

The relationship between the level of maturity of the Strategic Purchasing Model and its performance: An empirical study in Chilean organizations

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Abstract

This empirical study determines the relationship between the level of maturity along the Strategic Purchasing model and performance. Based on the Strategic Purchasing models in the literature; the study first proposes a model that includes five strategic areas: strategic planning, human resources, organizational processes and tools, supplier management, and communication with stakeholders. A subsequent empirical study of 278 Chilean firms evaluated the relationship between the level of maturity and purchasing department performance. Results confirm a strong significant relationship between maturity and performance. Implications confirm the value of investing in the development of the purchasing function in organizations.

Key words: Maturity model, purchasing department, provisions, output, supply chain

1. Introduction

Since the mid-eighties the purchasing model¹ has received growing attention from researchers and practitioners (Kapoor & Gupta, 1997; Trully, 1995). Research supports purchasing's role in business because it is considered a task that can add a significant competitive advantage (Spekman & Hill, 1980; Kraljic, 1983; Ellram, 1995; Carr & Pearson, 2002; Sánchez-Rodríguez, 2005). Traditionally, purchasing has been considered an operative function at the service of other departments (oftentimes the production department), whose duty was to process shopping orders for other departments as they attempted to obtain some sort of saving in their prices. According to this vision, purchasing was an accessory activity for the company. It displayed little relevance or status compared to other areas; it had no involvement in the company's

¹ In the present article the terms Purchases, Purchasing function, Purchasing model, or Purchasing Department will be used interchangeably to refer to the task that a company carries out to acquire and/or utilize external goods and services.

strategy formulation; it was responsive to internal requests and it had low perceived value for executives and managers (Keough, 1994).

During the mid-eighties and beginning of the nineties some companies such as, General Motors, General Electric, and Black and Decker, began to recognize the importance of the purchasing department as a key resource to achieve high Quality, smaller delivery times and significant cost savings. Indeed, since purchases in industrial companies reached 60% of the company's sales, a better purchasing management would imply significant improvements in results (Spekman, 1985). As a result, nowadays the purchasing role has broadened from a simple support function, to one that actively participates in the strategic planning and implementation. Its mission has become how to "obtain, from external resources, goods, services, knowledge, and innovation necessary to create and maintain the company's competitive advantages" (Van Weele, 2000). This purchasing approach bases its role on managing both external suppliers and resources.

The ability to actively manage the suppliers' network through collaboration, integration in the launching of new products, and the innovation and value uptake, has become a competitive weapon that allows to better satisfy the needs of external customers (Aguilar, 1992; Keough, 1994; Carr & Smeltzer, 1997; Van Weele, 2002; Van Weele, 2010). It is worth citing, as examples, the importance of suppliers for innovation uptake (Chesbrough, 2003, Christensen y Olesen, 2005) or the fact that companies such as Procter & Gamble may capture from their suppliers as much as 60% of their new launched products (Dodgson, Gann, & Salter, 2006). In sum, the purchasing model's role has greatly transformed over the last years, from a department with a basic support function, that is, a non-strategic department, to a strategic department that participates, contributes, and executes part of the company's value proposition.

The engaged resources, personnel, methods and approach in a strategic purchasing department are very different than those in a non-strategic one. In order to test and evaluate the level of evolution of the purchasing model in these different departments, research has identified several theoretical models to measure the development or maturity of a purchasing department. These models generally assume that the higher the maturity in the purchasing model, the better the practices that will be applied, and consequently one can expect better results for the company.

There are several issues related to the functionality and predictability of the maturity models; specifically, related to their linearity and progressiveness (Ellram et al, 2002). These issues evoke two types of concerns:

- a) First, concerns about the assumption that unmistakably links higher maturity with improvements in output and contributions to the company.
- b) Second, concerns on whether a specific department may avoid certain stages of the maturity process, that is, whether the department may evolve from a non-strategic department to a strategic one without some intermediate stages.

It is worth noting the research by Keough (1993) and Ellram et al. (2002), which indicates that, despite the adoption of highly developed practices and methods by certain departments, their outcomes were quite similar to those of departments with a more operational approach. This raises doubts about the predictability of the maturity models and reinforces the need for higher in-depth empirical studies. Unfortunately, most models to date have been mostly theoretical and there have been very few studies that demonstrate empirically the relationship between maturity and output.

This study aims to contribute to the need for more empirical review of these models. Based on the study of a sample of 278 Chilean companies, the study evaluates the relationship between maturity and output of purchasing departments in Chile and therefore it:

- a) Develops a theory-based model that allows the empirical measurement of the level of maturity in a sample of different purchasing departments.
- b) Links the level of maturity and the output of the department in each sample.

This study's contribution lies in being the first empirical study in savings measurement in Latin America, as well as developing a maturity model that meets the requirements of existing studies.

Following this introduction, this article continues with a literature review, a research design and methodology, and it concludes with findings and implications.

2. Literature review

The following review examines the two major frameworks in this study. On one hand it examines the literature on maturity models, and on the other hand, it reviews existing

research on the relationship between the purchasing model, output, and performance outcomes for the organization.

2.1 Maturity models

Maturity models are not exclusive to purchasing. They appear in other disciplines such as strategic analysis (Gluck et al, 1980), production management (Hayes & Wheelwright, 1984) or innovation (Cormican & O’Sullivan, 2004).

In purchasing, research has shown that the purchase volume expressed as a percentage of the company’s total sales has been increasing. This means that any improvement in the purchasing department’s efficiency should translate into greater benefits to the organization (Carter & Narasimhan, 1996; Narasimhan & Das, 2001; Carr & Smeltzer, 1999; Goh et al, 2005; Sánchez Rodríguez, 2005). The degree to which this statement is true depends on the level of development or maturity of the purchasing department. Maturity is “the level of professionalism in the purchasing model” (Rozemeijer et al, 2003). A maturity model describes various stages through which a department may evolve from the least sophisticated to the most complex one. There is an advantage to maturity; thus, organizations with department displaying a greater level of maturity are more likely to implement the best global practices, while those with no maturity are not (Chiesa et al, 1996; Ellram et al, 2002).

Research indicates that greater maturity leads to better practices, and better practices lead to increased performance in the model. Therefore the measurement of maturity may be a useful tool to test the relationship between the purchasing model quality and its financial/non-financial contribution to the company (Reck & Long, 1988; Shin, 2000).

Out of the several maturity models in the literature, the great majority of them are conceptual, rather than empirical. Table 1 indicates the main maturity models considered in this research.

Table 1: Purchasing Maturity Models

	Reck & Long (1988)	Bhote (1989)	Freeman/Cavinato (1990)	Keough/Carmish (1991)	Keough (1993)	Burt/Doyle (1994)	Chadwick/Rajagopal (1995)	Barry et al. (1996)	Paul raj et al. (2006)	Cousins et al (2006)	Schiele (2007)	Van Weele (2010)	Used model article
Scope	General purchases	General purchases	General purchases	General purchases	General purchases	General purchases	General purchases	MRO Purchases	General purchases	General purchases	General purchases	General purchases	General purchases
No. Stages	4	4	4	4	5	4	4	3	3	4	4	6	5
No. studied items	11	24	9	8	8	33	9	20	42	24	111	n.d.	43
Studied areas													
Strategic planning	yes	yes	yes	yes	yes	yes	yes	yes			yes	yes	yes
Organizational structure		yes		yes	yes	yes	yes				yes	yes	yes

Organizational processes	yes		yes	yes		yes	yes			yes	yes	yes	yes
Human resources	yes		yes	yes		yes	yes			yes	yes	yes	yes
Reporting and control	yes	yes	yes			yes	yes	yes	yes	yes	yes	yes	yes
Supplier relationship	yes	yes				yes	yes		yes	yes	yes	yes	yes
Communication													yes

According to Table 1 most models have three to five stages of evolution. These models also assume that purchasing departments evolve stage by stage from the most incipient or operational stages to the most mature or strategic stages. As they mature, organizations noticeable improvements in performance. Models tend to differ on the the weight of each of these stages.

It is necessary to notice that this review does not include models with only task in the purchasing model because they are too simplistic for the purpose of this study (Trent y Monckza, 2003).

Some of the earlier maturity models develop through basic observation. Some of he earliest observation-based models include in chronological order: Reck and Long (1988); Cammish and Keough (1991), Keough (1993), Burt and Doyle (1994) and those of Barry et al. (1996). These studies observation based models were not tested empirically. They were developed through interviews and through which the different maturity stages were summarized. In these earlier models observation occurred first and the stages were developed afterwards.

A second typology of models evolved through deduction. Generally, these models follow certain criteria that construe a classification of the purchasing model, that is, they develop the stages of each model as a function of a certain variable. Thses models include Bhote’s (1989), Freeman and Cavinato (1990), and Chadwick and Rajagopal (1995). For example, Bhote’s model takes the buyer-supplier relationship as a measurement of maturity. In this way the model goes from the phase of confrontation with the supplier to the phase of collaboration and integration with the supplier. Different stages consequently built upon this criterion. After defining the stages, the model infers control mechanisms for each stage, as well as indicators, type of organization, necessary human resources, etc. These deduction models lack empirical testing as well.

More recently, a third type of models has appeared which have greater applicability, for example Cousins et al. (2006) and Paulraj et al. (2006). These models initially emerge using an observation methodology similar to that of the observation models. Nevertheless, once construed, researchers look for an empirical link increased output and increased maturity that enriches the applicability.

2.2 Purchasing, output and contributions to the company

The second part of this literature review centers on studies that focus on the relationship between Purchases and output or *value contribution* and on what this relationship brings to the company, whether financial or otherwise. These studies have changed their focus overtime as they have moved from more generic to more focused approaches. For example, in the 1980's, research strived to show that the value purchases bring to the company were the result of a through selection of good suppliers, the ability to vertically integrate, excellence in delivery times, accomplishment of target costs and quality. These elements, they argued, were crucial for the success of the company (Bohte, 1989; Ellram & Carr, 1994; Dyer, 2000; Ellram, 2002).

During the 1990's the focus of research changed to the relationship and the strategic integration of the purchasing department with the company's general strategy. Added to this, research also appraised how that integration could permeate into the suppliers (Freeman & Cavinato, 1990; Cavinato, 1996). It was during this time that the literature introduced new concepts to purchasing, such as *total cost ownership* (TCO) (Ellram, 1993, 1995) and *strategic purchasing* (Carter & Narasimhan, 1996; Carr & Smeltzer, 1997, 1999).

From the mid-nineties on, yet another line of research emerged. As companies faced an increasingly globalized environment, organizations extended themselves into the supply chains onto their suppliers and customers. Thus purchasing departments encountered new challenges and an increasingly significant role in their organizations as they evolved into more complex supply chains (Pollice, 2006; Pollice & Fleury, 2007).

In the beginning of the 21st century, research shifted towards quality and supplier relationship. Competitive relationships gave way to more collaborative relationships. The improvement of the supplier base, suppliers' involvement in the development of new products, new multifunctional teams, supplier interconnectivity, and the development of long term relationships have become the main points of interest in the literature. (Monczka et al, 2005; Webb & Hughes, 2009; Ellram & Stanley, 2008; Wynstra, Van Weel & Weggrmann, 2001; Petersen, Handfield & Ragatz, 2005; Ellram, 2002).

The 2008-on crisis has shifted once more the center of attention to the study of the how purchasing departments contribute to add value to the company. The 2008 depression plus an increasingly intense globalization have elicited new purchasing models capable

of achieving supply chains with very competitive costs while, at the same time, sufficiently flexible and adaptable. Nowadays research is centering on how purchasing contributes to increase the economic and financial outcomes of the company. (Gonzalez-Benito, 2007; Narasimhan & Das, 2001; Schiele, 2007; Chen, Paulraj & Lado, 2004; Axelsson, Rozemeijer & Wynstra, 2006; Rudzki et al, 2006; Van Weele, 2010).

One can see the evolution of research focus across the decades. Thus Brookshaw and Terziovski (1997) show the purchasing departments' contribution to TQM techniques; Carr and Pearson (2002) measure the improvement in production output when suppliers are involved by the purchasing department; Carr and Smeltzer (1999) quantify the contribution of value of purchases in function of its strategic approach and size of the company; Carter and Narasimhan (1994) investigate the contribution of purchases to TQM techniques and their contribution to the final consumer; Das and Narasimhan (2000) measure the contribution of purchases to the output of the production function; Stanley and Wisner (2002) investigate the key determinants in quality implementation and the contributions of purchases to these determinants; Wynstra and Van Echtelt (2001) offer a revision of the contribution of purchases in the launching of new products; Novack and Simco (1991) explain how integration between suppliers and internal customers by purchases' management ends up contributing more value to the final customer; and Guimaraes et al (2002) show the economic and financial improvements of reducing the supplier base and enhancing the relationship with the remaining ones.

3. Research approach

Research shows that the evolution of purchasing departments from operational positions to more strategic functions improves strategic planification (Cavinato, 1999), contributes to a greater value for the final customer (Novack & Simco, 1991), serves as a source of support to increase the competitive advantage (Dyer & Singh, 1998; Kale et al, 2000; Leenders et al, 2002). This evolution is also linked to performance improvement in the organization (Chen, Paulraj & Lado, 2004) and brings further innovation uptake (Schiele, 2006).

There is a significant amount of research that links the improvement of the purchasing department's performance with that of the company in different areas. Nonetheless, there have been problems of interpretation of findings whenever the purchasing model

has been associated to the economic and financial output of the company. This has been mostly because most research has used indirect measures. For example, the work by Ellram and others (2002) linked stock price with purchasing department performance. Conversely, Carr and Pearson (1999) used return on assets, profits on sales, market share and the company's present value as indirect measures. Indeed, despite finding a direct relationship between the variables one would assume that there have to be several variables out of the purchasing department's range that may also affect the organizational outcomes.

A second issue in the literature is the level of maturity. Despite many models' conceptual attractiveness, the relationship to the purchasing model's output has not been the object of sound, extensive analysis. Many studies do not use maturity model methodologies; rather, they classify the department's degree strategic level and they only occasionally employ maturity models.

Shiele (2007) improves the deficits in previous studies. Shiele associates the maturity and economic output of the purchasing department in a sample of 14 companies. He employs a deductive maturity model that evaluates the maturity level of the purchasing department through interviews and surveys. The study then presents a series of saving levers to the sample such as the most mature companies are able to identify greater savings than those who are less mature. It is important to highlight that in this case maturity is linked to a greater usability of a greater number of more sophisticated levers. This output measurement is entirely direct, since it links purchasing maturity to savings and it accomplishes this without the other external or non-controlled variables.

This study contributes extends the literature by showing evidence of improvement in the maturity and output of the purchasing departments in a sample of 278 Chilean companies. Here we employ the maturity model developed by Reck and Long (1988) as a means to measure the maturity and real savings accomplished by the purchasing department. This work extends the findings of Shiele (2007) because it uses a much larger sample. The focus here is in achieved savings, not on what could be saved potentially, and moreover, it answers which savings levers are being used, not which would be hypothetically usable.

4. Methodology and discussion

The main methodology in the study was the online survey² sent to over 1.100 companies. The database of companies to survey was extracted from the customer database of Aquanima, of Santander Banking Group, a consulting firm with more than twenty years in the purchasing. Aquanima has a presence in Chile, Argentina, Mexico, Uruguay, Spain, Brazil, United States, Portugal, United Kingdom, and Germany. The survey – a *one-time cross-sectional data* type survey– was enabled for response from late November of 2011, until early March of 2012. Three hundred and two organizations responded. From these, 24 were eliminated for incomplete or incoherent answers, as well as for not calculating savings as required. The proposed incentive for participants was the possibility to obtain individual results for the maturity test, that is, an assessment of their own maturity levels.

According to the four-stage maturity model of Reck and Long (1988) the survey establishes issues that allow the measurement of the level of development of the purchasing department in four areas. These areas come from those used by Schiele (2007) and are slightly modified according to the models from Table 1 and the parameters that these models propose.

The constructs in the survey include³:

a. Planning and strategy

This area sought to validate two main aspects. On one hand, the strategic implication and participation of the department in the company; on the other, the capacity to predict demand accurately, to evaluate the environment (meaning shifts in the suppliers' markets), and to use strategic planning tools for purchasing in several categories (mainly with the use of *category management*). It is important to emphasize that this section appears in almost every model from Table 1.

b. Human resources

In this section questions address the measurement of the level of professionalism in the purchasing department. Here the questionnaire includes: level of academic training, specific training in purchasing, hiring requirements, personnel turnover, existing incentives, type of management used, and position in the organization chart. This

² The survey appears on www.surveymonkey.com.

³ The survey can be viewed online on <https://www.surveymonkey.com/s/BenchmarkComprasAbastecimiento>.

section also appears in the great majority of the models, since the professionalism of the department's components is crucial for its maturity.

c. Processes, organization, and tools

This section considers the tools, existing processes, and the department's capacity to form, lead, or participate in multifunctional teams. Here the survey examines the capacity and quality of forming strategic *sourcings*, as well as the TCO application, the use of demand anticipation tools, the *balanced scorecard* use in the department, and electronic tools such as *e-invoice*, *e-tenders* or auctions, and the categorization and use of the Kraljic matrix.

d. Supplier management

This section examines the degree of involvement, development, and relationship with the suppliers. Measures include the degree of management present in the panel, their selection process, supplier evaluation, and participation in key company processes, such as launching of new products and cost reduction.

e. Communication

This section measures the relationship of the department with its stakeholders. The survey includes the existing management relationships among purchasers, its suppliers, internal customers, shareholders, and the immediate surroundings, such as the community.

Each section is divided in subsections. For each subsection several statements range from the most simple and less evolved situation (in fact, it starts from the inexistence of the department or the function as such) to the statement that implies the maximum maturity or evolution possible according to the enlarged model by Reck and Long (1988) and Schiele (2007). From this, results indicate an arithmetic mean in such a way that each company has its own maturity score ranging from highly immature (1) to highly mature (5).

Table 2: Maturity level, studied areas, and responses by area and level

Management sections	Level 1	Level 2	Level 3	Level 4	Level 5	
Strategy	Purchasing policy	No	Based on actions	Linked to suppliers	Linked to internal customer	Integrated with strategy
	Purchasing map	Non-existent	Price analysis in each purchase	Analysis according to supplier, Known necessity and market	Complete analysis of internal customer, strategy by category	Complete mapping, several axes, strategy integrated with company

	Action plan	No	Informal	Formalized with supplier	Formalized supplier and internal customer	Shared with top management
People	Organization	The department is not visible in the chart	The function is visible in the chart	Organization oriented towards suppliers	Oriented towards suppliers and internal customer	Purchases is part of direction committee
	Competencies	Self-formation	Based on transaction	Annual interviews	Annual evaluation	Competencies in management plan
	Formation	None	Negotiation	Purchasing techniques	Regulated formation purchases	Formation plan
	Management	Ad hoc	Collective	Collective and individual	Co-management with internal customer	Implication in general management
Practices	Levers	No	Price negotiation	Volume grouping	Revision of specifications	Supplier development and optimization of supply chain
	Processes	No	One general procedure	Processes evaluation suppliers, quality	Integrated in management of internal customers	Integrated with main processes of company
	Scorecard	No	Informal	Formal	Internal customer is integrated	Purchases in company's CM
	TI Systems	No	Procure to pay	RFI, RFQ, and supplier evaluation	RFP, sourcing, and purchasing control function	E-purchases and business intelligence
Suppliers	Contracts	Commercial invoice	Request letter	Some contracts	Contracts process	Contract management
	Panel	Ad hoc	Formalized	Notice	Involves internal customers	DG implied in strategic customers
	Supplier relationship	No	Basic	Cooperative	Interdependent	Integrated
	Management	Directed by supplier	Main suppliers are evaluated	100% evaluated and optimized	Close collaboration	With joint management and improvements
Communication	Purchases	No	Frequent meetings	Communication plan	Diffusion among internal customers	Permanently updated
	Internal: support functions and internal customers	No	Transactions reports	Reports to top management	Reports to internal customer	To shareholders
	External: institutional suppliers	No	Partially	Regularly to main suppliers	Regularly to all suppliers	To company's surroundings
	Internet	No	Purchase on Internet	Intranet for internal customers	Extranet to suppliers	Collaborative extranet

Once the survey was designed, five professionals whose experience in high purchase management ranges from 10 to 25 years revised it. Additionally, to three academics belonging to the *Management des Achats Internationaux* of *MAI de Bordeaux* reviewed the instrument for further validity.

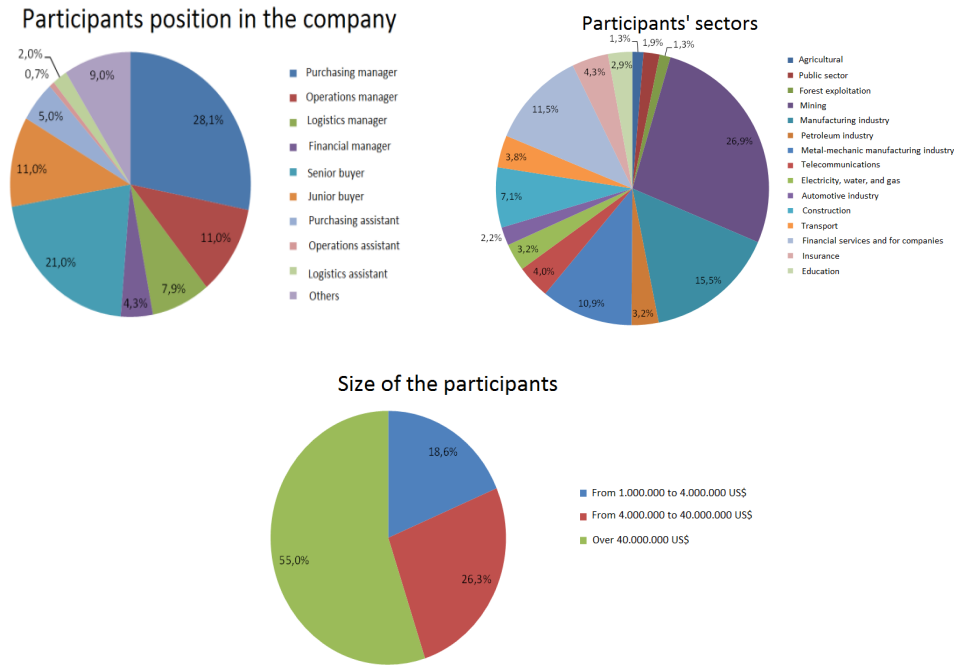
Aside from the issues of the previous figure, the survey offers questions referring to the savings level the department achieved in the last fiscal year. Participants were requested to calculate the average achieved savings in managed families compared to the master budget. Additionally, they were asked to indicate the frequency with which they employed the savings levers specified in the survey. Finally correlations were calculated to validate the following hypotheses:

- a.- The achieved savings are positively correlated with the maturity level.
- b.- The maturity level implies a capacity to use a greater number of levers, which may at the same time be more complex.

5. Findings

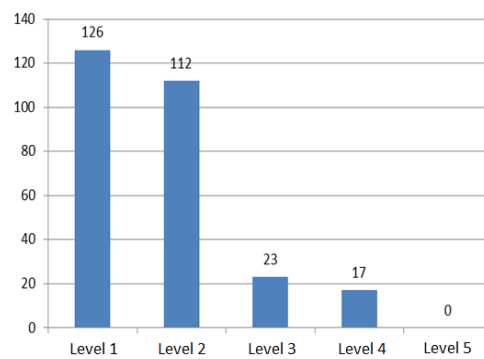
The survey was sent via e-mail with instructions for its response to approximately 1.100 Chilean companies between November 2011 and March 2012. Out of these, 302 companies answered the survey and 24 responses were eliminated. The distribution of participants, according to their sector, position, and size, appears in Figure 1:

Figure 1: Sector, position, and size of participant companies



The measured maturity level of the participant companies appeared in 5 maturity levels as is indicated in Figure 2. The number of companies in each level is as follows:

Figure 2: Number of companies per maturity level

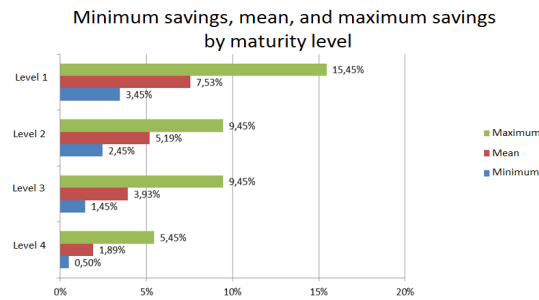


Results are similar to those by Van Wheel (2010) in a study of European companies. It is worth noting the absence of companies in level 5, as well as the great number of

companies in maturity levels 1 and 2 from the sample. This is an indication of limited savings by these departments.

The minimum and maximum savings by level and the mean appear in Figure 3:

Figure 3: Declared savings per maturity level



These results identify the existing relationship between maturity and achieved savings level. In fact, it is salient how the minimum, mean, and maximum savings increase with practically every maturity level increase. In order to determine whether these increases are significant, an analysis of variance examined whether the mean in each level is significantly different.

Table 3: Variance analysis of the savings mean in each maturity level

Groups	Count	Sum	Mean	Variance
Level 1	126	2.4625	1.90%	0.000058
Level 2	112	4.3205	3.90%	0.000277
Level 3	23	1.3125	5.30%	0.000267
Level 4	17	0.904	7.50%	0.001608

VARIANCE ANALYSIS						
Origin in variances	Sum of squares	Degree of freedom	Mean of squares	F	Probability	Critical value for F
Among groups	0.06096	3	0.020321397	89.76	1.9315E-40	1.56
Inside groups	0.06181	273	0.0002264			
Total	0.12277	276				

As shown, the differences obtained in the savings in each level are significant (F 89.76), which implies that greater maturity entails greater savings.

The correlation between maturity and savings further appears in Table 4:

Table 4: Correlation between reported savings and maturity level

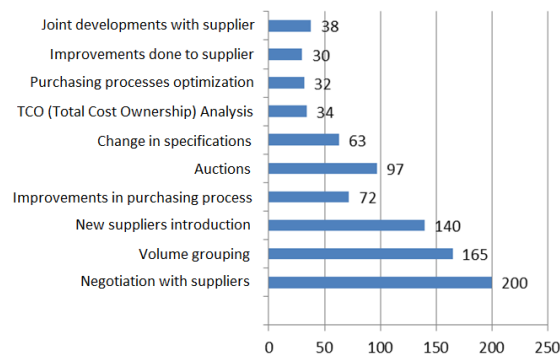
Correlation coef	t	
0,72	11,82	P<0,001

The 0.72 correlation index and t value confirm the first hypothesis: that there is a strong correlation between savings and maturity.

The previous relationship leads to the second hypothesis: those departments with a higher maturity level are capable, through their management, of using a higher number of savings levers with higher complexity.

One of the questions in the survey was the frequency of use of the levers shown in Figure 4. The displayed levers differed in the degree of implantation difficulty, thus the companies chose those levers they considered they applied most frequently.

Figure 4: Number of companies that most frequently employ the levers shown in the survey



Respondents indicated the frequency of use of levers they employed. As shown in Figure 5, a greater maturity level increased the mean of the levers employed.

Graphic 5: Mean of employed savings levers by maturity level

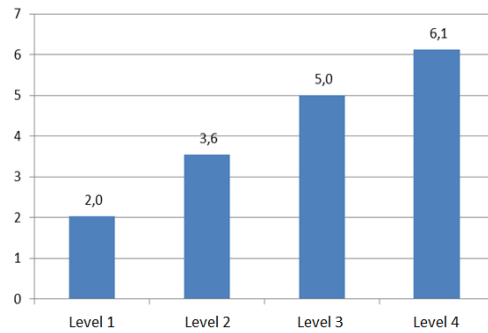


Table 6: ANOVA for the mean of employed levers

Groups	Count	Sum	Mean	Variance
Level 1	126	258	2	0.41371429
Level 2	112	439	3.9	0.66916023
Level 3	23	106	4.6	0.61264822
Level 4	17	93	5.5	1.01470588

VARIANCE ANALYSIS						
Origin in variances	Sum of squares	Degree of freedom	Mean of squares	F	Probability	Critical value for F
Among groups	358.47	3	119.48930000	210.27	9.2839E-71	2.638
Inside groups	155.7	247	0.5683			
Total	514.17	277				

Once again the variance test for the mean of employed levers was significant.

In conclusion results indicate that, for a sample of 278 Chilean companies, an improvement in the maturity level in the purchasing department implies significant improvements in the achieved savings through a greater number of levers.

Results also show that the purchasing model of the companies in the sample has a rather low level of development. This is consistent with findings in European organizations Van Weele (2010).

6.- Conclusion and implications

This article is the first of its kind in Latin America to empirically prove the existing relationship between the purchasing model maturity and the purchasing department output. Results indicate that, although quite incipiently, companies are beginning to develop in their departments more mature levels of the model. It is surprising to see, still, the amount of companies that remain in levels 1 and 2. This is consistent with the global tendency to step up from a supporting role to a more strategic function.

Implications of this finding suggest that when organizations invest in their purchasing departments they are likely to achieve higher returns. In fact, in this study the reported savings by those companies with more mature levels are significantly higher than reports by companies with levels in the model.

Until now, empirical evidence in the existing literature has been very limited. This study advances on previous findings and empirically demonstrates previously intuitive assertions that, especially in Latin America, investment in purchasing contributes to a generation of funds that is essential to reinforce the investments that generate competitive advantages for companies in a global context.

7.- Limitations in the study and future investigations

This study has several limitations. The first is inherent to the method of data collection. The data obtained through surveys is always at risk of finding responses with a certain “bias” to the survey’s coherence more than to objective reality. A second limitation is the savings’ calculation method. In spite of the specific directions for calculation of savings there is always the risk of an inconsistent application of these directions. The sample size of 278 participants may partly mitigate these risks.

Future research should include several aspects, first, research should examine whether managers are aware of the important resources that are lost whenever purchasing does not receive enough investment. Second, additional research should examine whether these findings in Chile can be replicated to other Latin American countries. This would allow a comparison within the region and with other areas. Finally, further research should to expand in the methodological aspects about the savings calculation and whether the value contribution of purchasing departments can extend beyond savings.

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