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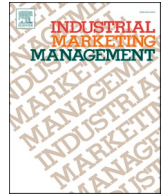
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In pursuit of value: The objective of a purchase as guide for a relationship

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ABSTRACT

This study investigates how buying firms differentiate their relationship practices based on the objective of a purchase. Although previous research shows that purchasing objectives strongly influence how buyers organize their relationships, it remains unclear how so-called tactical sourcing levers are used to support an objective. We draw on a mixed-method case study design consisting of a scenario-based survey study and semi-structured interviews. Our quantitative findings show that while transactional levers are commonly applied across purchasing objectives, they are not necessarily the most important for the different objectives. In fact, our qualitative findings reveal that sourcing levers are not either transactional or relational, but exist on a continuum where each lever can be used in different ways depending on the objective of the purchase. As such, our study provides a novel view on more traditional purchasing classifications such as the one on purchasing levers. Consequently, our findings suggest that existing purchasing tools need to be revised in line with today's value creation approach of purchasing.

1. Introduction

How buyer-supplier relationships are managed is an important predictor for the performance and value outcome of the relationship (Huang, Cheng, & Tseng, 2014; Shahzad, Ali, Takala, Helo, & Zaefarian, 2018). As relationships differ, so should the buying firm's relationship practices (Ivens, Pardo, Salle, & Cova, 2009). Indeed, the literature has developed several differentiated relationship management practices, termed *sourcing levers* (Hesping & Schiele, 2015), considering supplier relationships and purchasing categories (e.g., Caniëls & Gelderman, 2007; Cox, 2015; Kim & Choi, 2015). These are broadly distinguished into transactional (volume bundling, price evaluation, supply base extension) and relational levers (process, product, cross-category and relationship improvement; Hesping & Schiele, 2016). However, the literature does not provide clear insights into how a buying firm can translate purchasing strategies into differentiated levers (Formentini, Ellram, Boem, & Da Re, 2019). This is important because studies to date show that levers seem to be combined across different relationships with varying degrees of success (Ateş, Wynstra, & van Raaij, 2015; Drake, Myung Lee, & Hussain, 2013; Hesping & Schiele, 2016). At the same time, previous research shows that within clusters of purchases, different objectives (i.e., the envisioned accomplishment in terms of

competitive priorities for an single purchase; Ateş, 2014) prevail (Luzini, Caniato, Ronchi, & Spina, 2012) and suggest that the objective of a purchase could be a determinant in deciding upon which lever to adopt (Ateş et al., 2015). Therefore, in this article we explicitly seek to explain how the objective of a purchase guides the buying firm's use of sourcing levers in a buyer-supplier relationship.

Our article addresses two specific gaps within the literature. First, although previous studies suggest that the objective of a purchase influences the use of purchasing practices (e.g., Pagell, Wu, & Wasserman, 2010) it remains unclear how buyers use specific sourcing levers in support of a given purchasing objective. Previous studies either focus on single objectives of a purchase (e.g., cost and innovation, Ateş et al., 2015; sustainability, Pagell et al., 2010) or on individual sourcing practices (e.g., international sourcing, Schiele, Horn, & Vos, 2011; supply base reduction, Choi and Krause, 2006). As such, while there is a mature body of literature, research to date has applied a piece meal approach rather than a holistic perspective and “would profit from avoiding inquiries into any single lever [...] without taking the other levers into consideration” (Schiele et al., 2011). Second, while it has been found that transactional levers are applied more often than relational levers (Hesping & Schiele, 2016), much less is known about their differing importance and role across objectives. In addition, while we

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know that purchases combine relational and transactional levers across an objective (Ateş et al., 2015; Drake et al., 2013), there are very little insights into such combinations and how different levers interact to support an objective. To address these gaps, this article examines *how the objective of a purchase such as cost savings, delivery performance, innovation or quality improvements, affect the buying firm's use of transactional and relational sourcing levers*.

We apply a mixed-method case study consisting of a scenario-based survey study and semi-structured interviews. Our findings contribute to the understanding that purchasing increasingly contributes to value creation beyond the traditional understanding of cost savings (Ueltschy Murfield, Ellram, & Giunipero, 2021) in three ways. First, we provide insights into which sourcing lever (i.e., relationship practice) a purchaser prefers given the objective of a purchase. Specifically, our findings reveal that transactional levers are most important for purchases with a cost objective, while relational levers are relatively more important for the other objectives. This nuances the results of Hesping and Schiele (2016), who found that transactional levers are most frequently applied across different purchases. Our findings suggest that transactional approaches will always be applied independent of the chosen strategy while relational approaches are used more selectively depending on the importance. As such, we nuance existing studies and provide examples of how strategic value creation actually takes place in practice. Second, we find that transactional levers are used beyond the traditional meaning of cost savings. For instance, whereas volume bundling is typically seen as a lever to increase the bargaining position of the buyer and to enhance efficiency to realize cost savings, we find that buyers also apply volume bundling in purchases with quality and delivery performance objectives to create relational value and enhance risk management. At the same time, we also find examples where relational levers are used transactional. For instance, process improvement can be used in a transactional way to ensure security of supply via contractual clauses in delivery performance and cost focused purchases. These findings show that the applicability of levers is more multifaceted than suggested in the current literature, where purchasing practices are either transactional or relational. Instead, our findings show that levers tend to be used on a *continuum* ranging from transactional to relational approaches. This new view on the purchasing lever classification seems to be more in line with the idea that purchasing can add value to an organization beyond cost savings. At the same time, this provides a first step towards upgrading/ reviewing existing purchasing tools to reflect today's realities. These findings not only relate to the literature on sourcing levers, but also to the literature on transactional and relational governance in buyer-supplier relationships more generally (e.g., Shahzad et al., 2018; Sheth & Shah, 2003). Third, overall these findings contribute to the literature on differentiated practices within buyer-supplier relationships and suggest nuances on how to move beyond cost savings towards value creation using differentiated practices (Cox, 2015; Formentini et al., 2019).

2. Literature background

Similar to any other function, the purchasing department's strategy translates an organization's goals to the functional level (Formentini et al., 2019). On a functional level, relationship practices may differ for various purchases (Ateş, van Raaij, & Wynstra, 2018). These practices are sometimes termed tactical sourcing levers (Schiele et al., 2011) and are considered as the 'building blocks' of different purchasing categories. A sourcing lever forms a cluster of similar tactics, exercised both prior to and continuously after supplier selection (Hesping & Schiele, 2015). Purchasing handbooks have classified purchasing practices in, for example, the 'purchasing chessboard' containing 64 tactics (Schuh, Raudabaugh, Kromoser, Strohmer, & Triplat, 2012) or the 'six value levers' (O'Brien, 2012). We follow the sourcing lever classification by Schiele et al. (2011) and Hesping and Schiele (2016). These studies distinguish seven 'core' sourcing levers divided into transactional

(volume bundling, price evaluation, supply base extension) and relational levers (product, process, cross-category and relationship improvement). The former are often associated with a more traditional purchasing approach that guided the development of purchasing portfolios focusing on efficiency through a price-orientation (Svahn & Westerlund, 2009). The latter relate to broader value creation such as reducing risk (Hesping & Schiele, 2016; Van Weele, 2018) through cooperative efforts, relational norms, trust or commitment (Tangpong, Michalisin, Traub, & Melcher, 2015). Table 1 provides an overview of the six core levers.¹

Considering the diverse content and purposes of transactional and relational sourcing levers, buyers combine tactics across purchases to create value in different buyer-supplier relationships (Ateş et al., 2015; Drake et al., 2013; Hesping & Schiele, 2016). Hence, purchasing tactics are not necessarily applied as strict alternatives. Similarly, the literature exploring relational and transactional buyer-supplier strategies has argued that strategies differ based on the nature of the relationship and the purchasing objectives (Svahn & Westerlund, 2009). More so, it has been found that the interplay between transactional and relational strategies is not straight forward (Shahzad et al., 2018). For instance, Whipple, Lynch, and Nyaga (2010) demonstrate that for any relationships whether it is driven by cost motives or value creation, relational factors such as trust and communication are important for relationship satisfaction and performance. Studies utilizing social exchange theory demonstrate that relational approaches also relate to the buyer's cost benefits (e.g., Terpend & Krause, 2015) and, vice versa, transactional mechanisms are found to provide a legal and institutional framework in which relational mechanisms can perform (Liu, Luo, & Liu, 2009). Hence, the division of purchasing levers into transactional and relational may also not be as black and white as suggested in the current literature. A natural way to studying tactical sourcing would be to explore them based on the objective of a purchase as the basis determiner for the strategic intent of a purchase that signals what the firm aims to accomplish, given a set of contingencies (Ateş, 2014). This objective can be articulated according to the competitive priorities in operations management (Hayes & Wheelwright, 1984; Krause, Pagell, & Curkovic, 2001): cost, quality, innovation, delivery performance (dependability, flexibility). Several empirical studies in the purchasing domain draw on these objectives (see Table 2 for an overview).

Cost focused purchases are about minimizing both direct and indirect costs of a purchase which is usually important for standardized items in the context of technological and supply market stability (Luzzini et al., 2012). The three transactional levers are often associated with cost motives: 'volume bundling' can help to achieve economies of scale (Schoenherr & Mabert, 2008; Schuh et al., 2012), 'supply base extension' to increase the bargaining power of the buying firm (Caniëls & Gelderman, 2007; Li, 2013) and 'price evaluations' with driving the price via price analysis techniques (Schuh et al., 2012). Due to the strong use of transactional levers in many cost focused purchases relationships are usually adversarial with little to no innovation capabilities (Schiele et al., 2011). The objective of *innovation* is linked to a buyer's intent to improve introduction rates and timing of new products and services (Gonzalez-Benito, 2010; Luzzini et al., 2012), as well as contributions of suppliers to this process in terms of innovative components and production or process technologies (Ateş et al., 2018; Drake et al., 2013; Krause et al., 2001). Hence, customization drawing on the lever 'product optimization' is key (Ateş et al., 2018). Naturally, the lever 'relationship optimization' is used as close ties stimulate higher performance outcomes (Hesping & Schiele, 2015; Leenders, Johnson, Flynn, & Fearon, 2006), not only for innovative, but also for quality purchases. Indeed, strategic collaboration appears to be a preferred approach for quality focused purchases to leverage customization and supplier expertise and

¹ In this study, we investigate individual purchases. Hence we do not consider the 'category-spanning improvement' lever further.

Table 1
Tactical sourcing levers, underlying dimensions and associated activities.

Tactical sourcing lever		Definition (based on Hespings, 2015, p. 49) [The purchaser's engagement in ...]	Underlying dimension	Associated activities (source)
TRANSACTION-ORIENTED	Volume bundling	“... consolidating demand and increasing purchasing volume per request for quotation.”	Internal volume consolidation	Bundling several (complementary) requests into a single, large-volume package (1) Linking new allocations with current volumes (1) Consolidating demand across product groups, business units, sites, regions or subsidiaries (1; 12) Bundling across series of (future) projects (12) Single sourcing approaches (4) Reducing suppliers or sources (4; 12) Concentrating volume on one or few suppliers (1)
			Supplier consolidation	Bundling in purchasing group or buying consortium (3; 11) Taking part in sourcing community (12)
			Co-sourcing	Tendering: RFIs/RFQs; competitive price comparison (2; 11); reverse (e-)auctions (10) Gathering additional offers and specifications (1) Supplier market intelligence (11); industry analysis (12); detailed market research (13) Price benchmarking (11); comparison to market indexes, historical data or similar purchases (12) Spot buying; leverage market imbalances (12)
	Price evaluation	“... forming price targets and analyzing suppliers' bids and cost structures.”	Price analysis techniques	Target cost analysis (11; 12) Cost estimates and ‘should cost analysis’; competitive assessment(12) Total cost of ownership; total cost modeling (of the supply chain); life cycle costing analysis (2;12) Analysis of supplier cost breakdowns (12) Open book policies and spend transparency (5; 10)
			(Strategic) cost analysis and management techniques	Value analysis (value stream mapping) (12) Extending sources and competition; adding new suppliers in bidding process (1; 10) Outsourcing decision (‘buy’ over ‘make’) (10)
			Increasing sourcing options	Global and offshore (out)sourcing (2) ‘Bestshoring’ and global scouting (11) Low-cost country sourcing (1; 11)
RELATIONSHIP-ORIENTED	Supply base extension	“... increasing the number of sources and bidders per request for quotation.”	Global sourcing	Purchasing integration in new product development (2) Value engineering (6) Product benchmarking or product teardown (11) Functionality or specification assessment (11) Design for sourcing or invention on demand (11)
			Product (re-)specification	Supplier integration in (collaborative) new product development (1; 6) Requesting technical alternatives and innovative solutions from suppliers (1) Leveraging innovation and research and development network (11)
			Supplier or network integration	Reducing product or service variants (7) Technical simplification (1) Modular product design (6)
	Product improvement	“... making modifications to the design, functions and materials of the purchased items.”	Product standardization	Enlarging product/service variants and functionalities (2); widen product specifications (11)
			Product customization	Collaborative logistics and capacity management (1; 8; 10) Joint planning, forecasting, replenishment and resource sharing (1) Vendor managed inventory, just in time and other value-adding services (13) Electronic data interchange, e-procurement and e-billing (10; 1)
			Collaborative operations	Quality management (1) Contingency plans and risk analysis (13) Control of vendors, volume insurance and security of stock (13)
	Process improvement	“... improving processes related to the buyer-supplier interfaces.”	Process control	Dedicated investments (9) Contractual commitment in terms of volumes, spend or contract duration (10) Rewards and certifications (2) Profit-sharing clauses (2) Tailoring contract conditions to supplier (1) Offering favorable payment terms (11)
			Relationship commitment	
			Supplier incentivization	

(continued on next page)

Table 1 (continued)

Tactical sourcing lever	Definition (based on Hesping, 2015, p. 49) [The purchaser's engagement in ...]	Underlying dimension	Associated activities (source)
		Co-development	Supplier capacity-building (development) (1) Joint working teams, actions and events (2) Setting joint improvement objectives and tracking compliance (10)
		Relationship marketing	Preferred access to supplier innovations/capacities (1; 2); seeking exclusivity (10) Extensive field contact, timely payments and equitable treatment (2)

(1) = Hesping (2015); (2) = Schiele et al. (2011); (3) = Wang and Archer (2007); (4) = Wagner and Bode (2006); (5) = Kulmala (2004); (6) = Hong and Hartley (2011); (7) = Schoenherr and Mabert (2008); (8) = Cao and Zhang (2011); (9) = Nyaga, Whipple, and Lynch (2010); (10) = O'Brien (2012); (11) = Schuh et al. (2012); (12) = Ellram (1996); (13) = Kraljic (1983).

Table 2

Objectives of a purchase and prevalent measures in prior research.

Objective of a purchase	Description	Underlying goal (indicator)	Reference				
			Krause et al. (2001)	Gonzalez-Benito (2010)	Luzzini et al. (2012)	Lee and Drake (2010)	Ateş et al. (2018)
Quality	Uphold and improve existing purchase features.	Improve conformance quality Improve specifications and functionality Improve component durability and reliability Enhance supplier's efficacy in attending to complaints	•	• • •	• •	•	• •
Innovation	Improve introduction rates and timing of new products and services.	Improve time-to-market of new products with suppliers Improve introduction rate of purchase (part) Enhance supplier's ability to (re)design products and processes Enhance supplier's ability and willingness to share key technological information Enhance supplier's technological capabilities	• • •	• •	• •	•	• • •
Cost	Minimize both direct and indirect costs of a purchase.	Reduce unit price(s) Reduce total cost of ownership Reduce (internal) purchasing process cost Reduce asset utilization Enhance productivity and utilization of resources Reduce purchasing, inventory and quality cost Improve supplier's ability and willingness to share cost data	• • • • • • •	• • • • •	• • • •	•	• • • •
Delivery performance	Ensure supplier's ability to deliver accurately and on time.	Improve supplier's lead-time Improve supplier's conformance to delivery terms Improve supplier's volume (capacity) or modification flexibility Improve delivery speed, reliability and development speed Enhance supplier's ability and willingness to change order volumes or fulfil rush orders Enhance supplier's ability to provide just-in-time delivery	• • • • • • •	• • • •	• •	• •	• •

to mitigate the risk of quality incompliance and excessive supplier power (Luzzini et al., 2012). *Quality* focused purchases essentially concern the buyer's interest in upholding and improving existing purchase features (Ateş et al., 2018; Drake et al., 2013) related to its conformance to specifications, functionality, durability or reliability of a purchase (Gonzalez-Benito, 2010). This implies a focus on the lever 'product optimization' (Ateş et al., 2018). While being reliant on the supply base for competitive success, quality-minded buyers closely evaluate, train and monitor their suppliers (Slack & Lewis, 2011).

Therefore, the lever 'process optimization' is also associated with quality focused purchases (Caniëls & Gelderman, 2007). *Delivery performance* is often expressed through measures such as flexibility, availability, dependability and speed (Drake et al., 2013; Luzzini et al., 2012). To that end, buying firms seek to enhance their supplier's ability to meet short delivery times, flexible schedules and other delivery terms, such as location or quantity (Maestrini, Luzzini, Caniato, & Ronchi, 2018). This can be achieved through standardized and simplified logistics using the levers 'product and process optimization' (Luo, Kwong, Tang, Deng, &

Gong, 2011).

Based upon the above, one may conclude that studies to date link cost focused purchases more to transactional levers and quality, innovative and delivery performance purchases to relational levers. This, however, has not been studied holistically. At the same time, it has been found that transactional levers are the most applied levers across all purchases (Luzzini et al., 2012) which seems somewhat counterintuitive to what we outlined above. Accordingly, we examine how the objective of a purchase affects the buying firm's use of transactional and relational sourcing levers.

3. Methodology

We adopted a mixed method case study. We used a scenario-based survey to gain insights into the importance of levers depending on the purchase objective. Furthermore, we conducted in-depth semi-structured interviews to illuminate and explain the exact functioning of these levers to achieve a specific objective. As such, the mixed method approach allowed to provide a more holistic insight than a single method would have offered (Boyer & Swink, 2008; Singhal, Flynn, Ward, Roth, & Gaur, 2008) while improving triangulation, complementarity, and expansion of findings (Barratt, Choi, & Li, 2011). At the same time, the in-depth insights gained during the interviews clearly have dominant role in the knowledge creation and elaboration (Hurmerinta-Peltomäki & Nummela, 2006). Since the objective of a purchase and purchasing practices vary on an item level (Ateş, 2014), the unit of analysis is an individual purchase.

We engaged with the purchasing department of two large Dutch, internationally operating organizations that aim to be cost-leaders in their markets. ChemicalCO is a large chemical processing company with over 1500 employees worldwide. Their Dutch purchasing department (15 full time equivalents (FTEs)) has three focus areas: raw materials, energy and capital investments. The company selects its suppliers based on a multitude of factors, ranging from cost efficiency to reliability and innovative capability. Consequently, this purchasing department manages a large, rather heterogeneous supply base with a relatively high variety of purchase situations and objectives. This also holds for the second firm ('EnergyCo'; 80 FTEs in purchasing), that operates at every link in the energy value chain, holding a large and diverse client base. It specializes in utilities, energy infrastructures and maintenance and makes purchases with varying objectives. Both companies contacted us after a research presentation on the topic of purchasing objectives with an interest to collaborate and find out more. Given the companies' broad scope of sourcing items and diverse objectives when purchasing, we consider both firms to be suitable research settings given the focus of this study.

3.1. Scenario-based survey

We followed the scenario design stages by Rungtusanatham, Wallin, and Eckerd (2011) in developing and pre-testing our scenarios. In our scenario, we did not include any manipulations. The scenario-based study therefore is not an experiment. Instead, we asked purchasers to assess the importance of levers of four components with different purchasing objectives. The answers of the purchasers informed us on which sourcing levers are considered to be more important for a purchase with a given objective.

3.1.1. Scenario and procedure

Our scenario introduced MachineTooling Inc., a manufacturer of high-end agricultural machinery (see Appendix A for the scenario). We purposefully chose an industry (i.e., the agriculture industry) outside the scope of ChemicalCo and EnergyCo to avoid extraneous effects of specific industry knowledge. The scenario described how MachineTooling Inc. was involved in the development of a new combiner. Participants were instructed to take the role of the purchasing manager responsible

for the sourcing of four modules in the combiner project. For aid of visualization, the scenario included a schematic drawing depicting the different modules in a combiner. Because we were interested whether the objective of a purchase would influence the choice of the most important lever, we linked the four different purchasing objectives of this study to the four modules: straw walker - quality, grain tank - cost, driver's cab - innovation and the engine - delivery performance. The operationalization of the objectives was based on the descriptions and indicators from the literature as per Table 2.

Each participant was asked to assess the importance of the tactical sourcing levers for all four modules supplemented. The participants first read the full scenario and descriptions of a module. Then, the participants assessed the importance of the individual levers for one module at the time. The questions were formulated uniformly: *When making sourcing decisions for < MODULE> (focusing on < OBJECTIVE>), how important is it to use < LEVER ITEM>?* The descriptions and requirements of the focal module were repeated each time the participant proceeded to assess the next module. We randomized the sequence in which the modules were presented to the participants to avoid sequencing influences. The scenario and questions were available to participants in both English and Dutch.

3.1.2. Sample

We collected data from a sample of the population of purchasers at ChemicalCo and EnergyCo. An e-mail was sent to all purchasers in the Dutch purchasing divisions of these firms inviting them to participate in an online scenario survey hosted by the authors' university. To increase the response rate, the firms' higher management also sent out an e-mail to promote participation a few days preceding our invitation. The online scenario was accessed 73 times. After discarding the responses with missing values, 52 useable surveys remained, representing a response rate of around 55% (of the ~95 purchasers invited). Of the final sample, 80% were male and 96% Dutch.

On average, the participants had 15.5 years of experience (standard deviation = 9.07) and hence had sufficient purchasing experience to be familiar with the decisions in the provided scenarios. To assess potential non-response bias, we analyzed the 21 non-finishers of which 17 provided information about their experience. 13 indicated to have an average experience of 13.8 years, which did not significantly differ from our final sample. Based on this we conclude that non-response bias is not a major threat here. To reduce the likelihood of social desirability bias, we informed participants that their answers would be treated strictly confidential and that all data would be treated anonymously. In addition, we informed participants that there were no "good" or "bad" answers and asked them to complete the questionnaire in a way that would best fit their choices in the given scenario.

3.1.3. Measures

All measures were based on existing scales developed by Hesping and Schiele (2016) and correspond to the dimensions of the individual sourcing levers described in Table 1. Appendix B provides an overview of the individual items used to measure the levers (items are measured on a 7-point Likert scales from 1, far below average 7, far above average).

To test the reliability and discriminant validity of our measures, we first conducted a principal component analysis with varimax rotation. We excluded two items from further analysis due to poor loadings (see Appendix B). The final measurement items showed sufficient factor loadings all above 0.6 on the intended constructs. The Cronbach alpha values ranged between 0.73 and 0.93. These values well exceed the recommended threshold of 0.7 (Nunnally, 1994) and indicate satisfactory levels for internal reliability. Based on these results, we computed the average items scores to build the constructs for our analysis.

3.2. Semi-structured interviews

We conducted 14 interviews with nine purchasers in ChemicalCo and five in EngeryCo in November and December 2018 to explore how the levers were used to support a specific objective. All respondents worked at the tactical or strategic level and had considerable experience in the company and field of purchasing (see Table 3). As a matter of fact, we interviewed all strategic and tactical purchasers in ChemicalCo and those in EngeryCo involved in purchasing and feeling comfortable to provide an interview in English. Interviews lasted 68 min on average. We asked each interviewee to recall two purchases they made in the past year in which one specific objective was dominant (see Table 3) striving for an equal balance of purchases across objectives. This resulted in a total of 28 purchases, of which eight were cost focused, eight quality focused, six innovation focused, and six delivery-performance focused. An interview protocol was developed (see Appendix C) inviting interviewees to outline the two purchases made in detail and why, what and how different purchasing tactics were used. All interviews were conducted by two researchers, about half of the interviews face-to-face at the company sites, the rest by video call. Upon consent of the respondents, all interviews were audio recorded, transcribed verbatim and reviewed by the respondents.

Table 3
Overview of cases and interviews.

Company	Respondent	Interview Length	Purchase
ChemicalCo	Category Manager I	72 min	Q1 Production Equipment
			I1 Technical Equipment
	Purchaser I	68 min	Q2 Capex
			Q3 Production Equipment
	Category Manager II	83 min	Q4 Raw Material
			D1 Raw Material
	Purchaser II	61 min	Q5 Support Material
			I2 Software Solution
	Purchaser III	76 min	Q6 Capex
			I3 Production Equipment
	Category Manager III	50 min	I4 Software Solution
			D2 Raw Material
	Head of Purchasing	78 min	C1 Raw Material
			D3 Raw Material
EngeryCo	Purchaser IV	77 min	C2 Production Equipment
			C3 Software Solution
	Purchaser V	62 min	C4 Support Material
			D4 Raw Material
	Senior Buyer	60 min	Q7 Capex
			D5 Technical Equipment
	Senior Buyer II	66 min	Q8 Technical Equipment
			C5 Support Material
	Strategic Purchasing Manager	49 min	I5 Technical Equipment
			C6 Technical Service
	Senior Buyer III	73 min	I6 Technical Equipment
			C7 Technical Equipment
	Category Manager	76 min	C8 Technical Equipment
			D6 Technical Equipment

Purchases refer to cost (C), quality (Q), innovation (I) and delivery performance (D).

3.3. Data analysis

In the first stage of the data analysis, the interviews were reduced to quotes containing either information about the background of the purchase, the strategic importance of the purchase, or the choice, application and consideration of tactical sourcing levers. Data reduction was followed by deductive coding based on Table 1. Accordingly, we first coded for the tactical sourcing levers, followed by the underlying dimension and associated activities of each sourcing lever. Furthermore, we distinguished underlying dimensions and associated activities that were also part of the scenario-based survey and those that were not. In the next step, we inductively coded for reasons as to why a sourcing lever and its associated activities were applied. These analysis steps were first done for a single purchase and then within each objective. When analyzing within objectives, we explored the data for how the application of an associated lever activity links to the specific objective of the purchase. Here, we also consulted the results of the scenario-based survey and compared it to the qualitatively coded reasons for the application of lever.

Finally, we analyzed and compared the data across objectives. We slightly recoded reasons for how levers were used to ensure better comparability across objectives. When doing so, we noticed that reasons for applying transactional levers did not always link to the traditional price focus of transactional levers and vice versa for relational levers. Rather, a pattern emerged showing that levers are not used either transactional or relational, but more so on a continuum ranging from transactional to relational. We formulated observations based on the results including the importance of a lever for an objective based on the quantitative results and the identified usage of a lever for an objective based on the qualitative results.

4. Results

4.1. Scenario-based survey

To examine whether certain tactical sourcing levers are considered more/ less important for a certain objective of a purchase, we used a paired sample *t*-test to compare the participant's scores for a particular lever with the participant's average scores of all levers within the respective objective. Hence, significant scores on this test imply that participants rate the importance of a certain lever significantly higher/ lower than the other levers for the respective objective of a purchase. Table 4 shows the results of this analysis.

The results of the survey show that purchasers differentiate the importance of the sourcing levers for the projected objective of a purchase. These findings provide first insights into which sourcing lever a purchaser prefers given the objective of a purchase. Specifically, Table 4 shows that for purchases with a *cost* focus volume bundling and price evaluations to be significantly more important levers and relationship improvement to be a significantly less important lever. For purchases with a *quality* focus product improvement and relationship improvement were found to be significantly more important and extension of the supply base and volume bundling were significantly less important levers. When sourcing the module with an *innovation* focus, participants considered product improvement and relationship improvement to be significantly more important and supply base extension to be significantly less important. Finally, for purchases with a *delivery performance* focus participants considered product, process and relationship improvement to be a significantly more important levers and extension of the supply base and volume bundling to be significantly less important.

Although these findings show an impact of the objective of a purchase on the importance of the tactical sourcing levers, there are several limitations. For instance, the choice for a certain sourcing levers could have different underlying explanations. The scenario-based survey did only capture some of the actions associated with each lever, while

Table 4

Relative importance of tactical sourcing levers within a purchasing objective.

	Quality		Innovation		Cost		Delivery Performance	
	Rating	Relative	Rating	Relative	Rating	Relative	Rating	Relative
Volume bundling	4.83	−6.2%**	4.86	−4.1%	6.15	15.6%***	5.15	−4.8%*
Supply base extension	3.83	−25.6%***	3.65	−28.0%***	5.06	−4.9%	4.30	−20.5%***
Price evaluations	5.03	−2.3%	4.95	−2.4%	5.74	7.9%***	5.22	−3.5%
Product improvement	5.98	16.1%***	5.50	8.5%**	5.50	3.4%	5.92	9.4%**
Process improvement	5.35	3.9%	5.25	3.6%	5.23	−1.7%	6.20	14.6%***
Relationship improvement	5.88	14.2%***	6.22	22.7%***	4.23	−20.5%***	5.67	4.8%**
Average across levers	5.15		5.07		5.32		5.41	

The “Relative” column shows the relative differences between the average ratings across levers and the rating for the specified lever within the respective performance objective.

Asterisks refer to the two-tailed significance: *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

Table 1 based on a thorough literature review provided more detailed practices. To address these limitations and to gather more fine-grained insights the qualitative findings from the semi-structured interviews will be presented next.

4.2. Semi-structured interviews

Table 5 outlines how the objective of a purchase influences the use of individual sourcing levers. The following sections outline *per objective* the mechanisms by which a sourcing lever and its underlying practices (underlined text) supports a given objective.

4.2.1. Quality

4.2.1.1. Transactional levers. For volume bundling in quality focused purchases, we find no purchases with internal volume consolidation and only two cases (Q5, Q6) with volume bundling via supplier consolidation. Quality focused purchases tend to be “*distinct with varying specifications*” (Q3) and can often not be bundled internally without jeopardizing ‘fit for purpose’ (i.e., uphold and improve existing purchase features) in line with the specification. In Q5 and Q6 supplier consolidation aimed at continuity and close collaboration with a few parties with an affinity for the buying firm’s operations and quality standards. In Q5 a moderately complex set of products was consolidated from four separate suppliers into a new (‘all-in’) single source as “*the new supplier is the only one who is actually suitable*” and can ensure that the product “*is lighter and easier to maintain*” (Q5). Similarly, in Q6 the buyer settled on an installation of a supplier that fitted several systems at ChemicalCo already and, hence, knew the standards of the company. Therefore, we find that volume bundling can aim to achieve fit for purpose via a good (and improved) relationship.

The search for back-up options (i.e., supply base extension) to increase sourcing options and assure the availability of high-quality inputs across the future supply base was deemed important in Q1, Q3, Q5 and Q7. The data reveal, that for quality focused purchases supply base extension was aimed at mitigating potentially lengthy supplier selection processes in case of operational breakdowns or maintenance rather than to stimulate competition among suppliers. “*I do keep in touch with second parties, as I notice more and more that our factory is so fragile; if you don’t have something as backup, then you are in big trouble.*” (Q5). Hence, we find that besides volume bundling, also supply base extension for purchases with a quality objective can be used in a relational way to create value and reduce risk. Price evaluation tactics via cost analysis and management techniques focused on evaluating apparent trade-offs between cost savings and fit for purpose with regards to, for instance, safety (Q1) or lifespan (Q6) and as such were in line with the transactional nature of the lever.

4.2.1.2. Relational levers. Regarding product improvement, we find that buyers opted for solutions that were customized but as standardized

as possible. With adherence to product specifications for quality focused purchases being key, intensive product tests through pilots or trial setups (Q1–4) as well as experience and qualifications of suppliers (Q1, Q4, Q5, Q7, Q8) were used to ensure fit for purpose. “*All these criteria [pressure resistance, handling, etc.] were part of the evaluation. The trial setups helped us to check the requirements even better.*” (Q3). Furthermore, for some quality focused purchases the suppliers and/or the broader network were integrated into product development teams to improve the product. In Q5, Q7 and Q8 the focal company co-designed product improvements together with the supplier and in Q6, not only the supplier’s expertise, but also an external engineering agency was needed to redesign a product.

Furthermore, the qualitative data indicate that process improvement mainly revolved around the use of process controls such as supplier screening, auditing and product testing (Q1–3, Q5, Q7) or collaborative operations where consumer demand was jointly assessed with the supplier (all but Q4). Buyers audited (new) suppliers’ plants and assessed their credentials (e.g., certifications, references, production history) as indications for the quality of their operations.

Overall, the importance of good relationships with suppliers was highlighted throughout all quality focused purchases. In fact, we found single source long-term relationships commitment in all but one case (Q4 – due to delivery problems in the past and scarcity in the market dual sourcing was used) focusing on the development of personal relationships with the supplier supported by frequent contact and visits: “*I also went to the factory, we looked at their quality systems, went through the production process – to show from our side how important that relationship was to us*” (Q1). Furthermore, buyers of quality focused purchases were seeking relationship commitment to stimulate joint problem-solving (Q1, Q2, Q5) as well as dedicated investments (Q2, Q4–7). They also used relationship marketing via quality dialogues (all but Q4) to ensure that “[they] know the organization, and the expectation pattern” (Q6) and that “*you get quality by keeping good contact with your supplier and by giving each other something.*” (Q5).

4.2.2. Innovation

4.2.2.1. Transactional levers. The data show no attempts in any of the innovation focused purchases to try and achieve a specific price for a certain volume (volume bundling) as “*we are basically a customer with a very low volume. We would buy one, two, three or perhaps four of these systems, and then that’s about it.*” (I1). Similarly, we also did not find any examples of supply base extension. At the same time, purchased innovations clearly showed improvements in total cost of ownership (TCO), although this was not the main aim: “*Ultimately, the innovation has been a huge success, because we have reduced our maintenance costs enormously. The lead time of the [product] has improved, the process is much cleaner, people have less contact with our product and we spend less money. So if you look at the total cost of ownership and tool life; everything has improved enormously.*” (I3). Furthermore, we find two cost analysis and management techniques (price evaluation) examples: business case

Table 5
Findings qualitative data.

		Underlying lever dimensions	Quality	Innovation	Cost	Delivery Performance
Transactional Levers	Volume Bundling	Internal volume consolidation	–	–	achieve discounts (C7, C8)	–
		Supplier consolidation	enhance technical ‘fit for purpose’ (Q5, Q6)	–	achieve discounts (C2–C4, C6)	enhance supply availability (D3, D4)
	Supply Base Extension	Increasing sourcing options	Keep/ identify high-quality back up options (Q1, Q3, Q5, Q 7)	–	increase performance, modify prices or payment terms (all but C1)	extend (back-up) supply options (D1, D2, D4)
	Price Evaluations	Price analysis techniques	–	–	benchmark and evoke competition (C2, C4, C5, C6, C8)	–
		(Strategic) cost analysis and management techniques	assess ‘fit for purpose’ (Q1, Q7, Q6)	assess business case (all cases); flexible budgeting (I1, I6)	assess efficiency in use - target cost analysis (C1, C2, C5, C6, C8) - TCO (C2, C3, C6) - eliminate unessential inputs (C1, C4)	assess supply chain value & eliminate SC complexity (D1, D4, D6)

Green = relatively more important in the survey 1, red = relatively less important in the survey, no colour = neither less nor more important in the survey

		Underlying Lever Dimensions	Quality	Innovation	Cost	Delivery Performance
Relational Sourcing Levers	Product improvement	Product (re-) specification	test specifications (Q1–4); experience & qualifications (Q1, Q4, Q5, Q7, Q8)	pilot innovations (I1, I3–5)	value analysis (C1, C2, C4, C6, C8)	product tests (D1, D4)
		Supplier or network integration	co-design for superior quality (Q5–8)	co-development (I1–3, I6)	–	co-design for improved delivery (D4, D6)
		Product standardization	–	–	push suppliers to have low-cost design (C2–4, C6)	standardize logistics (D1, D4, D5, D6)
		Product customization	‘fit for purpose’ (Q1, Q3, Q4–6)	tailor-made solutions (all but I5)	–	–
	Process improvement	Process control	screen, audit and test (Q1–3, Q5, Q7)	control project scope and planning (I1, I3, I4, I6)	control budget constraints (C3–8)	lead time protection, buffers, & penalty clauses (D1, D3, D5, D6); eliminate SC complexity (D1, D4, D6)
		Collaborative operations	jointly assess demand (Q1–3, Q6–8)	evaluate size of supplier (I1, I2, I5)	coordinate (demand) planning (C1)	just in time deliveries (D6); production data, inventory & forecast exchange (D3, D4, D6)
	Relationship improvement	Relationship marketing	seek quality dialogues (all but Q4)	seek preferred access to innovation (I3, I5)	–	seek proactive contact with suppliers/ gain preferred customer status (D1, D2, D4, D5)
		Supplier incentivization	–	full transparency (I3); joint rewards & customized contracts (all)	–	full (financial) transparency (D3–5); premium price (D2);
		Relationship commitment	joint problem-solving (Q1, Q2, Q5); dedicated investments (Q2, Q4–7)	co-development (I1–3, I6)	supplier investments (C1, C2, C6, C8)	CEO involvement (D1, D5, D6)

Green = relatively more important in the survey, red = relatively less important in the survey, no colour = neither less nor more important in the survey

assessment and flexible budgets. Given the uncertainty of innovation focused purchasing, first the viability of the business case had to be shown internally in all cases (e.g., of a more durable machine component; I3), and promoted among both internal and external customers (i. e., to “land an innovation”; I5). In addition, for complex innovative projects with an unclear scope (in terms of timespan, needed resources and buyer-supplier task division; I1, I6), flexible budgets incentivized suppliers to advance in research and development: “We actually paid for that first part based on the hours made [by the supplier]. A supplier is simply not going to take the risk to charge a fixed price for it.” (I1). This implies more of a relational connotation. Flexible budgeting during innovation was followed by a fixed price set-up during execution.

4.2.2.2. Relational levers. Process improvements entailed the development of process controls for the project scope and planning (I1, I3, I4, I6). The data show that development trajectories were monitored continuously, mostly aiming to (re)direct suppliers and track their progress in research and development: “[supplier] produce a progress report every two weeks, then you have to report ‘this’; in two months you will be ‘here’, if not, we won’t pay you.” (I1). In I4 and I6 external consultants were hired to supervise such processes. Furthermore, to ensure collaborative operations and improve the process, respondents highlighted that appropriate supplier size was an important consideration – opting for a supplier that is willing to bring in sufficient (human) resources but does not fall back on overly bureaucratic or generalist approaches (I1, I2, I5). “For those very large parties I had the idea: I’m just one of many

parties, so how fast are you going to run [work] for me?” (I2). In essence, “you should look for a party that is technically skilled, but still has the interest to do such a development trajectory” (I1).

In terms of relationship and product improvement, all innovation focused purchases but I5 (supplier approached the buyer with an innovation) realized that the supplier's help was needed to innovate (i.e., co-development), as the technical complexity was “so high that we couldn't put it down on paper ourselves” (I1). “We linked the technicians together, who shared [...] drawings and ideas about how they could do things best.” (I6). Hence, to optimize the product a customized solution was needed in all cases but I5. Co-development required the integration of suppliers as well as relationship commitment evident in joint teams, tests and trainings. In I3 relationship improvement went as far as being “so transparent that you tell them what the budget is and what the planning is and then ask them if they can do something with it.” Furthermore, customized contracts and joint rewards (relationship improvement: supplier incentivization) were used in all cases to ensure mutual trust—an essential factor for co-innovations: “When you don't trust a party, you don't want it in your business environment. Trust is important, especially if you want to achieve innovation together” (I6). Nevertheless, the importance of testing quality specifications and piloting innovations to ensure product improvement (I1, I3–5) was widely recognized. Finally, in I3 and I5 buyers were keen on relationship marketing as they were seeking preferred access to innovations and “establish the exclusivity of that party. There is a lot to be found in the area of intellectual property.” (I5).

4.2.3. Cost

4.2.3.1. Transactional levers. The data show that in all cost focused purchases (except C1 that has a single source co-dependency situation) volume bundling was used. Volumes were either consolidated internally for the same product across projects and regions (C7, C8) or by bundling several internal contracts for different products towards one supplier (i.e., supplier consolidation) (C2–C4, C6). The consolidation of purchase volumes across projects or regions lead to lower transaction costs and economies of scale which in turn allowed to “negotiate certain volume discounts” (C8). Achieving discounts was also the reason for consolidating several contracts across one supplier. C2 even focused on future volumes “because why should we throw away all the knowledge and experience we have gained at this point? That will soon yield money again”

Supply base extension across the cost focused purchases (but C1 due to the above mentioned co-dependency) was used to shift the power balance in favour of the buyer: adding candidates to the bidding process to increase sourcing options and create pressure for suppliers to increase performance, modify payment terms or lower the price (cost). Hence, cost focused buyers played “the game of negotiation with the suppliers reasonably hard” (C8) as “they [suppliers] think twice, before they do something wrong” (C6). Therefore, “we did not [work towards a partnership]. I wanted to have maximum freedom to play the game of negotiation with the suppliers reasonably hard (C8).” This indicates that supply base extension was used as a *means* for price evaluations in all cases (but C1). We did not find any attempts for relationship improvement across cost focused purchases (but C1). Instead, cost focused cases used price analysis techniques to seize “opportunities to do things cheaper” (C7). In C2, C4, C5, C6 and C7 additional offers were gathered to benchmark and evoke competitive bidding. Furthermore, efficiency in use was increased via target cost analyses (C1, C2, C5, C6, C8) and TCO analyses (C2, C3, C6) as well as by eliminating non-essential inputs (C1, C4). In the co-dependency case C1, the buyer also investigated what the supplier can earn with by-products of their purchase to see “what that [total] ‘package’ yields in return?” [The supplier] may claim that everything will be more expensive, but also profits from that by-product” (C1).

4.2.3.2. Relational levers. Product improvement tactics for cost focused purchases generally referred to product standardization and

simplification suggestions from suppliers (C2–C4, C6) to ensure economies of scale, low-cost designs or configurable modules. Where possible, suppliers were asked to include standardization and simplification opportunities as part of their price and “to stick to the specifications in the drawings. When you do more, it'll cost more.” (C7). Furthermore, in the majority of cost focused purchases (C1, C2, C4, C6, C8) value analysis was used to assess whether standardization and re-specification efforts of suppliers still allowed for the necessary quality of products. Hence, overall the data indicate that there are little efforts of product improvement of buyers. Instead improvements options become the suppliers' responsibility. A similar logic holds for process improvement where standardization of procedures was deemed important, however it was expected from suppliers to improve the process, for example, through consignment stock legally owned by the supplier, but held by the buyer (C1). Internally, process improvement related to processual budget controls only (C3, C4, C6–C8) with the exception of C1, where collaborative operations also took place in the form of coordinated demand planning. In terms of relationship improvement, we find that cost focused purchases (C1, C2, C6, C8) also benefit from relationship commitment via as discounts or other (inflationary) price advantages could be arranged for long-term contracts, whilst loyalty was found to be rewarded with dedicated investments made by the supplier.

4.2.4. Delivery performance

4.2.4.1. Transactional levers. None of the delivery performance purchases used internal volume bundling and only two supplier consolidation, however not with a transactional, but with a relational focus. Supplier consolidation in cases D3 and D4 aimed at gaining a preferred customer status with suppliers in a very tight market. “The danger is, if you don't give anything [to a supplier], he'll say in a year or two: ‘We won't make that product for you anymore’” (D4). “Yes, we used to work with two or three parties, but because of the tightness [in the market] that is more of a theoretical thing.” (D3). Only in D1, D2 and D4 a second supplier was approved to increase sourcing options. However, the aim here was not to stimulate competition (i.e., transactional), but to mitigate risks in case there were problems with the agreed delivery performance of the primary supplier. In the other purchases buyers were tied to the available supplier (D3) or a project-specific supplier (D5, D6). Hence, given dominant single-sourcing focus for delivery performance purchases, generally transactional supply base extension appeared to be of little importance. With regards to price evaluation, buyers used cost analysis and management techniques to assess value streams and eliminate supply chain complexity (D1; D4; D6). “Take a look at the chain and see how we can do things smarter in a different way.” (D6). This type of supply chain value analysis was unique to delivery performance cases. More specifically, buyers bypassed intermediaries in the supply chain, and negotiated favorable prices with manufacturers directly (D1, D4, D6). At the same time, the improved TCO was a by-product of the actual lever purchasers focused on: process improvement (relational lever).

4.2.4.2. Relational levers. The tactic of direct buying was used to eliminate complexity and bottlenecks in the logistics process: “I tried to intervene, because what value did that technical wholesaler add?” (D6). Yet, process improvement involved not only eliminating supply chain complexity for increased process control, but also other control instruments such as buffer stock, lead time protection and contractual clauses (D1, D3, D5, D6). Furthermore, collaborative operations took place to “share the process now and tell each other what you like about the process and what you think is wrong” (D6) and included just-in-time delivery (D6) and production data, inventory and forecast exchange (D3, D4, D6).

More generally, given that there were high costs associated with late delivery (e.g., in D5 every day of late delivery costs €360,000), relational aspects in terms of process, product and relationship improvement

appeared to be key levers for delivery performance focused purchases. Product improvement included pilot tests (i.e. product specification) (D1, D4) and co-design (i.e. supplier integration) (D4, D6) and allowed for logistics process standardization (D1, D4, D5, D6) to reduce lead time and improve handling across all links in the supply chain. D1, D2, D4 and D5 sought proactive contact with suppliers via relationship marketing to fast track contracting or gain preferred access to supplier innovations/ or capacities. “There are many markets where the buyer does not have a market (power) at all” (D3), therefore “if you are responsible for those accounts you often take an extra step.” (D5). Overall, in all delivery performance purchases (but D6) relationship commitment and supplier incentivization were of high importance to ensure “goodwill” to return favors and help each other out when things get messy” (D2). This implied supplier loyalty by the buyer, an open and proactive attitude (D3–5), a premium price (D2) and “no cherry picking” (D4). Furthermore, to emphasize the importance and show commitment, in D1, D5 and D6 the CEO of the buying firm was involved in the negotiations. We find, that such attitude was often recognized by suppliers and met with reciprocity in the form of dedicated (time) investments and support resources (D4) or covering costs of solutions (D5).

4.3. Cross-objective observations

After outlining the findings per objective in the previous sections, we now outline the findings *per lever* across objectives (i.e., row by row in Table 5).

4.3.1. Transactional levers

Transactional levers are usually associated with more traditional purchasing approaches to lower prices. In line with that, our quantitative findings show that cost focused purchases primarily rely on transactional levers. The interview data provided additional insights into the use of volume bundling for the other objectives: the concentration of volumes on one supplier familiar with the buying firm’s operations was associated with better product functionality and service quality, as well as a greater willingness of suppliers to improve delivery reliability. Hence, even though the survey showed that volume bundling is relatively less important for quality and delivery performance objectives, findings from the interviews indicate that the lever can be used in a relational way and is then of importance for these two objectives.

Observation 1a: Volume bundling used in a transactional way is more important for cost focused purchases and less important for quality and delivery performance focused purchases.

Observation 1b: Volume bundling can be used in a relational way for quality and delivery performance purchases through supplier consolidation to enhance the effectiveness of product customization, complementary supplier service, and the security of supply.

Supply base extension for cost focused purchases was found to be neither more nor less important than other levers. At the same time, however, what became clear from the interviews is that supply base extension was the *means* for price evaluations to create leverage during negotiations. For quality, innovation, and delivery performance the survey showed that supply base extension was relatively less important compared to other levers. The semi-structured interviews further clarify that adding extra suppliers to the bidding process often seems infeasible (due to limited supply availability for quality) or undesirable (due to the focus on single sourcing for innovation). We find that such supply base extension was associated with cost motives as a lever to increase the bargaining power of the buying firm. However, what became apparent in the interview data is that in both quality and delivery performance purchases, firms proactively search for new backup suppliers and proactively build relationships with potential suppliers to be able to manage disruption risks. As such, supply base extension was found to be of relatively low importance in the true transactional sense for quality and delivery performance objectives. However, it was found to be valuable if applied in a relational way to manage risks.

Observation 2a: Supply base extension used in a transactional way can be used for cost focused purchases as means for price evaluation, but is less important for quality, innovation, and delivery performance focused.

Observation 2b: Supply base extension can be used in a relational way for quality and delivery performance focused purchases through extending backup sources and building relationships pro-actively to enhance security of supply.

The survey results show that price evaluation levers were relatively more important for cost focused purchases. The interviews specify that while price analysis techniques were only used in cost focused purchases, cost analysis and management techniques were also relevant for the other purchasing objectives. Cost analysis and management techniques were used transactional to assess trade-offs between the functioning of a product and its costs in quality purchases, to make a business case for innovation focused purchases, and to assess the supply chain value in delivery performance purchases. We also found that as a consequence of value assessment to accommodate delivery performance purchases supply chain design changes (e.g., eliminating non-essential intermediaries) to save costs or reduce supply chain complexity can take place. At the same time, we also find that the lever price evaluations via cost analysis and management can be applied in a relational way through contractual arrangement in complex innovative purchases. More specifically, we find that flexible budgets can be used to incentivize suppliers to advance research and development together with the buyer and perform unplanned modifications for the benefit of complex innovations and security of supply in the early stages of an innovation.

Observation 3a: Price evaluations used in a transactional way (1) are more important for cost focused purchases; but can also be used for (2) quality focused purchases through cost analysis that evaluates apparent tradeoffs between costs and fit for purpose; (3) delivery performance purchases through supply chain re-design to reduce complexities; and (4) for innovation focused purchases through business case assessment to ensure viability.

Observation 3b: Price evaluation can be used in a relational via cost analysis and management techniques for innovation focused purchases through contractual arrangements to enhance security of supply.

4.3.2. Relational levers

The survey shows that relationship-oriented levers are relatively more important for quality, innovation and delivery performance purchases. More specifically, we found that product improvement is most important for quality purchases and important for innovation and delivery performance purchases. The interviews explain that in these types of purchases, evidence-based approaches are used, such as product tests and pilots and co-developments. Opposed to that, for cost focused purchases, product improvements took a more transactional approach by conducting value analysis to ensure that any improvement would still allow for the product to function as intended. Furthermore, any product standardization effort was deemed the responsibility of suppliers only. As such, product improvements for cost focused purchases take a rather transactional approach.

Observation 4a: Product improvements can be used in a transactional way for cost focused purchases by transferring the responsibility of improvements towards the supplier.

Observation 4b: Product improvements used in a relational way are important for quality, innovation and delivery performance focuses purchases.

The interviews show that process improvement levers were used across all objectives, whereas the survey results only highlighted delivery performance purchases. We find that, process improvements can be both transactional and relational in nature. Collaborative operations took place for quality, innovation and delivery performance purchases and focused on assessing demands and needs jointly. For example, in delivery performance purchases process improvement could be about just in time deliveries, a concept that requires close collaboration and information exchange to make it work. At the same time, we also saw

that process improvements in cost and delivery performance purchases could be rather transactional emphasized in contractual clauses about e.g., lead time protection.

Observation 5a: *Process improvements can be used in a transactional way for cost and delivery performance focused purchases through contractual clauses that help to ensure security of supply.*

Observation 5b: *Process improvements used in a relational way are important for delivery performance purchases, and can be used for (1) quality focused purchases through process controls and collaborative operations to screen and audit suppliers to jointly assess demand; and (2) innovation focused purchases through process controls to monitor the innovation trajectory and collaborative efforts in product developments.*

The survey showed that relationship improvements are most important for quality purchases and innovation purchases, but relatively unimportant for cost focused purchases. The interview data show that relationship marketing and commitment was linked to become an attractive customer in an attempt to gain preferred access to innovations or to gain a preferred customer status for delivery performance purchases. For quality, innovation and delivery performance purchases, relationship commitment was demonstrated to be important and highlighted throughout the interviews. Most interestingly, the interviews indicate how relationship commitment is also important for cost focused purchases. Long-term contracts and loyalty were associated with price discounts, transaction cost savings and dedicated investments by the supplier. As such, while the survey finds that relationship improvements are relatively unimportant for cost focused purchases, the interviews show that relationship commitment can help to achieve cost savings.

Observation 6: *Relationship improvements are important for quality, innovation and delivery performance focused purchases and can be used for cost focused purchases through relationship commitment that can aid in achieving cost savings.*

5. Discussion

In this study, we took a holistic view in examining sourcing levers in relation to the objective of a purchase. Our findings have several implications, which we detail below.

5.1. Implications for research

The findings of this study confirm that one tactic may contribute to multiple objectives (Gonzalez-Benito, 2010) and that buyers do not use tactical sourcing levers as strict alternatives, but in fact mix these to achieve their goals (Hesping & Schiele, 2015). On a more detailed level, we extend the findings reported in previous research, which found that transactional levers are generally most frequently applied across all purchases (Hesping & Schiele, 2016). Our findings suggest that even though transactional levers are most frequently applied, they are not necessarily the most important. Indeed, in cost focused purchases transactional levers were more important than relational levers. However, for the other objectives this was reversed. For instance, similar to Luzzini et al. (2012), our findings suggest that relational levers are the most important for purchases with a quality focus and how they are used to mitigate potential quality noncompliance in the purchases with a delivery performance focus. Relating our findings to those of previous research (e.g., Hesping & Schiele, 2016), this implies that transactional levers are used as a default approach across objectives while relational levers are used more selectively, but are in fact considered to be most important for purchases with quality, innovation or delivery performance objective.

In addition, our findings relate to the literature examining how the purchasing function contributes to a company's performance beyond cost savings (Ueltschy Murfield et al., 2021). Our study, based on findings in two companies emphasizing cost-leadership, highlights that increasing purchasing performance through pursuing relational practices and cost savings can go hand in hand, in line with suggestions by

Schütz, Kässer, Blome, and Foerstl (2020). This is particularly evident in 'Observation 6' and provides new insights into how purchasing strategy translates into effective actions to align relational practices to the overall business practices (Formentini et al., 2019). Furthermore, our study provides important new insights into how both relational and transactional levers can be used for value creation. Purchasing practices associated with transactional levers traditionally aimed at costs savings may in fact be used for objectives that go beyond cost savings (Observations 1–3). This goes against the traditional perspective of purchasing in which the interaction with suppliers is mostly viewed as a transactional market exchange (Svahn & Westerlund, 2009). Although earlier studies indicated consolidation policies (volume bundling) have an impact beyond mere cost-savings and also benefit quality, delivery performance, and information exchange (Ogden & Carter, 2008; Schuh et al., 2012) it has not been associated with a fundamentally different approach to tactical sourcing levers. In addition, our observations also show that relational levers can be used in a transactional way. Together, these findings nuance the current categorization of purchasing practices into strictly transactional or relational (Hesping & Schiele, 2016). Our findings highlight that purchasing levers are used on a *continuum* ranging from transactional to relational as depicted in Fig. 1. These findings also relate to the broader buyer-supplier relationship literature on the interplay between transactional and relational strategies (e.g., Shahzad et al., 2018). Whether certain practices are used in a transactional or relational way might depend on whether the buyer takes relational orientation or a transactional orientation in the relationship with a specific supplier (e.g., Gadde & Dubois, 2010; Sheth & Shah, 2003), while certain practices will always be used regardless of the relational orientation (Whipple et al., 2010). Our findings imply that the objective of a purchase is an indicator for whether a certain practice is used for transactional or relational purposes and the question shifts from 'which purchasing practice to apply' towards 'how to apply a purchasing practice' in a relationship with the supplier.

5.2. Implications for practice

Purchasing managers can use our findings to critically review their current purchasing approach and practices towards their suppliers. While purchasing portfolios are the number one tool for purchasers to differentiate purchasing approaches because they are easy to use (Montgomery, Ogden, & Boehmke, 2018), they also stem from an era where purchasing mainly focused on cost savings. Furthermore, they over-simplify the choices for managers by identifying norm sourcing levers to be used within each of the four quadrants (Cox, 2015; Hesping & Schiele, 2015). Our findings suggest that it is important for managers to be aware that each sourcing lever can have different applications for different objectives. Hence, we suggest managers to use the objective of a purchase to determine the suitability of a tactical sourcing levers for a given purchase, and adapt its use accordingly. Simultaneously, these new insights can be useful in the instruction and training of purchasers. Awareness and training of more advanced purchasing tactics beyond cost savings alone may establish a stronger position of the purchaser in

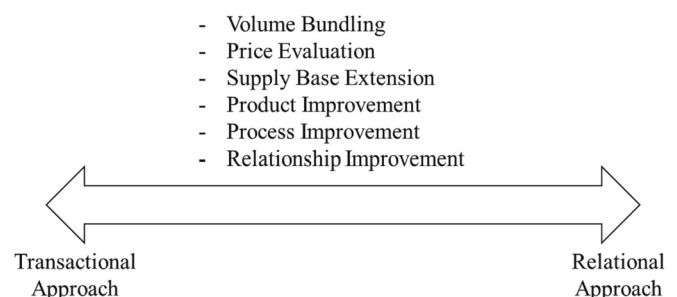


Fig. 1. Tactical sourcing lever continuum.

its relationships.

5.3. Limitations and future research

This study shows how buyers make use of tactical sourcing levers to achieve distinct purchasing objectives. However, the actual effect of the identified mechanisms remains unquantified. Future quantitative research would be needed to substantiate the identified mechanisms. In addition, we should note that a partial view on the use of certain sourcing tactics may have emerged due to the cost leadership focus of both firms and the fact that both companies were chosen due to providing access rather than a clear sampling strategy. Future research could consider this study as a point of origin to elaborate on the content of the tactical sourcing levers, the mechanisms behind tactics, and relevant contingency factors.

Finally, this study followed other studies and did not differentiate purchases with a clear sustainability objective (Ateş, 2014; Luzzini et al., 2012), despite their relevance. Firms are argued to treat the ‘triple bottom line’ impact of their products and processes as a quality consideration (Johnsen, Howard, & Miemczyk, 2014). At the same time, within the quality focused purchases two sustainability cases were included as they were clearly about ‘conformance to specification’. Nevertheless, future research could examine the tactical sourcing levers particularly suitable for purchases with a clear sustainability focus.

6. Conclusions

Buying firms use different purchasing practices in a buyer-supplier relationship (Ateş et al., 2015; Cox, 2015). However, the current literature does not sufficiently describe how the buying firm effectively uses these practices to achieve a given objective (Formentini et al., 2019). Indeed, previous research calls for in-depth studies that use the objective of a purchase to determine the optimal sourcing lever (Luzzini et al., 2012). Therefore, in this study, we made a first attempt to take a holistic view of studying sourcing levers in relation to the objective of a purchase. Traditionally, purchasing practices have mainly been studied either individually, varying from supply base reduction (Choi and Krause, 2006) to international sourcing (Schiele et al., 2011), or from a portfolio view (Hesping & Schiele, 2016). Similarly, the objective of a purchase has often been studied individually (e.g., Pagell et al., 2010) or from a portfolio perspective (e.g., Ateş et al., 2015), but not in relation to the most suitable sourcing levers. This study examined how the objective of a purchase affects the buying firm’s use of transactional and relational sourcing levers. Our results not only show the importance of tactical sourcing levers for a given objective, but also provide the mechanisms (Table 5) that explain how buyers differentiate between purchasing practices for a given objective and inherently create value beyond cost savings.

CRedit authorship contribution statement

Kirstin Scholten: Conceptualization, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. **Niels J. Pulles:** Formal analysis, Methodology, Validation, Writing – original draft, Writing – review & editing, Conceptualization, Data curation. **Luuk Hazeleger:** Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft. **Boris Fenneman:** Data curation, Investigation, Project administration, Validation, Writing – original draft.

Data availability

The data that has been used is confidential.

Appendix A. Scenario Study 1

You are a Purchasing manager at a Machine Factory named MachineTooling Inc. MachineTooling Inc. is specialized in the manufacturing of high-end agricultural machinery. Recently, MachineTooling started the ComBine project; the development of a new combiner (machine for harvesting crops). MachineTooling will outsource the manufacturing in the ComBine project, but it will assemble the machines in-house. You are responsible for sourcing four modules. These modules all have their own specific requirements.

Module: Straw walker

The straw walker is a moving part to remove the straws from the grain. The straw walker has many moving parts, which have to meet the exact requirements set by your firm. Therefore, the most important requirement in sourcing this component is quality (i.e., conformance to product specifications and requirements).

Module: Grain tank

The grain tank collects the processed grains. The tank is made of metal and is low-tech, but ordered in high quantities. Therefore, the most important requirement in sourcing this component is cost (in terms of product costs and ordering costs).

Module: Driver’s cab

The driver’s cab is where the driver of the combiner is seated. The driver’s cab is the heart of the combiner and very important for the perceived “look and feel” of the machine. Therefore, the most important requirement in sourcing this component is innovation (in terms of creating new and improved products).

Module: Engine

The engine is a standardized component, but because of its complexity rather expensive. MachineTooling wants to minimize inventory on this component and requires short and reliable delivery times. Therefore, the most important requirement in sourcing this component is delivery performance (in terms of speed and reliability).

Note: the original scenario included a schematic drawing depicting the different modules in a combiner (by Hans Wasthuber & Tucvif, retrieved June 2023 from: https://en.wikipedia.org/wiki/Combine_harvester#/media/File:Maehdrescher_schema_nummeriert.svg).

Appendix B. Measurement of the levers (adapted from Hesping & Schiele, 2016).

Note: * = the item has been excluded, due to low factor loading on the intended construct.

Volume bundling (Cronbach alpha = 0.860).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

- ... concentrate volumes on one or very few suppliers
- ... bundle several requests into a package with a large volume
- ... bundle purchases with subsidiaries and regions.

Price evaluations (Cronbach alpha = 0.862).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

- ... determine price targets before engaging in negotiations
- ... gather more offers than is customary
- ... recalculate the offered prices.

Extension of supply base (Cronbach alpha = 0.786).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

- ... stimulate use of suppliers from cost competitive countries
- ... encourage (deep) localization (i.e., promoting regional spread of suppliers)
- ... increase the number of suppliers per request for quotation suppliers.

Product improvement (Cronbach alpha = 0.878).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

... drive forward standardization of parts (reduction of variants)
 ... involve suppliers in development teams (e.g., to encourage product improvements)*
 ... stimulate technical simplifications of components (i.e., use of cost effective technology/functions).

Process improvement (Cronbach alpha = 0.727).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

... initiate early capacity planning with supplier (e.g., to avoid bottlenecks and excessive capacities)
 ... engage in quality dialogues with suppliers (e.g. to avoid quality defects)*
 ... improve (inbound) logistics (e.g., to reduce packaging or transport).

Relationship improvement (Cronbach alpha = 0.926).

When making sourcing decisions for < MODULE > (focusing on < OBJECTIVE>), how important is it to...

... become an attractive customer to this supplier (e.g., to gain preferred access to innovations or capacities)
 ... use individual contract conditions (e.g., to arrange specific price amendments or incentives for suppliers)
 ... improve the supplier's capabilities (e.g., using joint supplier qualification).

Appendix C. Interview protocol

General questions

- Could you give us an introduction to you as a person, your education and professional background?
- For how long have you been working as a purchaser, or have you been active in the field of purchasing?
- Please describe your role and responsibilities within this department?

Questions related to purchasing situation 1 & 2 (first questions are asked for purchasing situation 1 and then for purchasing situation 2).

In purchasing situation 1/2, we would like you to think about a purchase that you made in the past 12 months for which [quality, innovation, cost or delivery performance] was the leading, most important objective. The purchasing objective of [quality, innovation, cost or delivery performance] can be defined as [fill in definition as per Table 2].

- Please describe the purchase in detail?
 - o What was bought and why?
 - o Why was [quality, innovation, cost or delivery performance] the leading objective for this purchase?
 - o Who was involved in the purchase (internally and externally)?
- Please take us through the series of decisions you have taken from the moment you recognized the need to make this purchase until the selection of the appropriate supplier?
 - o Were there other options that you considered and why?
 - o How are these decisions and options linked to the objective of the purchase?
- How did you approach the supplier to build a relationship?
 - o What were guiding norms and beliefs from your side?
 - o What were your intentions?
 - o How did you come to an agreement?
 - o How is the approach taken linked to the objective of the purchase?
- Are you satisfied with the outcome of the purchase?
- (If) What would you do differently in a similar future purchase? Why?

Closing question

- Do you have any additional comments, remarks or suggestions regarding the topics discussed in the interview?

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