Achieving efficiency and effectiveness in Purchasing and Supply Management: Organization design and outsourcing

Lydia Bals,⁎, Virpi Turkulainen

⁎ University of Applied Sciences Mainz, Lucy-Hillebrand-Str. 2, 55128 Mainz, Germany
b Department of Strategic Management and Globalization (SMG), Copenhagen Business School (CBS), Kilevej 14, 2. Floor, 2000 Frederiksberg, Denmark
b University College Dublin (UCD), School of Business, Carysfort Avenue, Blackrock, Co. Dublin, Ireland

Abstract

As a function with a strategic role, Purchasing and Supply Management (PSM) needs to continuously find ways to improve its efficiency and effectiveness. One potential way to specifically address efficiency targets is to outsource parts of the purchasing process. While outsourcing remains one of the most prevalent business practices, many businesses fail to realize the benefits anticipated from their outsourcing initiatives. Research reports that one major reason for these outsourcing challenges lies in the design of the focal organization. In this paper, we take an organization design view to outsourcing in the PSM context. Based on a multi-year case study from 2010 to 2013 at a global chemical and pharmaceutical company, we elaborate how the organizational design of the PSM function relates to outsourcing opportunities in order to increase efficiency and effectiveness by allocating internal resources to more value-adding activities. The case illustrates how an activity-based organizational design of PSM can support outsourcing of some parts of the purchasing process.

1. Introduction

Purchasing and Supply Management (PSM) has a key strategic role in many contemporary business organizations (Barney, 2012; Hayes et al., 2005; Van Weele and van Raaij, 2014). As firms increasingly rely on suppliers’ inputs and contributions, the strategic importance of the PSM function as the interface managing these inputs has also increased (Van Weele and van Raaij, 2014). In the current global economy, PSM is under increased pressure to find additional value generation beyond efficiency seeking behavior and to search for effectiveness; for example by bringing in supplier product or process innovations, ensuring sustainability, and participating in product innovation activities (Barney, 2012; Caniato et al., 2012; Schiele, 2010, 2012; Turkulainen and Swink, 2016).

One of the fundamental managerial approaches to seek efficiency and effectiveness in different functional areas is outsourcing. Outsourcing has increased tremendously and has had transformational impact on how organizations manage their global operations and supply chains (Gray et al., 2009b). Despite its prominence, outsourcing continues to pose significant managerial challenges (Kroes and Ghosh, 2010; McIvor, 2009; Narasimhan et al., 2010) and many businesses fail to realize the benefits anticipated from their outsourcing initiatives (Gray et al., 2013; Handley, 2012; Handley and Benton, 2009; McIvor, 2000).

In this paper, we study outsourcing in the PSM context. Outsourcing in the PSM context refers to transferring tasks, such as order placement and source selection, outside the boundaries of the focal firm (Brewer et al., 2014; Maltz and Ellram, 1999). Understanding outsourcing in the PSM context is important as it is expected to grow by 50% in the near future (Deloitte, 2014). Furthermore, PSM has a boundary-spanning role, connecting the firm to its supply base, implying that it is crucial to understand the outsourcing and relationships to service providers in the PSM context (Hartmann et al., 2012). Considering these aspects, having detailed understanding of outsourcing of PSM is critical.

While outsourcing has been addressed widely in the academic literature, research has focused on areas such as manufacturing or IT outsourcing (e.g., Gray et al., 2009a; Kaipia and Turkulainen, 2017; McIvor, 2000), and not outsourcing in the PSM context. Moreover, research on PSM outsourcing is considered “sparse, and also largely atheoretical” (Brewer et al., 2014: 187). In this paper, we aim to develop more detailed understanding of outsourcing in the PSM context. We address the following research question: How does the design of the...

⁎ Corresponding author at: University of Applied Sciences Mainz, Lucy-Hillebrand-Str. 2, 55128 Mainz, Germany.
E-mail addresses: lydia.bals@web.de (L. Bals), virpi.turkulainen@ucd.ie (V. Turkulainen).

http://dx.doi.org/10.1016/j.pursup.2017.06.003
Received 5 January 2017; Received in revised form 9 June 2017; Accepted 14 June 2017
1478-4092/ © 2017 Elsevier Ltd. All rights reserved.

Please cite this article as: Bals, L., Journal of Purchasing and Supply Management (2017), http://dx.doi.org/10.1016/j.pursup.2017.06.003
purchasing and supply organization (PSO) support outsourcing parts of PSM? Understanding the organizational design aspects in the context of outsourcing is critical, as organizational design is one of the major reasons for outsourcing challenges (Ishizaka and Blakiston, 2012). We elaborate research on PSM organizational design and illustrate how a change of organizational design has supported outsourcing parts of PSM at a global chemical and pharmaceuticals company (Global Chemical Company GCC—a pseudonym).

This study contributes to research on PSM and outsourcing. First, the results give preliminary evidence on the relationship between an activity-based PSO design and outsourcing parts of PSM. Herein, an activity-based design refers to organizational design, which is based on bundling certain activities (rather than, say, business units) (Trent, 2004: 15). The organization design focus allows us to complement prior research on outsourcing of PSM (e.g., Amaral et al., 2006; Ellram and Billington, 2001; Nollet and Beaudieu, 2005). We also develop insight into one of the recent concerns of “outsourcing cascade” and the question of whether PSM follows manufacturing out the door (Brewer et al., 2013). And finally, the study complements prior research on organization design view to outsourcing in general (e.g., Handley and Benton, 2012; Narasimhan et al., 2010).

2. Conceptual background

2.1. Organizational design in the PSM context

Following Greenwood and Miller (2010), we use the term organizational design as a conventional designation for “organizational architecture”. In the PSM context, most research on organizational design has addressed the degree of centralization (locus of decision-making) at the firm level, describing PSOs as having a centralized or decentralized design (Arnold, 1999; Gunipero and Monczka, 1997; Glock and Hockrein, 2011; Johnson et al., 2014; Narasimhan and Carter, 1990; Schneider and Wallenburg, 2013). A hybrid organizational design also has been identified, combining aspects of both centralized and decentralized designs (Johnson and Leenders, 2001). In a hybrid design, for example, responsibility for negotiating some long-term contracts are maintained at the firm level, while subsidiaries place orders within the limits of these contracts (Trautmann et al., 2009a). Therefore, in contrast to centralized and decentralized designs, hybrid designs require both a global level and local level of analysis.

For developing understanding of the potential relationship between organizational design and outsourcing in the PSM function, the degree of centralization level fails to offer sufficient detail; there are potential variations in how companies might have organized themselves beyond the centralized-hybrid-decentralized framework. Classically, firms’ division of tasks and generic organization designs are assessed along functional, geographic, and product-based dimensions (Galbraith, 2002). Taking a closer look at organizational designs for PSM reveals that companies can design their PSOs by purchasing categories, geographic area or product lines (Gunipero and Monczka, 1997; Karjalainen, 2011; Narasimhan and Carter, 1990; Trautmann et al., 2009b). Jia et al. (2014) highlight that firms can have four levels of purchasing: global commodity team (category), business unit (BU) purchasing, plant purchasing, and International Purchasing Offices (IPOs). Both plant level purchasing and IPOs could be considered as a geography-based design. Moreover, some practitioner research identifies activity as the fourth structural alternative beyond category, geographic area or product line (Procurement Strategy Council, 2009, 2013).1 These four dimensions (categories, geographic area, product

---

1 A practice-oriented study suggests that companies structure their PSOs rather equally mainly by category (28%), activity (26%), and customer (24%), somewhat less by geography (17%) (Procurement Strategy Council, 2013). While the advent of such an activity-oriented organizational orientation in PSM was predicted by Trent in 2004 already, its realization was not reported in research until recently.

---

lines, activity) reflect the main structural alternatives companies follow in designing the PSO at global and local levels (Bals and Turkulainen, 2015).

Recent research suggests that combining the centralization-hybrid-decentralization framework and the structural alternatives provides a new way to study PSOs and provides better understanding of the organizational designs (e.g., Jia et al., 2014, 2016); “centralization/decentralization of a purchase structure obviously depends on how the responsibilities are divided” (Jia et al., 2014: 290). Therefore, in this paper we draw together the centralization-hybrid-decentralization framework and the four structural alternatives of PSO design (category, business unit, geography, activity). This combined view serves as the organizational design framework that we empirically elaborate in an outsourcing setting to develop further understanding on the potential relationship between the design of the PSO and outsourcing.

2.2. Outsourcing

Outsourcing is defined as the decision to move some of a firm’s internal activities and decision-making responsibilities to outside providers (Gray et al., 2013; Jacobs and Chase, 2008). Economists, management scientists, and organizational theorists all recognize that the decision to make or buy product components and/or services, and the resulting impact on industrial organization is of paramount importance to firms (Anderson and Parker, 2002; Gray et al., 2009b; Handley and Benton, 2009). While existing research on outsourcing in general is broad and abundant, it has especially focused on the decision of what to outsource (e.g., Bhalla and Terjesen, 2013; Melvor, 2000, 2009; Prahalad and Hamel, 1990). For the purposes of this study, we briefly review recent research on outsourcing taking the organizational view.

The organizational view to outsourcing suggests that outsourcing increases organizational flexibility (e.g., Schilling and Steensma, 2001). For example, external parties’ capacities can be steered more short-term in comparison to internal capacities (Bals et al., 2013) and to continuously restructure value chain and firm resources may become a key capability in itself and a source of competitive advantage (Fine et al., 2002; Pertusa-Ortega et al., 2010). The organizational view to outsourcing also provides understanding on the management of the outsourcing relationship with the contract manufacturer, suggesting that firms need to use various control, coordination, and supplier management practices to manage the outsourcing relationship (Handley and Benton, 2009, 2012, 2013; Kaipia and Turkulainen, 2017; Narasimhan et al., 2010).

Moreover, research on outsourcing with the organizational view emphasizes modularity, suggesting that a modular product structure and closely linked modular organization design have given rise to contract manufacturing in general and facilitate outsourcing (Benassi, 2009; Hoetker, 2006; Schilling and Steensma, 2001). In that context, modularity can be defined “as the extent to which the interdependencies between activities occur within, rather than across, Modules A and B. With no modularity […], activities are not only interdependent on other activities within the same module, but also… on activities in the other module” (Asmussen et al., 2016: 916).

Although research on outsourcing in the PSM context is scarce (Brewer et al., 2014), the following conclusions can be made. Research in this area has shown how PSM can retain buying leverage for intermediate materials and components when it outsourcing manufacturing of the item using those materials and components (Ellram and Billington, 2001) and that well-devised contracting can improve outcomes in scenarios where procurement is outsourced alongside production (Yang et al., 2017). Research has also shown how purchasing groups might be formed with other firms (Nollet and Beaudieu, 2005) and how the procurement element of outsourced production can be managed so that companies can retain supply chain power and minimize risk (Amaral et al., 2006). Also, more recently, research provides specific examples of how to outsource sourcing of certain commodities
(Parry et al., 2006). Nevertheless, the potential relationship between PSO design and outsourcing remains less understood.

3. Methodology

3.1. Theory elaboration research approach

In this study, we engage in theory elaboration research (Ketokivi and Choi, 2014; Lee et al., 1999). In theory elaboration research a theoretical framework is refined and enhanced with illustrative empirical data in a specific context. We build on and elaborate the combined view of the centralization-hybrid-decentralization framework and the four structural alternatives of PSOs (category, business unit, geography, activity) to develop further understanding on how the design of the PSO can support outsourcing parts of PSM. We use empirical data to illustrate how organizational design for PSM and outsourcing are related in the case of GCC and provide theoretical explanations for why the observed activity-based organization design could be related to outsourcing parts of PSM.

For the purposes of this research, we collected empirical data following a single embedded unit case study design (Yin, 2009). We selected this for five reasons. First, case study design supports the aim of theory elaboration (Ketokivi and Choi, 2014). Second, case study allows us to engage in detailed data collection and is well suited for developing an in-depth understanding of complex organization designs (Beverland and Lindgreen, 2010; Dubois and Gibbert, 2010). Third, the case study method supports our aim of investigating a contemporary phenomenon in-depth and within its real-life context (Dubois and Gibbert, 2010; Yin, 2009). Fourth, case studies are well suited for “how” types of research questions (Yin, 2009). And finally, a single embedded unit case study allows us to control for the effect of company context in the design of the organization (Ryu et al., 2008).

3.2. Case description

We selected the Global Chemical Company (GCC, anonymized) as the case to be analyzed in this study. GCC is headquartered in Germany and has subsidiaries around the world. Production within GCC encompasses a broad range of pharmaceutical and chemical products, such as prescription drugs or nutritionalics. There are several reasons why GCC provides an excellent setting for the study at hand. First, GCC had previously kept all PSM in-house but recently engaged with an outsourcing provider for significant parts of its PSM. Just before this effort, it underwent a major organizational redesign. This allowed us to study how the new design of the PSO facilitated outsourcing. Second, in line with the overall context of this paper as to how PSM can foster its strategic role, a clear initial goal of the project was to achieve process synergies, especially in transactional purchasing processes in order to shift internal resources into more strategic activities. Thus, at GCC the outsourcing of certain PSM activities was not initiated due to any manufacturing outsourcing. Moreover, we were given access to the data over the course of the organizational change right from original redesign in 2010 as well as the following implementation process, until outsourcing of some activities in 2012 and 2013.

3.3. Data collection and analysis

We collected data during the period of 2010–2013. This allowed us to analyze the decision making rationales for a new global sourcing organization design in real time. The data collection took place over the three phases of GCC’s organization design and outsourcing: organization redesign (2010), implementation of the new design (2011), and outsourcing of some PSM tasks (2012–2013). Data was mainly collected by interviews and observations of managerial workshops and meetings. In addition, we collected other material, such as organization charts, outsourcing documentation, meeting minutes, process descriptions, throughout the organization redesign.

In order to understand the initial situation regarding GCC’s strategy as well as the operating environment and development of the new organization design, we conducted a total of six interviews (Chief Procurement Officer (CPO), Head of Performance Management, Head of Procurement North America, Head of Procurement Germany, Head of Procurement Canada, Head of Category Technical Materials & Equipment), observed three core team workshops, three extended core team workshops, and three steering committees in 2010. Then, we conducted seven interviews (Head of Procurement Germany, three Site Procurement Heads, three team leaders at the largest site) and observed also five core team workshops to gather data about the first pilot (GCC’s Procurement Germany) between December 2010 and June 2011. And finally, we observed the actual implementation of the new organization design (Mid-2011) and subsequent outsourcing of some PSM tasks and conducted four follow-up interviews up to two years after the implementation (with the CPO, Head of Procurement Germany and twice with the Head of Performance Management). We also gained access to documents about the outsourcing decision, such as formal requests for supplier quotations and additional documents that GCC had for finding outsourcing providers, as well as observed the decision making process by, for example, taking part in several of the external provider presentations in 2012 and follow-up meetings among GCC personnel. In 2013, we conducted further observations of the outsourcing process and multiple interviews with the person in charge of managing the interface from within procurement to the external providers as well as several procurement department heads. They, for example, provided overviews of the projects that would start and details

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Status Quo</td>
<td>Status Quo and four structural options presented, activity + category</td>
<td>Pilot country Germany implemented</td>
<td>Internal provider is selected</td>
</tr>
<tr>
<td>Core Team Workshop 1</td>
<td>Steering Committee 1</td>
<td></td>
<td>Internal provider is initial out globally</td>
</tr>
<tr>
<td>Main events</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fig. 1. Illustration of organization design process and main data collection at GCC (own illustration).
related to selected provider, as well as underlying reasons. We also collected outsourcing documentation and contracts (e.g., specifying the mode of interaction with the external provider). The data collection is illustrated in Fig. 1 along with the organization redesign and outsourcing at GCC (the main events observed are summarized in Appendix A).

We engaged in several procedures to enhance validity and reliability of the data and data collection, following the guidelines of qualitative research (e.g., Barratt et al., 2011; Yin, 2009). These are summarized in Table 1 below.

### 3.4. Data analysis procedures

The centralization-hybrid-decentralization PSO design framework together with the structural alternatives served as a guide in our data collection and analysis. The interview data as well as additional material such as GCC’s minutes from related meetings, notes from observations, RFIs, RFQs etc. were originally analyzed for organizational design dimensions such as degree of centralization and specialization (Galbraith, 1973). In addition, we searched for instances related to organizational design change as well as outsourcing (a shift in internal versus external activity provision). This was followed up with additional analyses based on cross-tabulation of organizational design, organizational design change, and outsourcing. All data was collected in a case database.

### 4. Case results

#### 4.1. Re-organization of the local PSO: clustering organizational modules based on activities

Before the redesign, at the local level the PSO was structured by geography (individual sites per country). This meant that each site within a country had its own small PSO unit, which was responsible for carrying out all buying for its respective site (e.g. from search of suppliers to negotiations to ordering). To illustrate this initial situation, this design meant that there were nine sites with separate PSO units within Germany alone. The design led to a number of challenges, such as having multiple interfaces towards suppliers on a global scale as well as issues related to sharing category and process know-how among the PSM personnel. As the Head of Technical Materials & Equipment category emphasized:

“There are many opportunities to improve our ‘one face to the supplier’ […] Right now we often have sites pursuing their own, very local suppliers [e.g. for cleaning services], but what about regional suppliers […] or developing such [regional suppliers] over time?”

And as indicated by the Head of Procurement Germany (Steering Committee 1):

“The tasks and roles analysis of the sites shows that more than three quarter of procurement employees at the sites basically [perform] every role. They work all the time in a mix of strategic and operational. And a very little [share of] analytical tasks.”

After the re-organization, the PSO at the local level was redesigned along activity, with only sourcing (strategic activities) being further structured by category. This facilitated bundling of activities at the country level to reach a critical mass, as well as enabled standardization and specialization. When designing the new organization, GCC’s priorities focused on improving transparency and compliance, as well as efficient processes and clearly assigned activities. The importance of well-defined roles and responsibilities, especially with regard to all aspects that have a high process orientation, was highly emphasized, suggesting a need for more activity focus in order to bundle critical mass of activities and establish more clarity of roles. Therefore, GCC
made the decision to restructure the local organization based on activity. The designs before and after these changes are illustrated in Fig. 2.

At the global level, both before and after the local redesign, GCC had a PSO with a small, centralized global procurement management team located at the headquarters. Its global level PSO was mainly structured along categories (six major spend categories) and geographies (five major spend countries). Both the global category heads, the country heads, and global performance management head formed part of the global management team of the CPO.

At the local level, the three activity clusters that were established in GCC were ‘sourcing’ (strategic activities like provider selection and negotiations), ‘purchasing’ (operational activities such as purchase order processing), and ‘performance management’ (analytical tasks, such as developing and checking on KPIs for PSM, as well as spend analyses). After its development in 2010, this new organizational design was implemented in most countries in 2011 and the GCC Procurement function clustered processes and activities into organizational clusters based on analysis of existing processes. This clustering of PSM processes, as done by GCC itself, is illustrated in Fig. 3. GCC performed this clustering based on an analysis of currently roles (on the left) and translating them to the newly identified activity clusters (on the right). GCC had made a site-level workload analysis with these roles and wanted to determine the associated capacity levels in terms of the future clusters at the country level. This analysis also revealed that more than 60% of all employees had three or more simultaneous roles in the site organization model.

‘Procurement management & administration’ resembles the managerial tasks of steering the organization as well as administrative support, and hence they are not allocated to the three clusters on the right, but per newly emerging areas (e.g., in form of the newly emerging managerial role Head of Purchasing). In contrast, the other four process roles on the left resembled a mixture of strategic and operational purchasing activities on the general employee level. During the mapping to the right, it became apparent that some of the current activity allocations would need to be overhauled. For example, while local sourcing managers were responsible for creating and maintaining contracts, this came out as an activity that could be allocated to the ‘performance management’ cluster. The underlying reason is to disburden the emerging ‘sourcing’ cluster, which should bundle activities with the highest category expertise. As the Head of Procurement Germany (core team workshop 2) mentioned:

“[In the current set-up] I am the one who routes any category news from our [global procurement management team meetings] to all the site procurement heads, because there is no direct link between the global category managers and the local buyers. […] actually
they [the local buyers] hardly have the time to source strategically, but they [...] have to work in [tools and systems] that they use not so often [...] They should use and further develop their category expertise [...], go to trade fairs [...] have time for that.”

Likewise, ‘create & manage master data’ came out as an activity, which was currently being performed mostly by so-called buyer-assistants. However, in the future it is supposed to go into the ‘performance management’ cluster in order to allow the newly emerging cluster ‘purchasing’ to fully concentrate on achieving maximum efficiencies in purchasing order processing and the like, and also by better use of related tools and systems. As was discussed regarding the latter (Extended Core Team Workshop 1):

“[Head of Performance Management reflects on current system and tool issues] because in the past we have tried to implement various RFX tools [but...] who do you train? The current site employees sometimes use this once a year, if at all, others don’t get access right away [so implementation of such tools] is currently very difficult.”

Overall, GCC allocated ‘develop & monitor local supplier performance’ activities to the sourcing cluster, as it regarded this to be central to sourcers performing supplier management. However, upon implementation the more specific data-related sub activity of ‘supplier master data management’ was allocated to performance management.

This implied that each of the three newly formed clusters would be geared towards effectiveness and/or efficiency. This is illustrated in Fig. 4, which stems from after the reorganization was completed. It is based on an illustration used in GCC internal communication on the benefits of the new organizational design.

‘Local sourcing’ became focused on achieving effectiveness, with levers such as improving quality, cost, innovation and risk. ‘Purchasing’ became focused on achieving efficiency with levers such as increasing process efficiency and reducing operating cost. And ‘performance management’ facilitated both efficiency and effectiveness by ensuring required data accuracy, for example.

4.2. The activity-based organizational design paves the way for outsourcing

By 2012 GCC faced a significant growth scenario. With sales challenged to channel enough supply to meet market demand, GCC needed PSM to better support its overall strategic targets. This implied, for example, that PSM would have to not only take a close look at all available options with existing suppliers to increase volumes, but also identify and quickly engage with new suppliers. In these efforts, activity-based PSO design allowed it to source and engage external providers in parts of the PSM function. As the Head of Performance Management discussed:

“[External providers] can now support us with a ticketing approach [...] along our strategic sourcing process [in which] global and local sourcers have been trained last year [...] we now actually have local sourcers [as a dedicated job profile] and not everybody does everything [from time to time only] anymore.”

The spectrum enabling the organization to use activity-based organization for external provider engagement was identified early on, as shown in Fig. 5. However, it was done only after the analysis of the suitable dimensions had been concluded, not as a driver for the selected organization design.

This illustration of the make or buy continuum for PSM activities was created in 2010, but it was not before 2012 that parts of the PSM were outsourced and external providers were engaged. In 2012, GCC decided to engage external support for parts of its activity cluster ‘sourcing’. This focused especially on activities related to market intelligence and preparation of RFXs and e-auctions, which had initially (2010) been considered as part of the cluster ‘performance management’ but were not build up dedicatedly in-house during the implementation. In addition, GCC outsourced a part of the cluster ‘performance management’, particularly spend analysis and provision of the KPI reporting tool via a web-based interface. These changes also involved changing the CPO. The new CPO was experienced in successfully outsourcing in the PSM context and saw the engagement of external service providers as a cost effective means to address capacity challenges related to the growth scenario.

With these changes, GCC expected to achieve the following capacity benefits (which were later realized): First, improve process efficiency, as the external providers are experts at processing these activities in large volumes. Second, leverage outsourcing to quickly scale up or scale down human resources capacities on the provider side as required. The external providers were considered to have better access to human resources for these activities, and also actually contractually agreed to have a flexible organization, being able to increase or decrease capable resources dedicated to GCC’s needs within a three-months notice. This facilitated both efficiency and effectiveness in GCC operations. The CPO

Fig. 4. New foci of activity clusters after reorganization (adapted from: GCC, 2012).
“Make and Centralize” | “Centralize or outsource outside one sub group” | “Outsource”
--- | --- | ---
Centralize (core) across sites in country | Centralize selected categories in other sub group organizations (e.g. lead buyer) | Outsource non-core categories to external specialists
Centralize (core) in hubs within regions | | |

Purchasing

Centralize across sites in country | Centralize “Indirects” on corporate level | Outsource transactional activities to external provider
Centralize in hubs within regions | | |
Assign “Direct” to SCM units | | |

Performance Mgmt.

Centralize across sites in country | Handover to other sub groups (e.g. data management on corporate level) | Outsource to external provider (e.g. data management, reporting, etc.)
Centralize in hubs within regions | | |

Make | Buy |

illustrated this as follows:

“I went to him [to the board member he reports to] and presented the savings [forecast] we can achieve and how we can support the business to grow if we get additional capacity. [...] it was accepted that we get additional external headcount [...] and it is very flexible capacity, [so if] business declines, we can quickly react.”

And the Head of Performance Management further explained:

“[The processes] and tools are now more standardized than ever before. [The external providers] will be able to service the sites now, directly, we can integrate this [the ticketing] into our intranet. [...] we add an external layer to the [three activity clusters].”

The process descriptions in the Intranet were then updated to display an additional path for the external provider services, illustrating into which specific sub-activity in the three activity clusters the support would be associated with.

### 4.3. Reinvesting process synergies into strengthening PSM's strategic processes

It needs to be clearly stated that, for GCC, the organizational redesign project was not initially set up as an outsourcing project. Instead, the initial idea was to gain access to additional external capacity, because internal resources were kept at a constant level despite the aggressive business growth scenario (this is also illustrated in the quote from CPO in Section 4.2). Already in the organizational redesign phase, GCC considered that synergy benefits and subsequent cost savings received in transactional activities should be reinvested into strategic PSM activities. This means that if synergies were identified and realized by bundling purchase order processing in one country, the savings were not taken out of the budget but instead were reallocated to strategic PSM activities. For example, if one transactional purchaser position became available due to process efficiencies in purchasing, this position was reallocated to a local sourcer in the strategic sourcing area. The underlying reason for this was the fact that GCC had estimated that the return on adding one additional person in strategic PSM roles was at least 1:3 – one Euro invested meant a savings of three Euros in return due to, for example, better negotiating power. The Head of Performance Management explained this as follows:

“We have analyzed the last years in several countries [...] and looked what the additional savings are we reached after additional personnel was hired [...] we get to a rough return of a multiple and still if we calculate this cautiously [...] three times the buyer's salary is achieved as savings, on average. [...] as long as the return is there we should reinvest personnel [capacity] into strategic activities.”

Therefore, as mentioned earlier, the initial goal of the project was to achieve process synergies, especially in transactional purchasing, in order to facilitate shifting internal resources into strategic sourcing activities. In line with this, as well as the current distribution of capacities of activities in two of the major countries, GCC developed and implemented a guideline of having personnel distribution as follows: 60% sourcing, 30% purchasing, and 10% performance management. The additional external provider capacity was then intended to facilitate that change even further over time as transactional and support activities could be outsourced even more to the external providers, while simultaneously internal core employees could concentrate on the strategic tasks.

### 5. Discussion

The GCC case highlights how the design of the PSO can support outsourcing of parts of PSM in its efforts to enhance both efficiency and effectiveness. Below, we discuss the empirical results and then present theoretical explanation for the results.

#### 5.1. Discussion of empirical results

The new activity-based organizational design provided increased transparency as well as an opportunity to increase standardization and harmonization of PSM practices and processes on a global scale. Before the organizational change, each site was managed individually. For example, with the new activity clusters the heterogeneity of both strategic and operational PSM processes at different sites became fully transparent, a precondition for the subsequent process standardization. After such standardization, GCC had the opportunity to provide common training for all employees within each cluster.

The activity-based organizational design also provided increased transparency in human resources, including, for example, the overall level of human resources needed (especially if they are working on purchasing-related tasks in other functions), time allocated to different activities, distribution of roles, and levels of specialization. Apart from the outsourcing engagement, GCC was now able to reevaluate and redefine the overall internal capacity allocation within the PSM clusters in order to transfer internal resources from transactional to strategic tasks. This means that efficiency in the transactional tasks as a result of specialization of the employees and better ability to standardize and automate processes could be taken into account when designing the size of the new activity clusters and when reallocating resources towards the strategic activities. Taken together, we conclude that by fostering
standardization and harmonization of processes and practices as well as by increasing transparency on capacity needs, an activity-based PSO design supports outsourcing parts of the PSM function.

5.2. Theoretical explanation for the potential relationship between activity-based organizational design and outsourcing

If GCC had kept its original geography-based model at the country level (as was shown in Fig. 2), it would have been both more difficult to outsource some parts of PSM as well as less efficient for an external provider to service each site. In the original organizational design, every employee would have potentially received minor fractions of support for each different task (e.g., on preparing a spend analysis, and then weeks later prepare an e-auction). Furthermore, the split of sourcing projects between global and local sourcing would not have been clear, which would easily have led to duplication of work and potentially initiating redundant external provider support for similar projects on global and local levels. The activity-based organization facilitated harmonization of processes and tools across sites. Hence, intended outputs of an activity would have had to be clarified individually and multiple tools would have to be used for the same activity across different sites. This meant that interface management between the external provider and the internal organization would have been much more complex if GCC’s organization was not activity-based. The reorganization thus increased clarity between PSM tasks and their interfaces. This is evident, for example, in terms of clarifying what the envisioned inputs and desired outputs of each task are, how they would be measured, what would be the roles and responsibilities in carrying out each task. With the activity-based model, it was easy to pinpoint which activities should be outsourced and to technically implement that external support via an activity-based ticketing solution in the intranet so that sourcers could now engage external providers for specific parts of the sourcing process. Moreover, these directly link to Adam Smith (1776) and his ideas about the division of tasks and subsequent efficiencies; the external provider can focus on certain parts of the PSM and develop capabilities and efficiencies in carrying out those activities.

The potential relationship between activity-based organizational design and outsourcing illustrated with the GCC case can be explained with the concept of organizational modularity. At the very high level, systems are said to have a high degree of modularity when their components can be disaggregated and recombined into new configurations—possibly with new components—with little loss of functionality (Schilling, 2000). Modularity intentionally creates a high degree of independence or ‘loose coupling’ between component designs by standardizing component interface specifications (Sanchez and Mahoney, 1996; Schilling, 2000). While originating with a product-centric view, organizations also can be modular in their design; organizational systems become increasingly modular when tightly integrated, hierarchical structures are substituted for loosely coupled or reconfigurable forms (Hoetker, 2006; Schilling, 2000; Schilling and Steensma, 2001). In Simon’s (1962) terminology these ‘nearly decomposable systems’ are defined as ones in which interactions among subsystems are weak (but not necessarily negligible), and Daft and Lewin’s (1993: i) notion of modular organizations are systems that “continuously change and solve problems through interconnected coordinated self-organizing processes”. Organizational modularity has been proposed as a way for companies to evolve their business unit structure to match market opportunities (Helfat and Eisenhardt, 2004).

Activity-based organization is a form of modular organization; the activities can be conducted rather independently with weak linkages between them. Organizational modularity has also been recognized as a way to facilitate outsourcing in general. Each unit in the modular design is responsible for a specific domain and makes autonomous decisions on the assigned business issues and, hence, can be taken outside the boundaries of the firm (Benassi, 2009; Hoetker, 2006; Schilling and Steensma, 2001). By definition, the components of modular organization have very little synergistic specificity; the components are relatively independent and can be recombined in a variety of configurations (Schilling, 2000). By specifying design rules and pre-defining interfaces, each activity may be assigned to a different organizational unit or organization (Benassi, 2009). Such loosely coupled arrangements have been suggested as the facilitators of contract manufacturing and strategic alliances among others at the industry level, too (Schilling, 2000; Schilling and Steensma, 2001). To summarize, an activity-based organizational design is inherently modular and, hence, it potentially provides an opportunity to outsource parts of the PSM function.

Finally, the way that GCC had clustered the activities provided a direct opportunity to differentiate between core (strategic sourcing activities), close-distinct (performance management activities) and disposable (transactional activities) (Arnold, 2000). According to the notion of core competencies (Prakash and Hamel, 1990), this distinction is required for making make or buy decisions and, hence, explains why an activity-based organization design provides an opportunity to outsource parts of PSM. It allows breaking down the core activity clusters further into smaller ones to make the final make or buy decision on each of those.

5.3. Research contribution and implications

This study contributes to research on PSM and outsourcing by developing detailed understanding on the potential relationship between an activity-based organization design and outsourcing of parts of PSM. In GCC’s case, the activity-based design served to leverage efficiencies by outsourcing some activity clusters. These efficiencies were then reinvested to strengthen the overall effectiveness of the PSM function by shifting positions from the transactional cluster ‘purchasing’ to the strategic cluster ‘sourcing’, facilitating effectiveness. While providing clear benefits for GCC, by no means do we argue that activity-based organization design is something that all organizations should consider; whether activity-based organization facilitates internal operations in the most efficient and effective way is a matter of different contingencies (Bals et al., 2015). The study provides further support to recent research on PSOs suggesting that understanding of PSO designs requires combining the centralization-hybrid-decentralization framework together with the structural alternatives (Jia et al., 2014, 2016).

Focusing on how the organization design of PSM can support outsourcing also provides complementary knowledge to prior research on outsourcing of PSM, which has, for example, looked into make or buy decisions (e.g., Amaral et al., 2006; Ellram and Billington, 2001; Nollet and Beaudieu, 2005). Furthermore, the results add to the ongoing debate about the outsourcing cascade: does procurement follow manufacturing out the door (Brewer et al., 2013)? Importantly, the results of this study give preliminary evidence of the critical role that the PSO design plays. The study indicates that there is a potential relationship between the design of the focal PSO and outsourcing of some PSM tasks. These results also provide further understanding on the organization design view to outsourcing, which has looked into how to manage outsourcing relationships with contract manufacturers (Handley and Benton, 2012, 2013; Kaipia and Turkulainen, 2017; Narasimhan et al., 2010).

The illustration of GCC’s activity-based PSO highlights how organizational modularity might be a means to foster integration with service providers in the PSM function, as the results provide more nuanced understanding on how an activity-based organization as a modular structure could be associated with outsourcing in the PSM function. This raises an interesting point – in order to achieve effectiveness in the activity-based organization, it requires that someone is responsible for coordinating the activities at the top level in the organization. One option for this is the PSM as the function interfacing with the supply market and involved in make or buy decisions. This means that having an activity-based organization potentially increases the PSM’s role in
the organization at the firm level. These same conclusions could be equally interesting for other functional contexts such as accounting, finance or human resources.

5.4. Managerial implications

Regarding efficiency and effectiveness in contemporary organizations, the initial introduction of the activity-based organization at GCC served to leverage some process efficiencies, while simultaneously re-investing them to strengthen the overall effectiveness of the PSM function. The modularity of the activity clusters then provided an opportunity to outsource and have external provider support to steer through a growth scenario.

Taking the main findings into account, the results of the study provide a framework for managers to assess the design of their PSO. The study indicates that in to streamline processes and enhance transparency in the organization, an activity-based design holds potential. On the other hand, concerning the reassessment of capacities in PSM, the GCC case highlighted how the activity-based design offered a chance to re-allocate resources along the activity clusters, shifting them from transactional to strategic clusters. And finally, managers considering outsourcing parts of their PSM processes might actively evaluate whether to structure the PSO based on activity, comparing its suitability to the other options available.

Recent research indicates that activity-based organizations have become ever more popular in the PSM context (Prourement Strategy Council, 2013). While GCC is an example of proactively designing its PSO and arriving at an activity-based design, which then ultimately paved the way for outsourcing and engagement of an external provider, it is worth noting that this is not always the case. Sometimes the external providers can also serve as a trigger to consider activity-based design in the focal firm. It is evident also in the case of GCC that during the selection process of the external provider in 2012, a number of potential service provider firms had structured their offerings based on activities. If the focal firm has an activity-based design, outsourcing of parts of PSM is less complex. An example of this is Accenture, which offers both PSM consulting and services as an outsourcing service provider, using terminology such as ‘building blocks’ and marketing headlines such as “our clients love Lego” (Accenture, 2013). The organization design and operating model that they recommend as the standard to their PSM clients is also an activity-based model (Accenture, 2013).

The study also develops implications for managers responsible for the development of shared services for various activities at the global level in global business service organizations. As practitioner-oriented studies suggest, the next generation of the shared services business model is the integrated business services model (Timmermans et al., 2013). PSM is particularly well positioned to contribute within this expanded organizational model. The results of this study indicate that even though PSM is generally regarded as a back office operation, it tends to be under-appreciated and has full potential to shape business decisions. Moreover, in the context of integrated business services, PSM might well have a much more impactful and strategic role within the firm (Timmermans et al., 2013).

5.5. Limitations and suggestions for future research

This study was based on a single case study, which focused on illustrating organization design change and subsequent outsourcing decisions. Despite its limitations in facilitating broad generalizations, a single case study is suitable for the theory elaborative research approach (Retokivi and Choi, 2014). The research design also allowed us to develop detailed insight into the activity-based organization and the subsequent outsourcing, as well as analyze explanations for that. Future research could take a more intervention-based approach (Holmström et al., 2009). For example, one fruitful avenue would be to take a design science approach and study organization design change for outsourcing and testing different design options in different contexts. For example, some studies on organization of PSM show that outsourcing has increased in recent years, and managers expect to continue to do so in the future and also expect to see innovations in relation to outsourcing (Johnson and Leenders, 2012). The results presented in this paper provide insight into how that could be analyzed further, i.e. studying which organizational designs the companies engaging in outsourcing have and how this influences the provider interface (e.g., in terms of coordination efforts). Future research should also expand the study at hand and take into consideration that in some company contexts the decision to outsource parts of PSM might be associated with decisions to outsource other parts of operations (Brewer et al., 2014; Mugurusi and Bals, 2017). Whether, for example, an activity-based PSO could be more likely to follow manufacturing out the door compared to, for example, a geographically structured PSO, warrants further research.

This study focused on understanding how design of the PSO can support outsourcing, illustrating the activity-based organization design. Future research could dig deeper into activity-based organization designs and its antecedents and address especially questions of: What actually drives companies to activity-based organization designs? What explains development of activity-based organizations at the industry level? Are the manufacturers developing modular products and aiming to outsource parts of their activities?

Broadening the research approach to both sides of the dyad, another fruitful area for future research is to shed more light on the implications on outsourcing projects when the service-provider is activity-based in its organization design. One could hypothesize that this would reduce the coordination and control costs between the focal firm and the external provider and potentially make outsourcing more attractive. Such costs, and in general challenges in managing the outsourcing relationship with the external provider, have been found significant (Kalis and Turkulainen, 2017; Narasimhan et al., 2010), especially in the case of high task complexity (Handley and Benton, 2013). Looking at the current provider landscape, activity-based organization designs are prevalent also on the service provider side (Accenture, 2013). Future research could critically investigate the question whether the development of activity-based organizations may actually be (partly) due to the service providers seeking opportunities and driving their clients towards adopting such organizational designs.

6. Conclusions

Our starting point was to shed light on the potential relationship between organizational design of the PSO and outsourcing with the research question: How does the design of the purchasing and supply organization (PSO) support outsourcing parts of PSM? We addressed the research question by studying GCC’s (a global chemical and pharmaceutical company) redesign of the PSO and subsequent decision to outsource parts of its PSM. With the case study, we have developed further knowledge on outsourcing of PSM from an organizational design point of view. The results of the study indicate that an activity-based design facilitates both efficiency by increased harmonization and standardization, as well as effectiveness by increased transparency across the PSO and provide preliminary empirical evidence on the relationship between an activity-based PSO design and outsourcing.
APPENDIX A. Overview of interview guide (excerpt from topic areas addressed in the initial interviews)

**Interviewee background and current Purchasing & Supply Organization (PSO) structure**

- Organizational position; educational and professional background; years with the company and in this position.
- Current PSO; strengths and weaknesses of the current PSO.
- Main priorities today and three years ahead (e.g. including supplier management & development; spend transparency & compliance; supply security)

**Contingencies for future PSO structure (to develop understanding of potential synergies in terms of economies of scale, process and learning)**

- Support of current structure for the alignment across geographically dispersed sites and business units; if (unintended) multiple contacts to suppliers from different parts of the PSM function exist in parallel; if it supports great expertise in all spend categories; splitting of activities and how optimal it is to maximize efficiency and effectiveness; synergistic spend across sites and/or business units

**Purchasing maturity**

- Whether the organization is strong in applying strategies, guidelines and processes; exchange practices for employees of global and local procurement functions
- How collaboration works between (a) local and global procurement functions, (b) local procurement and business functions, (c) local procurement across sites, and (d) procurement employees within one local site

APPENDIX B. Overview of main events for data collection about organizational redesign and outsourcing (own illustration)

<table>
<thead>
<tr>
<th>Event</th>
<th>Main focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kick off</td>
<td>Finalize scoping of reorganization based on CPOs input and available organization and process documentations</td>
</tr>
<tr>
<td>Core Team Workshop 1</td>
<td>Review of external organizational benchmarks; Summary of current status of structural alternatives in place as “Geography-Geography”; alignment of interview guide</td>
</tr>
<tr>
<td>Extended Core Team Workshop 1</td>
<td>Overview on current organizational model with the dimensions “Geography-Geography” and existing models at other companies; review of results of the interviews in terms of which model would suit the internal and external environment of the company; the SWOT analysis is complemented by the participants’ inputs</td>
</tr>
<tr>
<td>Steering Committee 1</td>
<td>Outcome of “extended core team workshop 1” is presented and the decision to select basic model with the dimensions “Activity-Category” is taken by the Steering Committee</td>
</tr>
<tr>
<td>Core Team Workshop 2</td>
<td>The basic model selected is further detailed into variants, mainly differentiated regarding their level of centralization</td>
</tr>
<tr>
<td>Extended Core Team Workshop 2</td>
<td>The three variants are discussed and evaluated</td>
</tr>
<tr>
<td>Steering Committee 2</td>
<td>The evaluated variants are presented and the decision to select the variant “clear-cut scenario” is taken, Germany and the United States are suggested as first pilots for further analysis by the Steering Committee</td>
</tr>
<tr>
<td>Extended Core Team Workshop 3</td>
<td>Suitable candidates for piloting are reviewed based on an overview the core team has prepared; the participants add considerations why one or the other should be piloted first</td>
</tr>
<tr>
<td>Steering Committee 3</td>
<td>The two potential pilots are presented and the decision to select the pilot country Germany is taken by the Steering Committee</td>
</tr>
<tr>
<td>Workshop with Procurement Germany to prepare pilot</td>
<td>According to the guidance of the Steering Committee, this workshop with the Procurement Germany management team marks the start towards implementation</td>
</tr>
<tr>
<td>Germany Go-Live</td>
<td>After intensive preparations for workers councils alignment and employee communication, the go-live of the new organizational design is first carried out in Germany in June 2011. In parallel, 12 other (smaller spend) countries have implemented the new design.</td>
</tr>
<tr>
<td>RFX for External Providers</td>
<td>After a demand analysis for potential support by external providers the RFI and, subsequently, RFQ are issued. The demand analysis resembles a volume estimation of hours needed and is provided by the category heads.</td>
</tr>
<tr>
<td>External Provider Proposal Presentations</td>
<td>The shortlisted external providers have the opportunity to present their proposals.</td>
</tr>
<tr>
<td>External Provider Due-Diligence Begins</td>
<td>After selection, a phase of creating the necessary processes and infrastructure (e.g., a ticketing system) and piloting the new services begins.</td>
</tr>
<tr>
<td>General External Provider Rollout Begins</td>
<td>Global and local PSM functions at GCC get access to the external provider support after outsourcing some parts of the PSM.</td>
</tr>
</tbody>
</table>
References


Gray, J.V., Roth, A.V., Tomlin, B., 2009a. The inootnotesize{f}luence of task- and location-specific comootnotesize{p}etencies and control mechanisms: the moderating 

fl


Procurement Strategy Council. 2009. Fit for Purpose: Designing the right structure and learning to live with it.


Schneider, L., Wallenburg, C.M., 2013. 50 Years of research on organizing the purchasing function: do we need any more? J. Purch. Supply Manag. 19, 144–146.


