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A QUANTITATIVE ANALYSIS APPLYING AGENCY THEORY TO PURCHASING
DEPARTMENT INVOLVEMENT

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Abstract

Involve purchasing department (PD) in the sourcing process adds value by improving costs, quality and service. Previous studies indicate that not all activities are under PD. This paper proposes a quantitative study applying agency theory (AT). As main results is presented the relation between AT assumptions and PD involvement.

1.Introduction

Companies invest 50% to 65% of its sales revenue on purchases of materials and services from suppliers (COUSINS and SPEAKMAN, 2003; MOSCHURIS, 2008; MONCZKA, 2009). About half of this amount is spent on the purchase of items not related to production such as Logistics, Consulting and Marketing (ELLRAM et al, 2004; IRELAND, 2005, CARTER et al, 2003, BOER et al, 2003). The hiring of highly specialized services is defined in the literature as Business Services Sourcing (WYNSTRA et al, 2006; SELVIARIDIS et al, 2010; VALK and ROZEMEIJER, 2009) or Professional Services (SONMEZ and MOORHOUSE, 2010, COUSINS et al, 2008, CARTER et al, 2004). The importance of involving purchasing department in the sourcing process is explained by the value that the techniques, skills and expertise can add to the sourcing process (TATE et al, 2009). This value is realized through improvements in quality, costs and service levels (IRELAND et al, 2005). Despite the value proposition that the involvement of the purchasing department can bring to organizations, previous studies indicate that not all activities of the hiring process in an organization of suppliers conducted by your purchasing department (SCHIELE and MCCUE, 2004, 2006; WERR and PEMER, 2002; BALS et al, 2009; TATE et al, 2009). In the specific case of professional services, most sourcing process occurs without a meaningful participation of the purchasing department (SMELTZER and OGDEN, 2002, CARTER et al, 2003). As a result, it reduces access to the value that can be created by the purchasing department (TATE et al, 2009;

ELLRAM et al, 2007; BALS et al, 2009). Previous work using Agency Theory to address the issue of involvement of the purchasing department (MORGAN et al, 2006; CILIBERTI et al, 2010; TATE et al, 2009) are predominantly qualitative (SCHIELE and MCCUE, 2006; BALS et al , 2009; SELVIARIDIS, 2010) with few exceptions (SCHIELE, 2009). This article proposes to conduct a search of the descriptive type, with quantitative method in order to contribute with a different approach to the subject.

2. Conceptual Framework

The proposal of the paper is to test if involvement of the Purchasing Department is related to Agency Theory premises. Identifying these relationships will provide more insight into how Purchasing Department Involvement is actually affected. Agency Theory and dimensions of Purchasing Department Involvement are discussed in the next section. The framework is shown in Figure 1.

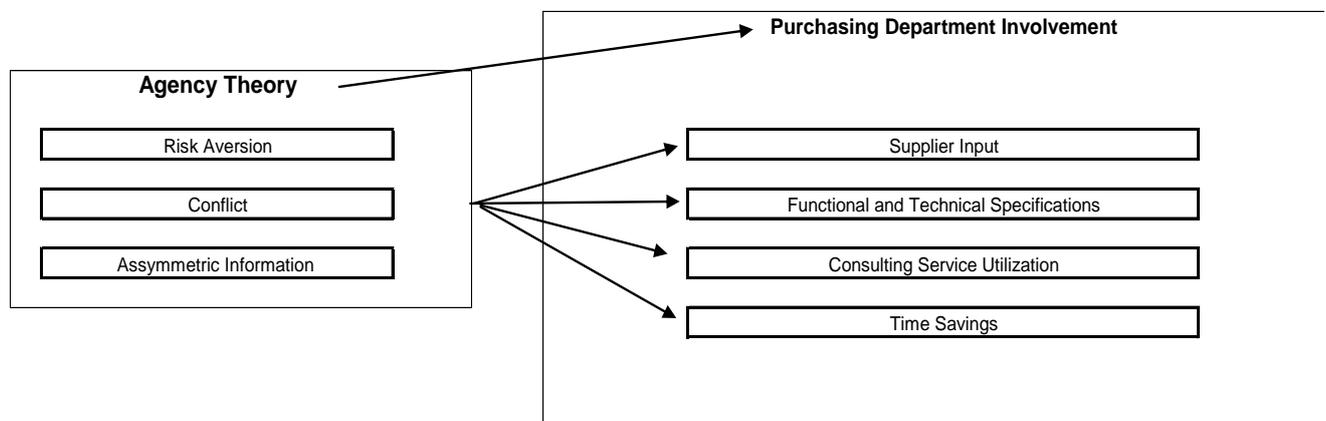


Fig. 1. Conceptual model

2.1 Purchasing Department Involvement

Involvement, according to Engel et al (1995) is the degree of perceived personal importance and or interest evoked by a stimulus within a specific situation. In the case of involvement of the purchasing department, it is understood as the time and collaboration perceived by the internal client added to the hiring process (STUART, 1991). Schiele and McCue (2004) propose four

dimensions to measure Purchasing Department Involvement: Supplier Input, Functional Technical Specifications, Consulting Service Utilization and Time Savings. All are related to overall level of involvement (SCHILE and McCUE, 2004). Scales were adapted as indicated at Table 1.

2.2 Agency Theory

The main assumptions of agency theory are around human characteristics, and organizational information. According to Eisenhardt (1989), agency theory assumes that individuals have interests at your own risk, as organizations have an aversion to conflict among its members. Jensen and Meckling (1976) define an agency relationship as a contract under which one person (the principal) hires another individual (the agent) to perform some service or interest. If both parties have different interests in relation to the object, there is good reason to believe that the agent does not always act in the best interest of the principal. According to Eisenhardt (1989), the Theory of Agency will be concerned with the resolution of three problems that can occur in a contract between the Principal and Agent.

- a) Conflict: the problem arises when the objectives of principal and agent are conflicting and when it is difficult to check whether the agent is acting according to their interests.
- b) Asymmetric Information: agent and principal have different levels of knowledge about the service to be sourced.
- c) Risk Aversion: Principal perceives a risk of the supplier that was hired by the agent.

The scales used were adapted from previous studies, as indicated (Table 1).

	Factor	No of Items				Adapted from
		Original	α	Used	α	
Involvement of the Purchasing Department (PD)	Supplier Input	8	0,88	4	0,82	(SCHIELE e McCUE, 2004, 2006; SCHIELE, 2009)
	Functional and Technical Specifications	9	0,92	4	0,85	(SCHIELE e McCUE, 2004, 2006; SCHIELE, 2009)
	Consulting Service Utilization	8	0,90	4	0,88	(SCHIELE e McCUE, 2004, 2006; SCHIELE, 2009)
	Time Savings	11	0,85	3	0,73	(SCHIELE e McCUE, 2004, 2006; SCHIELE, 2009)
				% Var	70,30%	
Agency Theory Premisses	Risk Aversion	5	0,68	3	0,58	(SCHIELE e McCUE, 2004, 2006; SCHIELE, 2009)
	Conflict	4	0,77	3	0,78	(BENTON e MALONI, 2005)
	Assymmetric Information	8	0,81	4	0,75	(HULT, <i>et al</i> , 2000)
				% Var	63,90%	

Table 1: Final Measurement tool

Several items were deleted to obtain clear factor structures, but the three items typically suggested (HAIR et al. 2006) were preserved.

3.Methods

The conceptual framework in Fig. 1 was tested empirically by a survey, that was developed based on instruments that had been validated in earlier research. All scale items were measured on a 5-point Likert Scale, ranging from (1) “completely disagree” to (5) “completely agree”. The respondents were invited when participating at events as Supplier Relationship Management, Supplier Risk Assessment, Sourcing and Procurement and Indirect Spend Management, that happened in Sao Paulo, Brazil, during the year of 2011. Table 2 presents the response rates.

Course / Seminar	Institution	Respondents Contacted
S R M	ESPM	80
S R A	ESPM	40
SOURCING AND PROCUREMENT	FIA	60
INDIRECT SPEND FORUM	ALATUR	491
	Total contacted	671
	Filled the questionnaire	163
	Response Rate (%)	24,29%

Its not possible to identify what caused the highest reponse rate, as it was a premisses to not identify the source - web-based questionnaire. Each individual received na email that gave access to it.

Table 2: Response rates

The respondents are internal client of the Purchasing Department, and they have never worked as a Purchasing professional. The categories they managed are the ones related to Professional Services, as Consulting, Marketing, Logistics, Travel, IT, Finance, Legal Affairs and Benefits. 70% of the respondents are supervisors, managers and directors and the total spend managed by the 163 respondents are approximately US\$ 400 millions.

4.Results

Table 3 shows the distributions and correlations between all variables in the study, and an overview of the regression results is given in Table 4. The results suggest that Risk Aversion is positively related to Functional and Technical Specifications; Conflict negatively affects Supplier Input and

Asymmetric Information is positively related to Supplier Input and Functional and Technical Specifications. There are relations between Agency Theory and Purchasing Department Involvement, in all dimensions, except for Consulting Service Utilization and Conflict and Time Savings dimensions and Risk Aversion.

	Mean	Std. Dev	N	Supplier Input	Functional and Technical Specifications	Consulting Service Utilization	Time Savings	Risk Aversion	Conflict	Asymmetric Information
Supplier Input	3,423	0,908	163	1,000						
Functional and Technical Specifications	3,137	0,929	163	0,642 0,000	1,000					
Consulting Service Utilization	3,196	0,992	163	0,547 0,000	0,533 0,000	1,000				
Time Savings	3,166	0,926	163	0,457 0,000	0,497 0,000	0,478 0,000	1,000			
Risk Aversion	3,493	0,848	163	0,469 0,000	0,426 0,000	0,286 0,000	0,172 0,028**	1,000		
Conflict	2,346	0,971	163	-0,395 0,000	-0,441 0,000	-0,273 0,000	-0,325 0,000	-0,316 0,000	1,000	
Asymmetric Information	3,448	0,849	163	0,454 0,000	0,422 0,000	0,481 0,000	0,460 0,000	0,169 0,031**	-0,208 0,008	1,000

p-values are smaller than 0.01, there is sufficient evidence at $\alpha = 0.01$ that the correlations are not zero, except **.

Table 3 Correlation Table

		Supplier Input	Functional and Technical Specifications	Consulting Service Utilization	Time Savings	Involvement (Overall)
Risk Aversion	<i>R</i> ²	0,216	0,368	0,265		0,399
Conflict	<i>R</i> ²	0,394	0,190		0,258	0,561
Asymmetric Information	<i>R</i> ²	0,357	0,300	0,227	0,207	0,600

Table 4 Multiple Regression results

5. Discussion

The objective of this article was to identify the variables that may influence the involvement of Purchasing Department by its users (internal customers). The focus was mainly at the purchasing categories which recent literature presents low involvement. This study contributes by analyzing the effects of theory agency premises on specific dimensions of purchasing department involvement. High performance on the overall involvement is proved to be linked negatively to Conflict and positively to risk aversion and asymmetric information. It means that minimizing conflict between the Principal, internal customer, and the Agent Purchasing Department, it may maximize involvement. And increasing confidence between both entities, risk aversion, it increases

purchasing department involvement. At last, having more information shared between Agent and Principal, the involvement increases. Secondly, there is no relation between Conflict and Purchasing Department as a Service and Consulting area. It is in line with expectations, as so to be viewed as a service provider conflict is not a variable to exist. Time Saving is not expected to be related to Risk Aversion, as so.

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