

Exploring the imperative for purchasing strategic alignment to drive purchasing maturity

*Britta Nonhoff (b.nonhoff@cranfield.ac.uk)
Cranfield School of Management*

*Heather Skipworth
Cranfield School of Management*

*Michael Bourlakis
Cranfield School of Management*

*Carlos Mena
Michigan State University*

*Michael Bernon
Cranfield School of Management*

*Hendrik Reefke
Cranfield School of Management*

Abstract

This study challenges purchasing literature on its lacking consideration of contextual factors, resulting in generic recommendations that oversimplify reality. Through a systematic review across purchasing maturity, purchasing strategic alignment and strategic purchasing literature, core conceptualisations are examined to understand underlying premises and the impact on performance links. This analysis highlights issues and unarticulated assumptions that limit the generalisability of any relationships with performance. The paper proposes a framework for future research that conceptualises alignment as a smaller gap between the current and target category maturity profile.

Keywords: procurement, strategic alignment, purchasing maturity

Introduction

Strategic purchasing stresses the increasing strategic recognition and bottom-line impact of purchasing, based on purchasing's historic evolution, which is replicated in purchasing maturity models (Ramsay and Croom, 2008; Rozemeijer et al., 2003). Supporting this proposition, both strategic purchasing and purchasing maturity have been linked to performance. However, conflicting results undermine the strength of this relationship and raise the question what really drives performance (Ellram et al., 2002).

To advance the understanding of purchasing’s role in supporting competitive advantage, this research takes a contingency perspective. Following Michael Porter (1985, pp. 36–41) in recognising purchasing as an important support activity in the value chain, purchasing’s strategic relevance depends on its ability to support corporate objectives and the extent it is aligned with the firm strategy. Applying this to maturity models, this research attempts to define the relationship between purchasing maturity, purchasing strategic alignment and performance, focusing on two research questions:

1. How are purchasing strategic alignment and purchasing maturity models conceptualised?
2. How are purchasing strategic alignment and purchasing maturity models linked to performance and how is this influenced by different conceptualisations?

The remainder of the paper details the method, describes the theoretical background as well as the findings and considers implications for theory and practice.

Method

Search String Definition

To answer the research questions, this research assesses existing literature. Systematic reviews aim to reach reasonable conclusions “about what is and is not known” (Denyer and Tranfield, 2009, p. 671) using a rigorous methodology to identify, select and analyse existing research. This research follows Tranfield et al.’s (2003) three-stage process, describing the planning, conducting and reporting of the review.

The research questions can be broken down into three components: purchasing maturity, purchasing strategic alignment and performance. All three are complex concepts with different synonyms that have to be considered. Strategic purchasing is included as an additional keyword, as the concept often includes aspects of strategic alignment. These resulting search string elements are described in Table 1.

Table 1: Search string element definition

Review question component	Search string element
Purchasing	(purchas* OR procur* OR “supply management” OR “supply-management” OR buy*)
Maturity	(maturity OR “development model” OR stages OR levels OR “best practices” OR configuration)
Alignment	(align* OR misalign* OR integrat* OR fit*)
Strategic purchasing	(“strategic purchasing” OR “strategic sourcing” OR “strategic procurement”)

These elements were then combined in two ways to reflect the research questions:

- Purchasing within three words of maturity
- Purchasing within three words of (alignment or strategic purchasing)

These were applied to title and abstract searches in ABI/Inform Complete (ProQuest) and EBSCO, reduced to peer-reviewed journals with no time restriction. Additionally, conference proceedings for the last two years were reviewed, to include research not yet published. Specifically, the following conferences were reviewed:

- European Operations Management Association (EurOMA)
- International Purchasing and Supply Education and Research Association (IPSERA) (papers published in 2015 only; papers from 2016 were not available)
- Production and Operations Management Society (POMS)

Screening Process and Results

The papers returned from the search strings were initially screened based on their title and abstract against their topical fit, followed by a full text screening. The papers remaining after both screening steps were taken forward into the analysis.

Table 2 indicates the screening process, starting with initial results of 3,532 papers, which were reduced to 279 papers after the abstract screening. The full text screening reduced this to 139 papers. Removing duplicates, this resulted in 74 papers. No relevant conference papers could be identified. However, 18 papers were included from references and panel recommendations, resulting in 92 papers included in the analysis.

Table 2: Search string results by process step

Search string	Purchasing w/3 maturity		Purchasing w/3 (alignment or strategic purchasing)		Total
	EBSCO	ABI	EBSCO	ABI	
Initial results	1,181	930	791	630	3,532
Title and abstract screening	45	38	101	95	279
Full text screening	26	19	46	48	139
Remove duplicates (papers taken forward to analysis)					74
Conference papers					0
Additional papers through reference search / panel recommendations					18
Total papers considered					92

Although quality aspects were assessed, no papers were excluded due to quality criteria. Question one focuses on underlying assumptions that can be informed by all papers, as they are read by other academics and therefore constitute the body of knowledge. In contrast, the quality of the paper does impact on the performance link (question two). Therefore, the quality of papers was taken into account during the content extraction and will be discussed in the thematic analysis of this section.

Theoretical background

Contingency theory moves beyond universalistic theories, assuming instead that competitive advantage stems from the fit of organisational characteristics with contingencies (Donaldson, 2001). Applying contingency theory in operations management, the theory of production competence develops an approach for production strategy alignment (Hayes and Wheelwright, 1984). González-Benito (2007) and Baier et al. (2008) have progressed this into the purchasing domain, arguing that similar concepts hold true. Purchasing strategic alignment can be defined as the consistency of purchasing's strategy and activities with the firm's objectives (Baier et al., 2008).

While the importance of purchasing strategic alignment is widely agreed upon, it is conceptualised differently. Strategic purchasing is based on the consensus that purchasing will only be more involved in corporate planning, when it is recognised as strategic. It is therefore related to status, skill levels, a willingness to take risks and resource availability on top of alignment (Carr and Smeltzer, 1997). This contradicts purist definitions and conceptualisations of purchasing strategic alignment.

This demonstrates that the concept of purchasing strategic alignment is not clearly understood – or at least not clearly agreed upon – in purchasing literature. This is also demonstrated in purchasing maturity models, which reflect purchasing's evolution and provide a tool to improve organisational purchasing (Schiele, 2007). Purchasing maturity is said to reflect “the level of professionalism in purchasing at the business unit level” (Rozemeijer et al., 2003, p. 5). Similarly to strategic purchasing, it is not entirely clear, how purchasing strategic alignment is considered.

Results

Descriptive and Theoretical Analysis

The majority of papers identified focus on purchasing maturity (18 papers) or strategic purchasing (50 papers), with only 18 papers on purchasing strategic alignment.

Table 3 details the reviewed papers by research method and topic. It demonstrates the popularity of survey research, followed by case studies and conceptual papers. This reliance on deductive research indicates a predominance of positivist epistemologies, especially since case studies are often used to test an existing maturity model, not to explore underlying assumptions (e.g. Versendaal et al., 2013). For a relatively unexplored field, there seems to be little explorative research, like interviews, indicating that existing research is driven by academic interests, rather than industry issues.

Table 3: Papers by research method (some papers use more than one method)

Method	Number of papers			
	maturity	alignment	strategic purchasing	total
Survey	12 (38%)	8 (44%)	39 (78%)	54 (59%)
Case study	14 (44%)	2 (11%)	5 (10%)	19 (21%)
Conceptual	3 (9%)	7 (39%)	6 (12%)	15 (16%)
Interviews	5 (16%)	0 (0%)	2 (4%)	7 (8%)
Other	1 (3%)	1 (6%)	2 (4%)	4 (4%)
Total	32	18	50	92

Table 4 indicates that a large proportion of the papers reviewed (67%) do not clearly state a theoretical perspective for their research. As Colbert (2004, p. 341) argued, “without good theory, the field [...] could be characterized as a plethora of statements regarding empirical relationships and/or prescriptions for practice that fail to explain why these relationships exist or should exist”, indicating that a lack of theory is a serious obstacle to determining purchasing’s impact on corporate success.

Where a theory is used, it is usually the resource-based view or its extension, the relational view, which is not universally accepted in the purchasing domain (Ramsay and Croom, 2008). Papers looking at strategic alignment also use contingency theory, proposing that competitive advantage stems from the fit of purchasing’s actions and objectives with the firm strategy (e.g. Baier et al., 2008).

Table 4: Papers by theory (some papers use more than one theory)

Papers by theory used	Number of papers			
	maturity	alignment	strategic purchasing	total
No theory stated	28 (88%)	7 (39%)	33 (66%)	62 (67%)
Resource-based view	1 (3%)	1 (6%)	7 (14%)	9 (10%)
Relational view	1 (3%)		5 (10%)	6 (7%)
Transaction cost theory		2 (11%)	2 (4%)	4 (4%)
Contingency theory		3 (17%)		3 (3%)
Agency theory		2 (11%)		2 (2%)
Theory of production competence		2 (11%)		2 (2%)
Dynamic capabilities theory		1 (6%)	1 (2%)	2 (2%)
Knowledge-based view		1 (6%)	1 (2%)	2 (2%)
Other theories (mentioned once)	3 (9%)	7 (39%)	8 (16%)	12 (13%)
Total	32	18	50	92

Conceptualisation of purchasing strategic alignment

Table 5 compares the different conceptualisations with different types of measurements, indicating that the reviewed papers can be classified broadly in three conceptualisations:

1. Papers classified as *strategic alignment* are those that focus on the consistency of purchasing strategies and activities with corporate objectives. Only 27% of all papers reviewed use this conceptualisation, indicating a significant gap
2. *Strategic purchasing* papers use a multi-measure construct, capturing different concepts besides strategic alignment
3. *Congruence* requires the alignment of levels of maturity across different categories or between purchasing and the firm

As conceptualisations of both strategic purchasing and congruence differ significantly from the strategic alignment definition used in this research, these papers are not considered as part of the strategic alignment literature for this research.

Table 5: Papers by alignment measure (some papers use more than one conceptualisation)

Conceptualisation and measurement of purchasing alignment	Number of papers				
	Strategic alignment	Strategic purchasing	Congruence	Alignment not considered	Total
Likert scale	2 (8%)	31 (97%)			33 (36%)
As part of the maturity matrix	8 (32%)		1 (25%)		8 (9%)
Fit with deducted construct	4 (16%)				4 (4%)
Fit with inductive construct	1 (4%)				1 (1%)
Congruence (purchasing and firm maturity)			1 (25%)		1 (1%)
Congruence (maturity aspects)			1 (25%)		1 (1%)
Not defined	10 (40%)	1 (3%)	1 (25%)	31 (100%)	43 (47%)
Total	25	32	4	31	92

Table 5 also demonstrates that strategic alignment is measured in a number of different ways. A large number of papers (40%) do not define any measure for alignment, usually the conceptual papers. 10 papers (40%) measures strategic alignment directly (Likert scale) or as part of a maturity matrix. Both of these rely on respondents' perceptions to determine the extent of strategic alignment, usually using measures such as

- Purchasing performance in terms of its contributions to the firm's objectives
- Training is oriented along the needs derived from the firm's strategic plan
- Purchasing plans are continuously revised to adapt them to in the strategic plan
- The purchasing function has a good knowledge of the firm's strategic goals (e.g. Handfield et al., 2015; Kaufmann and Gaeckler, 2015)

These measures tend to focus on the *process* of alignment. All of the above measure actions to increase a firm's strategic alignment, while none of them measures the *extent* to which purchasing objectives and activities fit with the firm strategy.

Only five papers overcome this issue by measuring strategic alignment indirectly, using pre-defined constructs and measuring whether respondents' answers fit with the defined concept.

Narasimhan and Carter (1998) inductively research related business and purchasing strategies. They find that respondents tend to emphasise different purchasing strategies depending on their business strategy cluster. However, their research is based on the questionable assumption that all surveyed purchasing functions are currently in alignment with their business strategy.

David et al. (2002) find that a differentiation strategy fits with a decentralised purchasing structure and a broader scope of activities, while cost leadership fits with more centralisation and a more narrow scope. Due to the narrow conceptualisation they do not explain how purchasing can align its strategy and activities to the firm objectives.

González-Benito (2007) finds that alignment between the emphasis placed and the performance in different purchasing objectives is related to firm performance. However, his findings are limited by their reliance on purchasing managers' perceptions, which excludes perceptions of other functions, including purchasing's internal customers.

Baier et al. (2008) measure the importance attached to different purchasing priorities. They define ideal purchasing strategy profiles per business strategy based on the averages of the best-performing companies. They find that a profile closer to the optimum is linked to firm performance, but fail to provide evidence that no other business aspects of underlying phenomena influence the performance link.

Finally, Kroes and Ghosh (2010) find that the extent to which outsourcing drivers align with competitive priorities is related to firm performance. Similar to David et al. (2002) they do not consider actual purchasing strategies or activities.

Conceptualisation of purchasing maturity models

Purchasing maturity is conceptualised in a number of different ways. These differences include the measurement type, the unit of analysis and the alignment conceptualisation.

The majority of papers (53%) use average maturity measures, although some papers measure maturity a profile, scoring each aspect of the maturity model individually. It describes two very different approaches: one where the purchasing function can only develop as a whole and one where different aspects of purchasing can be compared.

Table 6 analyses papers by their unit of analysis, i.e. the corporate level at which maturity is measured. It is interesting that 87% of papers measure maturity at the company or business unit level, while widely accepted purchasing papers like Kraljic (1983) clearly demand a segmented approach, depending on product characteristics. Even when assuming that all practices considered in maturity models indeed apply to all companies, it is still questionable whether they also apply to all product categories.

Table 6: Papers by unit of analysis

Unit of analysis	Number of papers
Company or function	25 (78%)
Business unit or plant	3 (9%)
Segment or category	2 (6%)
Individual buyer, component or supplier	2 (6%)
Total	32

Only two papers use the purchasing category or segment as their unit of analysis. Beukers et al.'s (2006) framework compares current and target maturity profiles of different segments to identify areas for improvement. However, their target profile is based on the highest maturity score per segment, thus calling for intra-segment congruence and inhibiting the prioritisation of different purchasing tactics. Deasy et al. (2014) compare two emergency service departments, deeming the identified differences "appropriate for the nature of the commodities [...] and the cost and operational risk" (Deasy et al., 2014, p. 26). They then appear to contradict this, stating that the "consistent implementation and execution of purchasing strategy is of paramount importance" (Deasy et al., 2014, p. 26). Both papers are further limited by low quality ratings and their lack of consideration of purchasing strategic alignment.

Table 7 provides an overview of the different ways in which alignment is considered in maturity models. It demonstrates that the majority of papers (62%) do not consider alignment at all. If alignment is considered, it is conceptualised in two different ways:

1. In consistency with this paper's definition (*purchasing strategic alignment*)
2. As *congruence*, either between different maturity aspects (e.g. Mikalef et al., 2015) or between purchasing and the firm (e.g. Cavinato, 1999). As argued before, this refers to a concept different from purchasing strategic alignment and will therefore be excluded from the analysis going forward

Table 7: Papers by alignment measures (some papers use more than one conceptualisation)

Alignment conceptualisation	Alignment measures	Number of papers
Not considered	No alignment considered in model	20 (63%)
Strategic purchasing alignment (fit between purchasing objectives and activities with firm strategy)	Alignment considered as a topic of the maturity model	11 (34%)
	Alignment considered as a level in the maturity model	5 (16%)
Congruence	Congruence between levels of different topics in maturity	3 (9%)
	Congruence between purchasing maturity and company maturity level	2 (6%)
Not defined	Not defined	1 (3%)
Total		42

When alignment is considered it is usually as a topic in the maturity model or as a stage in the maturity model. Either way, alignment is assessed by the respondents or researchers. Measures here are similar to strategic alignment measures, including:

- The purchasing function has a good knowledge of the firm's strategic goals
- Purchasing performance is measured in terms of its contributions to the firm
- Purchasing professionals' development focuses on elements of the competitive strategy (Paulraj et al., 2006)

They also have similar limitations, namely the reliance on purchasing managers' perceptions and the measurement of processes instead of outcomes.

What becomes apparent is that all papers assume that purchasing needs to achieve a generic higher stage of maturity, instead of selecting the best fitting practices. This appears to be in contrast with findings from the strategic alignment research. For example, a number of papers call for a more centralised purchasing structure as one of the maturity aspects, which appears to directly contradict David et al.'s (2002) finding that the level of centralisation is contingent upon the firm strategy.

Purchasing maturity and performance

The relationships identified between purchasing maturity and performance are subject to some major limitations. First, most papers attempt to link performance to an aggregate measure of maturity. Considering the differences in topics included in maturity models, this poses a significant limitation to the generalisability. While authors may prove a link between an individual maturity model and performance, this limitation prohibits claims that literature cumulates into proving a general link between maturity and performance.

The performance links identified are conflicting; while some papers find support for their hypotheses, others find opposing evidence (Ellram et al., 2002). Moreover, the identified links are based on surveys only answered by one respondent, typically a purchasing professional, indicating possible bias and posing a limitation to findings.

Performance links appear to be stronger at the purchasing level, while no direct links were found at firm level. This raises questions concerning the often claimed bottom line impact of purchasing. With purchasing accounting for a large proportion of a firm's cost this finding is surprising. Whilst improved purchasing performance does appear to be related to firm performance, the detailed relationships and causes remain unclear.

Finally, whilst most papers are satisfactory in methodological aspects, the theoretical basis is weak. Schiele (2007) is the only one to suggest a theory to explain the identified relationships; however, his research provides little information on data analysis and only considers on perceived, expected performance improvements.

Strategic purchasing and performance

Similarly to maturity models, strategic purchasing is not a clearly defined concept. Hence, links with performance are based on a multitude of different measurements for strategic purchasing, including but not limited to strategic alignment, strategic planning and status (e.g. Carr and Smeltzer, 2000).

The theoretical basis is lot stronger for strategic purchasing. A large number of papers use the resource-based view, or its extension, the relational view, to argue that through its activities and relationships purchasing's capabilities can contribute to a firm's overall competitiveness (Izquierdo et al., 2015).

However, conflicting evidence around the identified relationships raises the question whether performance is driven by underlying concepts. Moreover, all research is based on survey approaches, relying on respondents' perceptions to measure performance. As almost all of these respondents are purchasing professionals this raises the question to what extent these relationships are perceived and accepted by the rest of the business.

Purchasing strategic alignment and performance

Although few papers research purchasing strategic alignment, the performance link appears to be promising. Not only is the empirical evidence less conflicting, but authors also find direct links to firm performance.

The fit between alignment conceptualisation and alignment measurement is also much clearer. Papers looking into strategic alignment operationalise at least aspects of this, including outsourcing drivers, purchasing priorities or purchasing's organisational set-up. However, this indicates a lack of clarity around purchasing strategic alignment.

It also becomes apparent that the performance link between purchasing strategic alignment and company performance is much more grounded in theory. Whilst the compared papers use several different theories, the contributions of David et al. (2002), González-Benito (2007) and Baier et al. (2008) have started to move the contingency theory paradigm towards the development of a theory of purchasing competence.

One major limitation is that business strategies are commonly distinguished into cost leadership and differentiation (e.g. Baier et al., 2008; David et al., 2002). This does not align with Narasimhan and Carter's (1998) inductive research into relevant business strategies. It appears therefore that some further research is necessary to define the optimum purchasing strategies contingent upon different business strategies.

Discussion

The analysis clearly highlights limitations of existing literature, especially in the underlying assumptions. Purchasing maturity literature was shown to generalise to an extent that cannot be reconciled with findings in the purchasing strategic alignment literature. These limitations undermine the performance links identified and raise a number of questions to be considered in future research.

First, literature appears to disagree upon the measurement type for maturity. Some research uses aggregate measures for maturity, while other authors use profiles to determine individual levels for each aspect of maturity. To enable the prioritisation of purchasing practices the proposed framework measures maturity as a profile, distinguishing between a current and a target profile derived from the category strategy.

Purchasing maturity literature usually measures maturity at a functional or firm level. However, in the broader purchasing literature Kraljic's (1983) call for segmentation of purchased items depending on their importance to the company and the supply market complexity is widely recognised. Considering the differences between segments, the framework proposes the category as the unit of analysis for purchasing maturity.

It also becomes evident that purchasing maturity research does not sufficiently cover purchasing strategic alignment. The framework proposes to types of alignment: The *process of alignment* defines how the firm strategy determines the overall purchasing strategy and finally the category strategy. The *extent of alignment* defines the extent to which the current and target purchasing profiles align.

Finally, the analysis has highlighted some important limitations, especially a reliance on positivist ontologies and the acceptance of respondents' bias. In the proposed framework, performance is related to the extent of alignment, which is measured as the inverse size of the gap between current and target maturity profile.

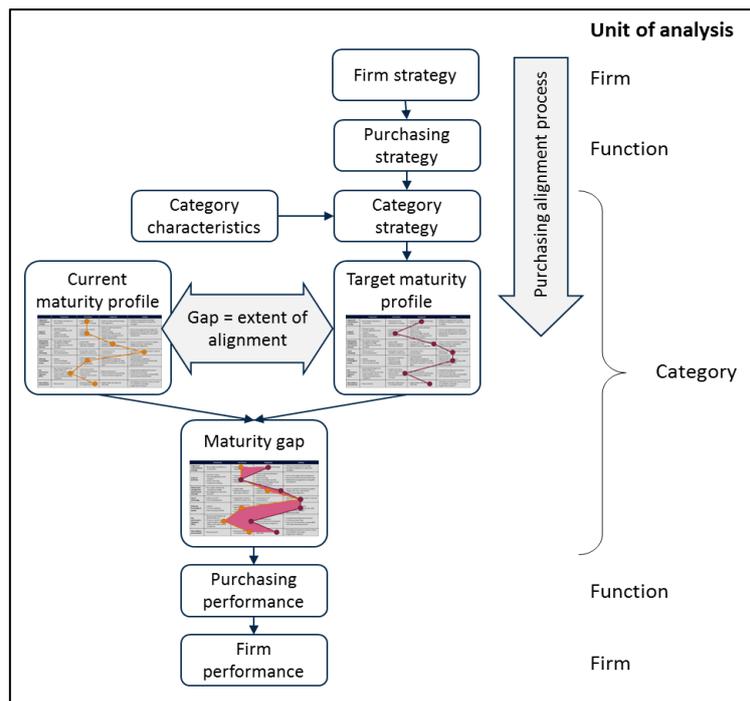


Figure 1: Conceptual model

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