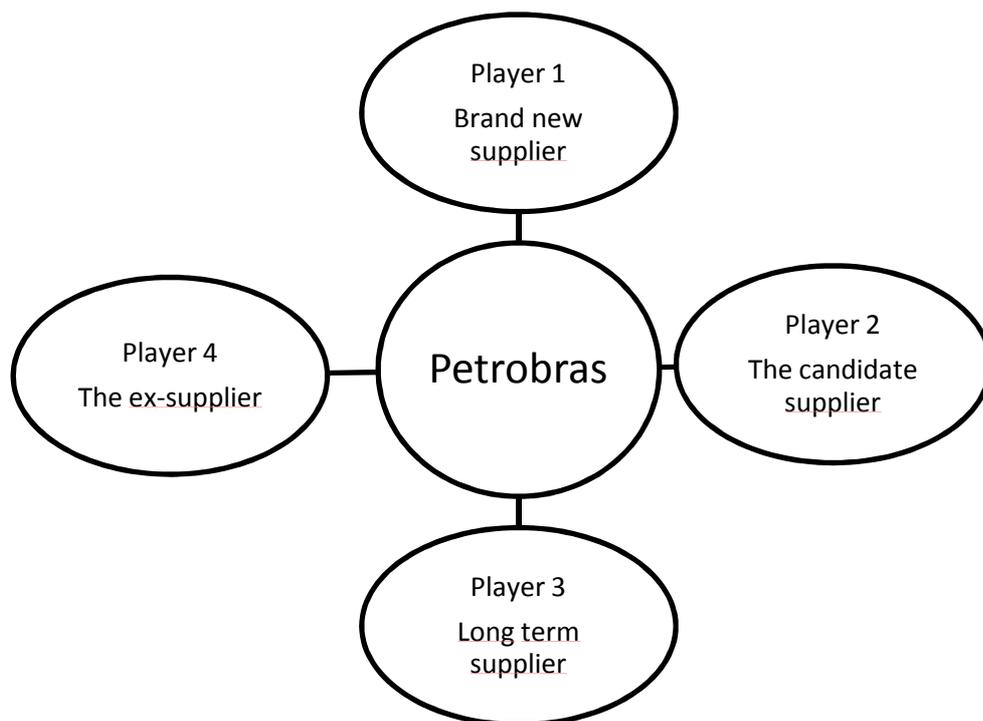


Figure 1: Case study components

Source: Prepared by authors

As per Eisenhardt and Graebner (2007) suggestion, the selection of the cases considered different organizations profiles in order to observe the phenomenon in

diverse perspectives and complexities. After selecting the cases, authors exploited these strategies by interviewing organization's Executives (semi-structure questionnaires), analyzing documents and researcher's observation notes.

THE CASE STUDY

The case study is in early development. Following it is presented the preliminary results of the study.

1. Petrobras Perspective

Considering the strategic importance of Petrobras for the development of Brazil, the government created in 1998 a decree to give agility and flexibility to the Company's hiring process. The decree (Law 2745 – August 1998) is specific to Petrobras and was created with the Petroleum Law. Before the decree, Petrobras followed the 8666 Law, which presents some differences comparing to the decree. The most important ones are: the decree does not require the publication of the invitation in major newspapers – the invitation can be sent only to companies that are able to provide the product/service; the process is faster, decentralized and gives autonomy to the Company.

The hiring process is conducted through a Corporate Procurement Portal – Petronect. Nowadays, the company has more than 100 contracts. Tendency to medium-term contracts (2 to 3 years, extendable). In cases of more specific services (critical), the periods are larger. Letter of invitation is the main kind of contract used. There are two main kinds of suppliers: long-term and spot ones.

1. Supplier selection

Companies that want to be a Petrobras supplier, must subscribe at Petronect. But, before the registration, the supplier has to be qualified in terms of management/finance, technical aspects and history. The suppliers are divided by specialty "in families"

The supplier selection has some stages: first, the invitation letter is sent for the selected companies. Then, the companies have 15 to 30 days to prepare the proposal. The period starts only after all companies have received the invitation.

Petrobras requires that the potential suppliers make a technical visit. During all the process, the company is opened to answer technical and commercial questions, that are published to inform all those involved and to promote equality.

At no time, the supplier can claim ignorance of the content / scope of the work. Before a hiring process, Petrobras staff estimates the value of the product/service that will be contracted. After comparing the estimated value and the supplier's proposal, Petrobras calls the supplier to a negotiation meeting to discuss a better margin for both parties (if the value is much higher than expected) and to a diligence meeting (to be sure that the supplier understood the work). After this, it is declared the winner and the contract is signed.

2. Transaction Management

Petrobras has some safeguards, as fees, to guarantee the work done and to prevent opportunistic actions. The contracts are relatively flexible, the clauses can be renegotiated if necessary – possibility of additives.

If there are problems with quality or time limit, the supplier is called to a meeting. In cases of discordance in products/services, the Company blocks the payment until the resolution of the problem.

When a supplier makes a serious mistake (specification deviations, inappropriate behavior), it can be forbidden to get new business from the Company. The supplier is assessed in terms of time, value, volume executed, quality and behavior.

After signing the contract, a new stage starts: the monitoring. In this process, there are two figures: the manager and the controller of the contract (people from the area that required the product/service). This task includes: monitor the contract deadlines and scope and monthly assess the suppliers. When the contract finishes, it is renewed if both parties agree or a new bid is opened.

3. Relationship

The company has specific assets with some suppliers: equipments for industrial area; mechanical materials, facilities and laboratories. The relationship is very close in some cases. “There are vendors that we never want to leave. They’ve incorporated the company's culture and philosophy. We consider them as partners, it seems like we are from the same company. They do not cause troubles, behave well, follow the rules, they have quality and deliver what we’ve asked”.

About training activities, all vendors receive training, particularly related to security and aspects of the Company’s business. In the Petrobras Research Center (CEMPS), there are many projects (development of new technologies, process improvements, means of preserving the environment, reduction of waste and pollution, new measurements, efficiency improvements) being developed in partnership with

research institutes, national and international companies and universities (for instance Federal University of Sao Carlos, University of Sao Paulo, University of Campinas).

Considering the information and knowledge sharing, Petrobras employees say that "it is essential to exchange information with the supplier throughout the process to get the work well done".

About the cooperation, it is assured that they collaborate a lot with the suppliers. "I see many benefits of collaboration: quality, time and costs gains".

CONSIDERATIONS

The current outcomes of the interviews are not robust enough to be present in this moment. Authors are still addressing interviews and collecting data with the four suppliers in order to compose a final framework.

However, preliminary results suggest that in some aspects the points of view of Petrobras and its suppliers are similar. But, in others, they are opposite. Some actions can be understood differently depending on the context, the people from the enterprises involved, the history of the relationship and the transaction costs involved.

These results can be explained through the lens of the theories in terms of the main aspects discussed: power, dependence, bounded rationality, opportunism, justice, asset specificity and uncertainty.

Besides the different views from Petrobras and its suppliers, it is interesting to note that, depending on the stage of the relationship – brand new supplier, candidate supplier, long term supplier and ex-supplier – the perception of value added from the relationship varies.

Considering the first findings from this study, we believe that it will can bring important contributions about the buyer-supplier relationships.

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