
A Dutch–French comparison of dependence, trust and commitment in buyer–supplier relationships: a purchasing portfolio approach

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Abstract: National culture is likely to affect trust, commitment and dependence in buyer–supplier relationships. Yet, empirical research on buyer–supplier relationships in different cultural settings is still limited. This article presents the findings of an exploratory study into the role of culture in different types of buyer–supplier relationships. Hypotheses have been tested, using data from a survey among 84 French purchasing professionals and data gathered before in the Netherlands with 216 colleagues. A comparative analysis revealed that the cultural background of purchasers does affect their perceptions of trust, commitment and dependence in supplier relationships. French purchasers demonstrate lower levels of (affective) commitment, competence trust and goodwill trust towards their suppliers, compared to their Dutch colleagues. These findings are inconsistent to what French–Dutch intercultural studies suggest. Focus group discussions indicate that Professional Culture might be more important than National Culture for the explanation of differences in buyer–supplier relationships.

Keywords: buyer–supplier relationships; commitment; dependence; intercultural management; purchasing (portfolio) management; trust.

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1 Introduction

National Culture (NC) has an impact on how people act in resolving day-to-day problems (Hofstede, 1980; Trompenaars and Hampden-Turner, 1997). We observe in day-to-day purchasing practices, culture impacts the purchasing professional too in managing buyer–supplier relationships. Managing supplier relationships on a global scale is extremely complex because it involves larger risks, management of global network ties and the bridging of cultural differences in buyer–supplier relationships (Trent and Monczka, 1998). Purchasing professionals from different nationalities are confronted with comparable challenges. We expect, however, that the purchasers will respond in different ways to these challenges, depending upon their cultural background. As a result, buyer–supplier relationships are likely to vary in different cultural settings.

Regardless their cultural background, all purchasing professionals will agree that not all suppliers are to be dealt with in the same way (e.g. Bensaou, 1999; Frohlich and Westbrook, 2001). The need for differentiated-supplier relationships requires some sort of classification (Lilliecreutz and Ydreskog, 1999). In a seminal article, Kraljic (1983) introduced a comprehensive purchasing portfolio approach, including a matrix that classifies a firm’s purchased items into four categories on the basis of their profit impact and supply risk. Other authors have elaborated this approach by providing recommendations for each category in the (Kraljic, 1983) matrix: partnerships for strategic products, assurance of supply for bottleneck products, competitive bidding for leverage products and systems contracting for non-critical products (e.g. Van Weele,

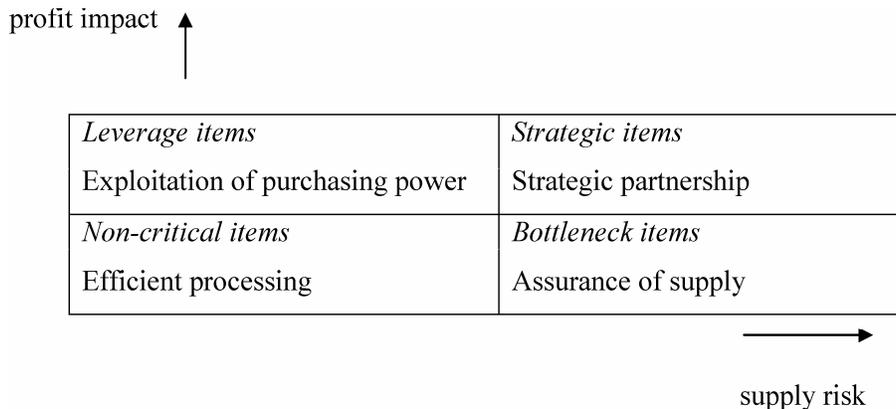
2005). Currently, Kraljic's matrix is widely used by purchasing professionals in Western Europe, the USA, Canada and Northern Europe for managing buyer-supplier relationships (Lamming and Harrison, 2001; Gelderman, 2003; Caniels and Gelderman, 2007).

It is generally agreed that dependence, trust and commitment are important concepts for understanding buyer-supplier relationships. These characteristics do not only feature in the interaction approach as proposed by the Industrial Marketing and Purchasing (IMP) group, but they are generally accepted as key dimensions of buyer-supplier relationships in the marketing and purchasing literature (c.f. Dwyer, Schurr and Oh, 1987; Anderson and Weitz, 1989; Kumar, Sheer and Steenkamp, 1995). In general, trust and commitment have been identified as essential prerequisites for building and developing relationships (e.g. Morgan and Hunt, 1994; De Ruyter, Moorman and Lemmink, 2001). Cultural studies have identified dependence too as a key relationship dimension (Hofstede, 1980, 2001; Ulijn and Gorter, 1989). Although dependence, trust and commitment are likely to vary in different cultural settings, there has been little discussion about the impact of NC on these relationship characteristics. Until now, little is known about dependence, trust and commitment of buyer-supplier relationships in different cultures.

The main questions addressed in this article are: do differences exist between Dutch and French purchasers in their assessment of dependence, trust and commitment in buyer-supplier relationships? And, if so, to what extent could these differences be explained by NC *post hoc*, not *ex ante*? The goal of this article is to examine dependence, trust and commitment in buyer-supplier relationships within different cultural settings. This will be done by developing and testing hypotheses with respect to buyer-supplier relationships for each quadrant of the Kraljic portfolio matrix. The empirical analysis is founded on a survey among French purchasing professionals and comparable data gathered before in the Netherlands.

The organisation of the article is as follows. First, we will give a brief overview of the Kraljic approach, we will discuss trust, commitment and dependence as the key characteristics of buyer-supplier relationship and we will identify hypotheses combining NC and characteristics of buyer-supplier relationships (Section 2). In Section 3, we will present our survey design. The results of the survey are presented in Section 4 and further discussed in Section 5. Section 6 will conclude and give suggestions for further studies.

Table 1 The Kraljic matrix



Source: Kraljic (1983, p.111).

2 Theoretical background

Section 2.1 will present the Kraljic purchasing portfolio matrix, Section 2.2 presents dependence, trust and commitment as key relationship dimensions and Section 2.3 intercultural aspects of Dutch and French buyer–supplier relationships. Finally in Section 2.4, we develop some hypotheses to be tested in this study.

2.1 The Kraljic purchasing portfolio matrix

Portfolio models have received considerable attention in the recent literature about professional purchasing. The best-known portfolio model was introduced by Kraljic (1983). According to Kraljic, a firm's supply strategy depends on two factors:

- 1 profit impact
- 2 supply risk.

His model has had a broad influence on professional purchasing (e.g. Kamann and Bakker, 2004; Gelderman and Van Weele, 2005).

Other scholars have introduced variations of the original Kraljic matrix (e.g. Elliott-Shircore and Steele, 1985; Syson, 1992; Hadelier and Evans, 1994; Olsen and Ellram, 1997; Van Weele, 2005). The resulting matrices are quite similar to what is known as the Kraljic matrix, in that, they employ comparable dimensions and derive largely equivalent recommendations. Typically, one strategy is recommend for each quadrant, see Table 1. With the help of this matrix, professional purchasers can differentiate between the various supplier relations and choose strategies that are appropriate for each category and thereby effectively manage suppliers (Nellore and Söderquist, 2000).

Kraljic's seminal article has started a stream of conceptual and empirical studies on the use and possibilities of a portfolio approach in purchasing (e.g. Olsen and Ellram, 1997; Bensaou, 1999; Lilliecreutz and Ydreskog, 1999; Dubois and Pedersen, 2002; Gelderman and Van Weele, 2002, 2003, 2005; Zolkiewski and Turnbull, 2002; Wagner and Johnson, 2004). The introduction of the Kraljic matrix has inspired academic authors to investigate in more detail portfolio models, such as issues of power and dependence (Caniëls and Gelderman, 2005, 2007), purchasing portfolio usage and purchasing sophistication (Gelderman and Van Weele, 2005), the dynamic nature of purchasing strategies in the matrix (Carter, 1997; Gelderman and Van Weele, 2002, 2003; Faes, Matthyssens and Vanstraelen, 2005), global supply base management (Gelderman and Semeijn, 2006), web-based procurement of Maintenance Repair and Operating (MRO) supplies items (Croom, 2000), the link to the specification process (Nellore and Söderquist, 2000) and supplier development in new product development (Wynstra and Ten Pierick, 2000). However, all these studies have been carried out in companies that are located in a single country under conditions of a single cultural setting. These studies, however, do not shed light upon the potential impact of NC on buyer–supplier relationships.

By following the generic logic to come to differentiated purchasing strategies, we implicitly assume that evaluating purchasing segments is conducted in the same way across different markets, independent of national culture. This might not be the case. Based upon some important culture studies (e.g. Hofstede, 1980, 2001; Trompenaars and

Hampden-Turner, 1997), it is highly probable that cultural differences might affect the interpretation of purchasing segments, recommended purchasing strategies and corresponding buyer–supplier relationships.

2.2 *Dependence, trust and commitment*

The management of supply chain relationships frequently stresses three concepts: dependence, trust, and commitment (Morgan and Hunt, 1994; Geyskens et al., 1996; Trompenaars and Hampden-Turner, 1997; Wong and Sohal, 2002). Dependence originates from the desire or goal to achieve or obtain specific resources. A much quoted general definition of (social) dependence is provided by Emerson who wrote:

“The dependence of actor A upon actor B is (1) directly proportional to A’s motivational investment in goals mediated by B, and (2) inversely proportional to the availability of those goals outside of the A–B relationship” (1962, p.32).

In other words, dependence is determined in essence by two factors: the necessity of a resource to the firm and the degree in which alternative providers of this resource are at hand. Thus, dependence results from an organisation’s dependence on external resources and the uncertainty of acquiring those (Pfeffer, 1981). buyers and sellers face complex decisions in balancing the search for certainty with stable suppliers while reducing the level of dependence on the supplier (Geyskens et al., 1996; Cox, 2001; Cox, Sanderson and Watson, 2001). Firms always depend, to varying extents, on their trading partner. Early studies on dependence focused on the effects for the buyer of its dependence on the supplier, without taking into account the supplier’s-dependence (e.g. El-Ansary and Stern, 1972). More recent studies have incorporated dependence from the perspective of the buyer as well as the supplier (Buchanan, 1992; Kumar, Sheer and Steenkamp, 1995; Geyskens et al., 1996). In study too, we will differentiate between buyer’s- and supplier’s-dependence.

Trust and commitment have been identified as essential prerequisites for building and developing buyer–supplier relationships (e.g. De Ruyter, Moorman and Lemmink, 2001). Morgan and Hunt (1994, p.23) have defined trust as the willingness to rely on exchange partners in whom one has confidence. These authors conceptualise trust as something that exists when one party has confidence in the exchange partner’s reliability and integrity. This definition is parallel to that of Anderson and Narus (1990), Moorman, Dehpandé and Zaltman (1993) and Ganesan (1994).

In the literature, a distinction is made between competence trust and goodwill trust. Competence trust is defined as the ability of an exchange partner to perform according to agreements (Nooteboom, 1996). Competence implies that a partner has the required technical capabilities, skills and know how (Blomqvist, 1997). This reliability refers to the extent to which an exchange partner has the required expertise to perform the job successfully (Ganesan, 1994).

Another type of trust is goodwill trust which refers to the integrity and benevolence of parties. Some studies propose that the true meaning of trust implies a ‘leap of faith’: parties believe that both are interested in the other’s welfare and that neither will act without considering the impact of his action on the other (Kumar, 1996, p.95). Goodwill trust reflects the belief that each partner is interested in the other’s welfare and that a partner will not intentionally undertake actions that harm the other (Anderson and Narus, 1990; Geyskens et al., 1996). As a working definition, we refer to goodwill trust as the

belief that the supplier will not misuse his position and instead will take the buyer's interests into consideration.

Commitment too has emerged as a critically important characteristic of business relationships. Moorman, Zaltman and Dehpandé (1992) define commitment as an enduring desire to maintain a valued relationship. This corresponds with the belief that relationship commitment only exists when the relationship is considered important (Morgan and Hunt, 1994). Although different conceptualisations exist, commitment is typically defined as the intention of an exchange partner to continue a relationship (Dwyer, Schurr and Oh, 1987; Anderson and Weitz, 1989). Geyskens et al. (1996) emphasise that different motivations can underlie such intention, and therefore various types of commitment exist. They distinguish affective commitment and calculative commitment as the most relevant types of commitment, since these types occur most often in practice (see also Mattieu and Zajac, 1990; Geyskens et al., 1996; De Ruyter, Moorman and Lemmink, 2001).

Affective commitment expresses the extent to which a party likes to maintain a relationship with the other party. This kind of commitment is based on a general positive feeling towards the exchange partner. An affective committed partner desires to continue his relationship because he likes the partner and enjoys the partnership (Geyskens et al., 1996). De Ruyter, Moorman and Lemmink (2001, p.286) refer to 'affective commitment' as the degree in which buyers declare that 'it is pleasant to work with our supplier, that is why we stay with our supplier'.

In contrast, calculative commitment pertains to the extent in which an exchange partner perceives the necessity to maintain a relationship. The relationship results from a cold-blooded calculation of costs and benefits (Geyskens et al., 1996). Therefore, calculative commitment is based on a general negative feeling towards the exchange partner. Similarly, De Ruyter, Moorman and Lemmink (2001, p.286) conceptualises 'calculative commitment' as the level to which buyers state that

"there is just too much time, energy, and expense involved in terminating our relationship with this supplier."

Although other relationship dimensions are conceivable, this study focuses on dependence, trust and commitment. Dependence, trust and commitment are the core elements for understanding supply management relationships. In the remainder of this article, we will further investigate the following characteristics of buyer–supplier relationships:

- 1 buyer's-dependence
- 2 supplier's-dependence
- 3 competence trust
- 4 goodwill trust
- 5 affective commitment.

2.3 Intercultural aspects

We expect differences in managing buyer–supplier relationships between countries based on the fact that people with different culture act differently in their answer to equally

perceived problems. Culture is the ‘mental programming’ that applies to a collective of people in a society, an organisation or profession that distinguishes the members of one group of people from another (Hofstede and Hofstede, 2005). Trompenaars and Hampden-Turner (1997) state that people from different national cultures may apply different solutions for similar dilemmas. Following this line of argument, purchasing practitioners from different cultures are likely to act differently regarding their supplier relationships.

In this study, we will focus on the differences between the Dutch and the French national culture. d'Iribarne (1993) and Gesteland (2002) explain that the French culture is one of Europe's most hierarchical societies today where ascription and the personal network are dominant factors in forging and maintaining business relationships. The Netherlands pursue a far more egalitarian approach where neutral, straightforward and quick negotiation processes are appreciated. The result in purchasing practices would be that French purchasers are focused on the relationship while Dutch purchasing are predominantly concerned with the deal (Gesteland, 2002). When we consider the two most used large-scale surveys on NC (Hofstede, 1980, 2001; Trompenaars and Hampden-Turner, 1997), we see that these dimensions support the approach of Gesteland (2002). Hofstede (1980, 2001) demonstrated that the French are more egalitarian than the Dutch, considering the scores on the power difference aspect (38 for the Dutch, 68 for the French on a 100-scale). Hofstede (1980, 2001) and Trompenaars and Hampden-Turner (1997) do not explicitly mention a difference in deal – or relationship focus between the two cultures, although Trompenaars found a large difference in the Dutch person being universalistic, such as betraying your friend, if s/he as a car driver kills a walker on a protected street crossing, whereas French are less likely to do this as a witness in the courtroom, being particularistic. This dimension of Trompenaars and Hampden-Turner (1997) supports the reasoning of Gesteland (2002) for a deal-focus for a Dutch and a relationship-focus for a French business context. This difference is likely to impact the way Dutch and French purchasing professionals handle their portfolio of supplier relationships and the role of trust, commitment and dependence in their buyer–supplier relationships.

2.4 Development of hypotheses

The assumption of intercultural studies is that differences in national backgrounds result in differences in behaviour. We return to the initial idea of Trompenaars and Hampden-Turner (1997) who state that people in every country or organisation face the same dilemmas. The response to dilemmas, however, is likely to differ between managers from different national cultures. Differences in culture are likely to impact buyer–supplier relationships in the purchasing segments of the Kraljic portfolio.

Purchasing professionals maintain a portfolio of relationships, based on their need for differentiated supplier relationships. This study addresses the perceived levels of dependence, trust and commitment in the buyer–supplier relationships strategies that correspond with the four segments of the Kraljic matrix. In this section we will develop hypotheses regarding the differences between Dutch and French purchasers in their assessment of dependence, trust and commitment in buyer–supplier relationships.

We expect that the patterns of perceived levels of dependence across the purchasing segments are evaluated similarly in Dutch and French buyer–supplier relationships. Regardless of the cultural setting, a portfolio approach puts central the level of

dependence in the buyer and the supplier (Dubois and Pedersen, 2002; Gelderman, 2003). Scholars have identified identical determinants of organisational dependence. Dependence is, as we argued, determined in essence by two factors: the necessity of a resource to the firm and the availability of that source/resource (e.g. Emerson, 1962; Jacobs, 1974; Pfeffer and Slanancik, 1978). Caniels and Gelderman (2007) reported differences in buyer's and supplier's-dependence between the segments of the Kraljic matrix. For instance, they found that the dependence between companies in the strategic quadrant is significantly higher than the dependence in the leverage and non-critical quadrant. The perceived levels of dependence in these studies can be considered the relational structure of supplier-dependence that a purchasing professional has to respond to. Following the line of thought of Trompenaars and Hampden-Turner (1997), the different levels of buyer and supplier can be considered relational situations not determined by cultural setting. Therefore, we expect to find no dependence differences between Dutch and French relationships within the same segment of the Kraljic matrix. Therefore we posit:

Hypothesis 1a. Dutch and French purchasing professionals perceive similar levels of buyer's-dependence in their buyer–supplier relationships.

Hypothesis 1b. Dutch and French purchasing professionals perceive similar levels of supplier's-dependence in their buyer–supplier relationships.

Trust and commitment are considered as prerequisites for developing and maintaining long-term business relationships (e.g. Morgan and Hunt, 1994). Dwyer, Schurr and Oh (1987) state that trust and commitment refer to an implicit or explicit pledge of relational continuity between exchange partners. Many studies present support for a positive relationship between relationship continuity and trust and commitment (e.g. Anderson and Weitz, 1989; Achrol, 1991; Moorman, Zaltman and Dehpandé, 1992). Considering the relationship-focus of French purchasers (see Section 2.3), we expect relatively high levels of trust in buyer–supplier relationships. Dutch purchasers on the contrary are more deal-focused and are more likely to maintain supplier relationships with lower levels of trust. Therefore, we posit the following hypotheses:

Hypothesis 2a. Competence trust in French buyer–supplier relationships is higher than competence trust in Dutch buyer–supplier relationships.

Hypothesis 2b. Goodwill trust in French buyer–supplier relationships is higher than goodwill trust in Dutch buyer–supplier relationships.

Similarly, we expect differences in levels of commitment between Dutch and French buyer–supplier relationships.

Hypothesis 3a. Affective commitment in French buyer–supplier relationships is higher than affective commitment in Dutch buyer–supplier relationships.

Hypothesis 3b. Calculative commitment in French buyer–supplier relationships is higher than calculative commitment in Dutch buyer–supplier relationships.

3 Methodology

The hypotheses were tested by comparing the data from a Dutch sample of purchasing professionals and the data from a French sample of purchasing professionals.

The Dutch data originated from an earlier study by Gelderman (2003) among 216 purchasing practitioners which corresponds with an effective response rate of 18.7% (216/1153). The French data were gathered by replicating the Dutch 2003-study. The questionnaire was translated into French and administered to alumni of the Master in Purchasing at Institut d'Administration des Entreprises de Grenoble. The respondents worked in all regions of France, in different positions and represented various industries. We sent a first mailing in April 2005 to 413 French purchasing professionals. The first mailing as well as the reminder contained a link to a web-enabled questionnaire. A total number of 84 valid and useable questionnaires were received which resulted in an effective response rate of 20.3%. This can be considered as a satisfactory result for a web-enabled survey (Deutskens et al., 2004).

In order to test the hypotheses, the four purchasing strategies in the Kraljic matrix have been converted into comprehensive description of real-life situations (scenarios). The description of the four scenarios is given in Table 2. Each scenario corresponds to a segment of the purchasing portfolio matrix: non-critical, bottleneck, leverage and strategic. Respondents were asked to assess their supplier relationships for each of the purchasing segments (scenarios) in terms of dependence, trust and commitment.

By using a scenario-based questionnaire, we account for differentiation in purchasing strategies and were able to control for side effects. The survey adopts a repeated measures design, i.e. respondents had to evaluate a series of identical questions for each of the four scenarios from their own perspective, i.e. the perspective of the buyer. The distinct advantage of using a repeated measures design instead of other experimental designs is that the potential bias caused by individual differences among groups of respondents is taken away. Each of the respondents has to answer all questions in each of the four scenarios. Therefore, specific characteristics of the respondents, such as IQ, education and motivation, do not differ across the four groups that reply to the questions in each scenario. By adopting a repeated measures design, variability among groups of respondents is removed from the error term which makes the design more powerful than randomised designs (Stevens, 2001).

A potential drawback of a scenario-based research design is that respondents might not be able to fully visualise themselves in the proposed descriptions, resulting in unreliable answers. This shortcoming was countered by including an entry for recognition of the scenario, i.e. respondents were asked to assess the degree in which they recognise the described situation. In the analysis of the data, we removed the survey results for respondents with low scores on 'recognition' from the database. In this way, we ensured the validity of the results. The survey procedure included a pilot study aimed at enhancing the reliability and validity of the questionnaire. The pilot study entailed discussions with 20 French purchasing professionals. On account of the pilot study, a few items were slightly modified and the layout of the questionnaire was improved.

Table 2 Description of the scenarios corresponding to the Kraljic quadrants

<i>Scenario</i>	<i>Characterisation</i>	<i>Corresponding kraljic quadrant</i>	<i>Scenario description</i>
1	Maintain partnership	Strategic quadrant	Consider a product with a high purchasing risk and a high financial value. Supplier X is an important partner with whom you maintain a valuable relationship of strategic cooperation. Both parties have an interest in continuing the relationship and have a good mutual understanding
2	Keep safety stocks	Bottleneck quadrant	Consider a product with a relative low financial value, but a high purchasing risk. Your firm is vulnerable regarding the supply of one supplier X. You try to ensure the supply by keeping high safety stocks
3	Partner of convenience	Leverage quadrant	The product provides you a favorable negotiating position: the purchasing risk is low while the product represents a relatively high amount of money. You buy at supplier X. Negotiations are tough in order to achieve the best conditions. Priority is given to buy at low prices while maintaining quality and security of delivery
4	Individual ordering	Non-critical quadrant	Consider a product that has a relative low financial value and a low purchasing risk. The product is not very critical for your company, but still it has to be purchased. The product is bought at supplier X

Dependence, trust and commitment were assessed by respondents for their supplier relationships in each of the four Kraljic segments. Variables have been measured by using single item constructs. Respondents were asked to directly assess their dependence on a supplier and the supplier's dependence on the buying company (cf. Noordewier, John and Nevin, 1990; Berger, Noorderhaven and Nootboom, 1995). Although it can be argued that dependence is a multi-dimensional construct (e.g. Heide and John, 1988), there is a evidence that purchasing professionals understand the concept of 'dependence' very well and are able to assess dependence scenarios because it plays a prominent role in the development of purchasing strategies (e.g. Caniels and Gelderman, 2007). Competence trust and goodwill trust were operationalised, following Ganesan (1994), Kumar, Sheer and Steenkamp (1995), Nootboom (1996), Doney and Cannon (1997) and De Ruyter, Moorman and Lemmink (2001). Affective and calculative commitment were measured in accordance with Geyskens et al. (1996) and De Ruyter, Moorman and Lemmink (2001). Appendix A summarises the operationalisation of the six key characteristics of buyer–supplier relationships:

- 1 buyer's-dependence
- 2 supplier's-dependence

- 3 competence trust
- 4 goodwill trust
- 5 affective commitment
- 6 calculative commitment.

Note that each variable was measured by a corresponding item in the questionnaire, using a 5-point Likert scale.

The Dutch sample size is 216 and the French sample size is 84. Respondents of both samples have been compared with regard to job title, company size and industry. Only minor differences were found. For instance, French respondents were employed in relatively larger companies than their Dutch colleagues and the automotive and electronics industries were overrepresented in the French sample. In addition, we have compared the Dutch and the French respondents on the purchasing maturity of their industry sector. The purchasing development model of Van Weele (2005) states that depending on, amongst others, business context, company strategy and top management commitment, the purchasing and supply management function develops over time. This means that some industries are characterised by a more mature purchasing and supply management than other industries. However, the industries in the Dutch and the French sample seem similar on the level of their purchasing maturity.

The results of the survey have been discussed in two focus group discussions. One group consist of only French purchasers. The other group represented purchasing professionals from different European countries that were all experienced in dealing with Dutch or French purchasing environments.

4 Results

This section presents the results of this study. We have quantified the identified key characteristics of buyer–supplier relationships in a Dutch and in a French cultural setting. Table 3 shows the means for buyer’s and supplier’s-dependence in the four Kraljic quadrants, indicating the differences between Dutch and French buyer–supplier relationships (measured on a 5-point scale). Several points emerge from Table 3. Generally speaking, French purchasing professionals perceive higher levers of dependence on their suppliers, compared to their Dutch colleagues. However, these differences are not statistically significant (at $p < 0.05$). These findings are in accordance with our prior expectations. Therefore, we have found support for Hypothesis 1a, that expected similar levels of buyer’s-dependence. The same conclusion can be drawn for the supplier’s dependence. Differences between Dutch and French supplier’s dependence are relatively small and are not statistically significant too. This finding confirms Hypothesis 1b: similar levels of supplier’s dependence (in all of the four Kraljic segments).

The results for trust and commitment are shown in Table 4. As expected, many differences between the Dutch and the French sample emerge. The differences however point in an unexpected direction.

All segments differ significantly for ‘goodwill trust’ and ‘affective commitment’. Mean differences for competence trust are statistically significant for the leverage, the strategic and the non-critical scenario, although the difference for the bottleneck scenario

is not significantly different. Generally speaking, Dutch respondents report higher levels of competence trust, goodwill trust and affective commitment. The results lead to a rejection of Hypotheses 2a,b and 3a. We expected higher levels of trust and commitment in French buyer–supplier relationships. We did not find support for Hypothesis 3b (on calculative commitment). Generally, the French respondents did not report statistically significant higher levels of calculative commitment (the leverage segment being the only exception). Therefore, the findings do not support Hypothesis 3b either.

In general, the French show far lower levels of trust and commitment than their Dutch counterparts. When considering the behaviour of the characteristics over the quadrants, the eye catcher is the low level of affective commitment that the French purchasers feel towards their suppliers. A difference between French and Dutch NC might explain this finding with regard to long- and short-term or whether knowing each other privately.

Table 3 Means for buyer's- and supplier's-dependence in the Dutch and in the French sample

	<i>Leverage</i>	<i>Strategic</i>	<i>Bottleneck</i>	<i>Non-critical</i>
<i>Buyer's-dependence</i>				
Dutch sample	1.86	3.98	3.67	1.46
French sample	1.97	4.24	4.01	1.74
Mean difference ^a	-0.11	-0.26	-0.34	-0.28
<i>Supplier's-dependence</i>				
Dutch sample	2.98	3.03	2.15	1.93
French sample	2.86	3.26	2.13	1.91
Mean differences ^a	0.12	-0.23	0.02	0.02

^aNone of the mean differences is significant at $p < 0.05$ (t -test).

Table 4 Means for the trust and commitment in the Dutch and in the French sample

	<i>Leverage</i>	<i>Strategic</i>	<i>Bottleneck</i>	<i>Non-critical</i>
<i>Competence trust</i>				
Dutch sample	4.08	4.21	3.41	3.71
French sample	3.62	3.68	3.34	3.21
Mean differences	0.46*	0.53*	0.07	0.50*
<i>Goodwill trust</i>				
Dutch sample	3.89	4.03	3.20	3.48
French sample	3.44	3.14	2.72	3.10
Mean differences	0.45*	0.89*	0.48*	0.38*
<i>Affective commitment</i>				
Dutch sample	3.12	3.57	2.71	3.11
French sample	1.94	1.81	1.31	1.83
Mean differences	1.18*	1.76*	1.40*	1.28*
<i>Calculative commitment</i>				
Dutch sample	2.17	3.22	3.13	2.32
French sample	2.64	3.14	3.16	2.75
Mean differences	-0.47*	0.08	-0.03	0.43*

*Significant at $p < 0.05$ (t -test).

The results of Table 4 can be analysed too, by comparing the findings of the four types of supplier relationships. A clear difference can be found between the bottleneck and the strategic quadrant. We found significantly higher levels of competence trust and goodwill trust for the strategic quadrant. Comparing the bottleneck with the leverage quadrant, higher levels of trust are found for the latter. Obviously, trust is related to profit impact: higher levels of trust are associated with higher levels of profit impact (i.e. in the leverage and strategic quadrants). No significant differences in relationship characteristics are observed between bottleneck and non-critical, and non-critical and leverage. From leverage to strategic, there is a significant increase in calculative commitment. The same behaviour can be observed in the Dutch sample. The differences between the scenarios are not as clear as in the Dutch sample. The Dutch seem to keep more to the theoretical pattern than the French.

Besides differences between the Dutch and the French sample, we observed that the four purchasing strategies also differentiate among each other. The Dutch sample demonstrates a strong pattern in the distribution of characteristics over the quadrants. It seems that the level of trust and commitment increased along the sequence bottleneck, non-critical, leverage and strategic. Apparently, in case of an important purchase, associated with high profit impact, trust stays equal (in the leverage as well as in the strategic position). Only the calculative commitment increases, probably due to the increased dependence on the supplier. Affective commitment is relatively low, but increases in a strategic partnership.

5 Discussion with two focus groups of French purchase professionals

The results for dependence levels are in support of our first hypothesis which expected no significant differences between Dutch and French buyer–supplier relationships. No differences in supplier’s- and buyer’s-dependence were found which means that Dutch and French purchasing professionals perceive the four purchasing segments equally in terms of buyer’s and supplier’s dependence. We did expect, however, national cultural would have an impact on relationships in terms of more trust and more commitment in French relationships. Surprisingly, the empirical findings were in the opposite direction: Dutch relationships seem to be characterised by higher levels of trust and commitment (except for calculative commitment). Dutch purchasing professionals seem to be more focused on the relationship than French purchasing professionals.

In our quest, to find an explanation for our surprising results, we have organised two focus group discussions. The first discussion involved 11 French participants and a second discussion involved 12 international participants, having experience with French and Dutch purchasing practices. The two focus group discussions had an identical structure. In a session of one hour and a half, we presented two perspectives: our hypotheses (based upon some studies), and our findings (based on the survey). We presented the differences between the hypotheses and the results. Then, we invited the group members to participate in a discussion that was aimed to shed light on the issues at hand. The main question was: how can we explain the unexpected results? The focus group discussions were taped and summarised for analysis. The results of the two group discussions proved to be quite similar. The purchasing professionals confirmed that NC might not be crucial in the attitude towards buyer–supplier relationships. Purchasing

professionals indicated, however, that Professional Culture (PC) plays a major role in the attitude towards relationships. Two explanations were put forward.

The first explanation of different expectations and results was expressed by orientation of the purchasing function. A possible explanation of the discussants was that the purchasing function in France represents employees with a different educational background from that in the Netherlands. French purchasing professionals have a strong technical background (CDAF, 2002) compared to Dutch purchasing professionals. In their comparison of the educational background of French, German and Dutch engineers Ulijn and Fayolle (2004) found that both French and German are rather technically trained and oriented whereas the Dutch show some commercial disposition, even if they are strictly technically trained. This technical versus a more commercial background in (purchasing) education is likely to impact purchasing practices. Higher scores on the relationship characteristics would reflect a more commercial and therefore relationship-oriented approach among the Dutch. The technical orientation of the French may correspond to a more deal-oriented approach. The discussants indicated that a more technical orientation of the French purchasing professionals and a more commercial orientation of the Dutch purchasing professionals could have a significant impact on the findings of this study.

The second explanation pointed towards a separation between personal and business relationships. According to the discussants, research should clearly differentiate between behaviour in personal relationships and behaviour in business relationships. Discussants indicated that intercultural studies into characteristics of NC might explain attitudes in personal relationships. It was felt strongly that behaviour and attitude in business relationships should be studied and explained differently. The lower scores for relationship characteristics would not reflect the personal man-to-man relationship with the supplier, but the business-to-business approach to the relationship. In French companies, business-to-business negotiations seem to be dealt with more formally and hierarchically than in Dutch companies. Regarding business relationships the aforementioned element of professional (educational) background may play an important role in explaining the behaviour of the purchasing professionals. This difference points at a possible interaction between professional and national culture. Given the outcome of the focus group discussions, the unexpected results of our comparative study might be explained by differences in PC, rather than by differences in national culture.

The educational background and the distinction between personal and business relationships in supplier negotiations both indicate that purchasing is practiced differently in the Netherlands and France. Differences in PC between the Dutch and French purchasing professionals seem to provide a reasonable explanation for the differences that we observed in our study. PC, however, has not received much attention in (intercultural) studies on buyer–supplier relationships. Given our results, we argue that PC warrants more attention in future culture studies. Apparently, for a Dutch buyer who is dealing with a French supplier, the question for him or her is not so much how (s)he has to deal with a Frenchman, but rather how (s)he has to work with a purchasing professional with a French engineering background.

6 Conclusions and recommendations for further study

The results of this exploratory study imply that cultural factors affect the use of differentiated purchasing strategies. When confronted with scenarios of purchasing segments, however, the Dutch and French sample perceive similar levels of buyer–supplier dependence, as described in Kraljic’s purchasing portfolio. An intriguing difference was observed with regard to the way French buyers deal with supplier relationships. Significant differences could be observed related to two important relationship characteristics, i.e. trust and commitment. French buyers seem to be less relationship-oriented and tougher negotiators than their Dutch colleagues. Based on a variety of intercultural studies (Hofstede, 1980; 2001; Trompenaars and Hampden-Turner, 1997; Gesteland, 2002) one would expect that the French purchasing professionals would be more relationship-oriented than Dutch purchasing professionals. However, across different purchasing segments (non-critical, bottleneck, leverage and strategic) the French purchasing professionals turn out to show less affective commitment, competence trust and goodwill trust towards their supplier than their Dutch colleagues. Possible explanation for this difference is the technical versus commercial educational background that result in differences of PC.

This study contributes to the debate on the role of culture in purchasing practices. The focus group discussions resulted in a deeper understanding of the cultural differences and their impact on buyer–supplier relationships. A clear distinction should be made between the role of PC and the role of national culture. Within a universal supplier’s- and buyer’s-dependence perception of Dutch and French purchasing professionals, a NC sensitive perception with regard to trust and commitment occurred. This position could be explained by the educational background that impacts the purchasing profession. Based on this study, PC seems a more profound factor in explaining differences in purchasing practices than NC. This may explain why integrating and leveraging purchasing strategies in large multinational corporations is so troublesome (see Rozemeijer, 2000). Cultural differences in handling relationships and negotiating tactics among purchasing professionals in different countries and professional environments may represent important obstacles to international purchasing coordination activities. However, the extent to which these differences may exist and the impact of culture on the outcome of purchasing strategies, obviously warrants further studies.

As regards the limitations of our study, questionnaires were administered to purchasing experts. Obviously, two parties are involved in buyer–supplier relationships. Further research could include the perception of the supplier side of the relationships. A large part of the study elaborated on the survey of Gelderman (2003). The questionnaire has initially not been developed for conducting cross cultural comparison. Nevertheless, our questionnaire provided a useful vehicle for addressing intercultural aspects of the buyer–supplier relationship. Perceived dependence levels, trust and commitment are the main ingredients for exploring buyer–supplier relationships with partners of a different cultural background. Obviously, more aspects play a role in buyer–supplier relationships, such as conflict, uncertainty, communication, adaptation, resource allocation, interaction patterns, institutionalisation and organisational learning. The proposed exploration of the PC in buyer–supplier relationships demands a review of variables included in this study. Although the study aims at exploring the intercultural context in the purchasing activity, the study is limited to purchasing in the Netherlands and France. The focus group discussions indicate that PC might be more important than the NC for the explanation of

differences in buyer–supplier relationships. Future studies might focus on the NC × PC interaction within intercultural buyers–sellers relationships by careful manipulation beforehand of both variables, for instance between French and Dutch engineer and non-engineer buyers and sellers. Through these studies more evidence could be obtained about how buyer–seller negotiations are affected by differences in national and PC.

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Appendix A Measurement of buyer–supplier relationship characteristics

<i>Variables</i>	<i>Operationalisation</i>
Buyer's-dependence	You are dependent on supplier X
Supplier's-dependence	Supplier X is dependent on your organisation
Competence trust	We believe that supplier X will keep his promises and agreements
Goodwill trust	We believe that supplier X will not misuse his position and actually takes our interest into consideration
Affective commitment	We are doing business with supplier X, mainly because it is pleasant working with this supplier
Calculative commitment	We are doing business with supplier X, mainly because too much time, energy and expense would be involved in terminating the relationship with this supplier