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Dynamic capabilities view on value creation in public procurement

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Abstract

Purpose – This study aims to build on the dynamic capability view by examining dynamic capabilities associated with public value in public procurement.

Design/methodology/approach – A qualitative case study approach is used in this study. The interview and secondary data consist of eight cases of value-creating procurement from four public organizations.

Findings – The findings connect dynamic capabilities and public value in terms of innovation generation and promotion, well-functioning supplier markets, public procurement process effectiveness, environmental and social sustainability and quality and availability of products or services.

Social implications – Dynamic capabilities in public procurement are necessary to improve public procurement.

Originality/value – This study extends understanding of how sensing, seizing and transforming capabilities contribute to public value creation in both innovative and less innovative (i.e. ordinary) procurement scenarios.

Keywords Dynamic capabilities, Public procurement, Public sector, Value

Paper type Research paper

1. Introduction

Improved services, enhanced trust and the mitigation of social problems are all important artifacts of public value achieved through public procurement (Meynhardt, 2009). Public

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procurement is a strong value driver as the large sums of money spent by governments have the potential to shape markets (Mazzucato and Ryan-Collins, 2022). Public organizations face frequent policy changes, uncertain environments and the need to satisfy multiple – often conflicting – goals imposed by various stakeholders (Malacina *et al.*, 2022; Piening, 2013). However, owing to constraints from fixed budgets, uncertain demand, high public expectations and performance targets (Meehan *et al.*, 2017), public organizations need to create and effectively deploy procurement capabilities. The ability of public organizations to cope with changes partly depends on how well they can use dynamic capabilities (Piening, 2013). The dynamic capability view (Teece, 2012; Teece *et al.*, 1997) offers a theoretical lens to study the abilities of organizations to sense and respond to change and develop capabilities accordingly.

However, existing research has yet to determine a comprehensive relationship between value creation and dynamic capabilities in relation to procurement managers in public organizations (Kattel and Mazzucato, 2018). Value can be defined as a trade-off between benefits and sacrifices (Walter *et al.*, 2001). As public procurement can be conceptualized as "the acquisition of goods and services by government or public sector organizations" (Uyarra *et al.*, 2014, p. 632), its ultimate objective is to create public value (Moore, 1995) and balance various value trade-offs. Recent research has examined the idea of dynamic capabilities in public procurement, focusing mainly on the broader macro policy perspective and the innovation-driving nature of public procurement (Bleda and Chicot, 2020; Clausen *et al.*, 2020; Uyarra *et al.*, 2020). The present study assesses the dynamic capabilities of procurement, focusing specifically on three types of capabilities (i.e. sensing, seizing and transformation/reconfiguration) that are necessary for value creation through public procurement.

The objective of this study is to examine how dynamic capabilities may facilitate public procurement to achieve public value (i.e. innovation generation and promotion, well-functioning supplier markets, public procurement process effectiveness, environmental and social sustainability and quality and availability of products or services) for both innovative and noninnovative products or services. Scant research on the differences between innovative and ordinary procurement cases in the context of capabilities has been identified as a gap in the literature (Holma *et al.*, 2022). However, more research is needed to understand the performance-related consequences of investments in dynamic capabilities (Pisano, 2017). Correspondingly, we formulate our research question as follows:

RQ1. How can dynamic capabilities of public procurement contribute to public value creation?

Our study adopts a qualitative multi-case study design (Eisenhardt and Graebner, 2007; Yin, 2014) to explore the ways in which dynamic capabilities are connected to public value. Our sample consists of eight cases – either innovative or ordinary in nature – from four public organizations, which all achieved to successfully create public value. The case contexts vary from the procurement of complex technical solutions and health-care services to sustainable food and facility services. The primary data are collected through 14 semi-structured interviews and the secondary data include tender documentation.

Our study contributes to the field of public procurement and capabilities (Holma *et al.*, 2022; Piening, 2013) by presenting connections between dynamic capabilities and public value. By doing so, we go beyond occasional findings regarding the capabilities needed in specific contexts (Patrucco *et al.*, 2021) and paint a broader picture of the various dynamic capabilities needed to achieve different forms of public value. Accordingly, we contribute to research on value creation in public procurement (Malacina *et al.*, 2022; Patrucco *et al.*, 2017) by showing how value can be achieved through dynamic capabilities.

2. Literature review

2.1 Dynamic capability view

Dynamic capabilities can be defined as the routines through which organizations alter their resource base to establish new value-creating strategies (Eisenhardt and Martin, 2000; Pablo *et al.*, 2007; Teece *et al.*, 1997). They are essential sources of sustained competitive advantage for long-term organizational survival, especially in uncertain markets (Eisenhardt and Martin, 2000). The dynamic capability view emphasizes the renewal of resources by reconfiguring them into novel capabilities and competencies (Teece *et al.*, 1997). According to Teece (2012), dynamic capabilities can be divided into three organizational dimensions of activities:

(1) identification and assessment of opportunities and threats (*sensing*);

(2) utilization of resources to take advantage of opportunities to capture value (*seizing*); and

(3) continuous renewal and reconfiguration of the organization's intangible and tangible assets to maintain competitiveness (*transformation* or *reconfiguration*).

These activities or routines do not exist in isolation and require the use of a range of resources (Makadok, 2001). Significant research has been conducted on the role of dynamic capabilities in private organizations, but the specifics of these capabilities in public procurement remain underexplored.

Several studies have examined the role of innovation-related public dynamic capabilities (Crespi and Guarascio, 2019; McLaren and Kattel, 2022; Wirtz *et al.*, 2021; Bleda and Chicot, 2020) investigated how public procurement can encourage business innovation by supporting the formation of markets for new products, technologies and services. Among the many findings, researchers have often attributed the failure of innovation initiatives to the lack of dynamic capabilities in public procurement. Piening (2013) also proposed an analytics model of dynamic capabilities in public organizations, but despite its strong contribution, the model does not analyze public procurement functions. Kattel and Mazzucato (2018) sought to define dynamic capabilities specific to the public sector, proposing capabilities such as leadership and engagement, policy coordination, administrative competence and diversity of expertise. In another study, Mazzucato and Kattel (2020) focused on the dynamic capabilities governments need to navigate the COVID-19 pandemic and emphasized the importance of governments' ability to develop dynamic capabilities. While this line of research is a pioneer in applying the dynamic capabilities perspective across various levels of public sector organizations, it has overlooked the role of public procurement.

Purchasing departments require dynamic capabilities to function effectively (Brandon-Jones and Knoppen, 2018; Yook *et al.*, 2018). For instance, Brandon-Jones and Knoppen (2018) argued that to be effective, procurement departments must develop and deploy knowledge scanning, a dynamic capability that allows the identification and capture of knowledge and technology. Similarly, Yook *et al.* (2018) discovered that organizations require dynamic green capabilities such as supplier assessment and cross-functional cooperation to improve their environmental performance and address environmental challenges. Santos and Cabral (2022) proposed that public buyers who possess specific capabilities (i.e. knowledge management, contract management and prominent stakeholder management) can develop collaborative trust-based relationships with suppliers, leading to improvements in operational performance and the attainment of policy goals. Miller and Lehoux (2020) found that procurement is shaping what is sought or provided in the markets and how specifications are set. Holma *et al.* (2022) investigated the relational abilities in

buyer–supplier interaction in ordinary procurement cases. Finally, Valovirta (2015) delineated a set of capabilities essential for the successful public procurement of innovation but stated that these capabilities are, regrettably, not part of regular public procurement competencies.

2.2 Role of dynamic capabilities in public value creation

Value is a dynamic concept that is subjectively assessed by the value receiver in different contexts (Kähkönen and Lintukangas, 2018). To achieve the highest public value, public buyers need to involve the suppliers and users of the purchased product or service as value co-creators (Bryson *et al.*, 2014). Previous research has shown that public sectors can influence market structures and boost new supply market entries by promoting standards for innovative technologies (Georghiou *et al.*, 2014). In addition, public procurement can create value for suppliers by opening doors to new markets (di Mauro *et al.*, 2020; Saastamoinen *et al.*, 2020) and for users through improved public service availability, location access and service coverage (Torvinen and Ulkuniemi, 2016).

Earlier research suggests that dynamic capabilities can support public value creation, such as innovation promotion (Bleda and Chicot, 2020), environmental performance (Yook *et al.*, 2018), risk management (Mazzucato and Kattel, 2020) and effectiveness (Brandon-Jones and Knoppen, 2018). However, the specific role of dynamic capabilities in public procurement has received limited attention in the literature. The key to public procurement success is identifying and building capabilities to produce the greatest public value for key stakeholders at a reasonable cost (Bryson *et al.*, 2007). Public procurement must structure the existing resource portfolio, bundle resources into valuable capabilities and formulate leveraging strategies (Bryson *et al.*, 2007). Our study centers on the notion that public organizations should have supportive resources, organizational cultures, capabilities, infrastructure and processes to adopt innovations from the markets and aim toward enhanced value (Heitmueller *et al.*, 2016; Meehan *et al.*, 2017).

Regarding the specific value components that can be achieved, Malacina *et al.* (2022) offer the most comprehensive synthesizing of them to date by reviewing more than 170 articles on public procurement. They argue that value can be achieved through the public procurement function from the perspective of the public buyer and/or user by:

- innovation generation and promotion;
- well-functioning supplier market;
- public procurement process effectiveness;
- environmental and social sustainability; and
- quality and availability of products or services.

These five value components will be used in this study and Table 1 presents a detailed overview of them (for a full review, Malacina *et al.*, 2022).

3. Methodology

This study uses a qualitative case study approach (Ospina *et al.*, 2018; Yin, 2014) to analyze the dynamic capabilities of public procurement and the value emerging from these capabilities. It aims to expand our limited knowledge of dynamic capabilities in public procurement through theory elaboration (Ketokivi and Choi, 2014). The case study method is particularly suitable for our research setting, which seeks a sense of generality in situationally grounded procurement cases (Ketokivi and Choi, 2014; Yin, 2014). The main objective is to connect dynamic capabilities to value while considering the impact of the

Table 1.
Value components obtained by public procurement

Value component	Short description	Subcomponents
(1) Innovation generation and promotion	Generation of innovative solutions and promotion of innovation in the market	(a) Innovation triggering *(PUBLIC BUYER)* (b) Innovation diffusion *(PUBLIC BUYER)*
(2) Well-functioning supplier market	Development of a well-functioning supplier market	(a) Structure of competition *(PUBLIC BUYER)* (b) Market stability *(PUBLIC BUYER)* (c) Creation of new economic activities *(PUBLIC BUYER)*
(3) Public procurement process effectiveness	Improvement of the overall effectiveness of the procurement process	(a) Enhancement of the transparency of the procurement process *(PUBLIC BUYER)* (b) Minimizing the complaints and errors *(PUBLIC BUYER)* (c) Promotion of organizational learning *(PUBLIC BUYER)* (d) Improving supplier selection and compliance *(PUBLIC BUYER)*
(4) Environmental and social sustainability	Improvement of environmental and social sustainability	(a) Environmental sustainability, e.g. low-carbon procurement *(PUBLIC BUYER, USER)* (b) Social sustainability, e.g. reduction in social inequality *(PUBLIC BUYER, USER)*
(5) Quality and availability of product or service	Quality and availability	(a) Service availability and location access *(USER)* (b) Market availability *(USER)* (c) Improved product or service quality *(USER)* (d) High end-user satisfaction *(USER)*

Source: Table adapted and courtesy of Malacina *et al.* (2022)

innovativeness of the cases on these relationships. The context of this research is in local public administration, which has received considerably less attention in public procurement literature (Patrucco *et al.*, 2017).

3.1 Research settings and case selection

The primary objective of this research is to link value objectives and capabilities, which led us to focus on successful procurement cases. Thus, the unit of analysis for this research is a successful public procurement case. Following our research focus, we also sought cases that could be classified as either innovative or standard public procurement. This contrast is required because the procurement of innovative solutions is associated with a higher level of uncertainty and requires a different set of dynamic capabilities, in addition to routine operational capabilities, than in ordinary procurement cases (Lee and Kelley, 2008). Still, dynamic capabilities are important in ordinary procurement, for example, through their role in improving environmental performance (Yook *et al.*, 2018). We distinguished innovative procurement cases following the definition by Torvinen and Ulkuniemi (2016) as purchasing new innovative solutions (e.g. procurement of solutions not yet in the market) or a procurement process emphasizing the adoption of innovative practices.

To identify successful public procurement cases, we focused on local public organizations that have publicly reported their recent procurement successes in achieving key objectives. Using this criterion, we preselected four public organizations dedicated to local governance: two cities and two health-care districts. After selecting these organizations, we contacted representatives from each, asking them to identify successful public procurement cases that matched our criteria. These representatives provided insights on cases that achieved their key objectives and suggested relevant experts for interviews, facilitating our case selection process.

Table 2 presents the summaries and brief descriptions of the cases. To verify the innovative procurement cases, we reviewed the corresponding case documentation (e.g. tender documentation). For example, we classified the case as innovative if the public buyer adopted an innovation partnership or competitive dialogue as a procurement method. Similarly, if the service design was regarded as new by the public organization, we placed the case in the innovation category (i.e. TAXI case).

In addition, we classified our cases as either *goods* or *services* procurement based on whether they were listed as "service" or "good" in the corresponding tender documents. Notably, we identified the HOME HEALTH CARE case regarding the procurement of information technology solutions as "goods" because it involved the development of a technology integration platform. The LIGHTING and EYE cases were classified as "services" despite also involving the procurement of technologies associated with goods and being defined as "services" in the corresponding tender documents. The sample selection process allowed us to examine and compare dynamic capabilities and value outcomes in the context of goods or services and ordinary or innovative procurement cases. Surprisingly, the differences between product and service procurement were only moderate and related essentially to sensing capabilities. Thus, ordinary or innovative was used as the main attribute in comparing the cases.

3.2 Data collection

The primary data were collected through semi-structured interviews with public buyers and project managers with high levels of expertise in selected procurement cases. Collecting empirical data through interviews with multiple respondents not only ensures rich data, a variety of observations and diverse perspectives but also limits the bias inherent in

Table 2.
Overview of cases and data

Case	Brief description	Organi-zation	Schedule	Key objectives	Category	Case type	Procurement method	Total costs (approx.)	Interviews	Other data sources
FOOD	Food and ready meals as a joint regional procurement	City 1	2020–2021 (1 + 1 + 1 option)	Healthy and safe food meeting the strategic sustainability objectives set by the city in a cost-effective way	Goods	Ordinary	Open procedure, joint procurement	9,2 M€ (large ob.) And 5,6 M€ (small ob.)	A (Buyer)	Tender documents
FACILITY	Facility services and management for outdoor activities		2021	Safety of users and employment of local SMEs	Service	Ordinary	Open procedure, joint procurement	3 M€	B (Buyer)	Tender documents
HOME HEALTH-CARE	Remote services for home health care	City 2	2020–2021	Better quality and cost-effectiveness of home care services/Better productivity of care Uniform service availability in different regions	Goods	Innovative	Innovation partnership	750k€	C (Project manager) D (Development director) L (Planning manager) Y (Director, safety and security)	Tender documents, project reports and documentation
LIGHTING	A lighting control system		2020–2030	IoT platform for lighting steering and sensor technologies that produce open data to stakeholders	Service	Innovative	Competitive dialogue	3,5M€	V (Project manager) N (Senior business advisor) H (IT manager)	Tender documents, negotiation plan, project description report, article

(*continued*)

Case	Brief description	Organi-zation	Schedule	Key objectives	Category	Case type	Procurement method	Total costs (approx.)	Interviews	Other data sources
TAXI	Dynamic purchasing system (DPS) of taxi services	Health district 1	2021–2022 but DPS may last until 2030	Taxi services for people and transport of goods in a cost-effective way	Service	Innovative	Dynamic purchasing system (DPS), annual internal tendering process	20 M€	F (procurement manager)	Tender documents
ACCELERA-TOR	Technological solution for particle acceleration		2021	Good quality linear accelerator	Goods	Ordinary	Open procedure	2,3M€	G (Buyer)	Tender documents
PERSONAL ASSISTANCE	Personal assistance service for people with disabilities		2021–2023 (1 + 1 option)	Personal assistance service and evaluation service of its need	Service	Ordinary	Open procedure, framework agreement	11 M€	P (Buyer)	Tender documents, contract model
EYE	Technological solution for ophthalmological care and evaluation	Health district 2	2020–2022	Better cost-effectiveness of care Better fit between care and client needs	Service	Innovative	Innovation partnership, joint procurement	330k€	E (Project director) K (Project manager)	Tender documents

Source: Table created by authors

Table 2.

interviews (Eisenhardt and Graebner, 2007). As the procurement cases were variously resourced (i.e. ordinary vs innovative), the roles and number of identified interviewees differed between the cases. For example, to achieve data saturation in the case of innovative procurement, more interviews and secondary data were needed to gain a deeper understanding of the complex processes associated with this procurement category. During the interviews, the informants were first asked to describe their responsibilities, after which comments were elicited about the specific procurement case. This was followed by a more focused question on the dynamic capabilities adopted by their organization and how those capabilities were related to value creation. The interviews were conducted virtually by two researchers, digitally recorded and transcribed. The interview data were supplemented with notes from the interviews, tender documents and other secondary materials. Table 2 presents the full list of interviews in each case.

3.3 Data analysis

Qualitative content analysis was used to examine the data obtained by the three researchers. Two researchers manually coded all the data through text editor. Thereafter, one researcher used NVivo software to identify in-case conceptual patterns across the interviews and secondary documents and aggregated the coding performed by others for implementation into the software.

In this article, capability is deemed dynamic in reference to the "capacity of an organization to purposefully create, extend, or modify its resource base in a practiced and patterned manner" (Helfat *et al.*, 2009, p. 4; Schilke *et al.*, 2018). Helfat *et al.* (2009, p. 4) describe the resource base to include "tangible, intangible, and human assets as well as capabilities which the organization owns, controls, or has access to on a preferential basis". Dynamic capabilities are characterized by three dimensions: sensing, seizing and transforming (Teece, 2012). We placed the first-order codes relating to capabilities within these dimensions, which were labeled by the researchers. The resulting coding tree of dynamic capabilities is presented in Appendix and in a codebook in the supplementary files ("Coded"). After coding the capabilities, we coded the relationships between them and public value. The value categories were set based on the public procurement value components derived from the literature (Table 1). A capability was linked to a value component if the text fragment from the interview mentioned this relationship. In the cross-case analysis, we compared capabilities and public value across the cases. Our generalization logic was not based on a large sample but on a cross-case analysis that added degree of abstraction and theorizing opportunities (Leavy, 2014). The cross-case analysis was based on comparisons between innovative and ordinary cases and goods and services. As dynamic capabilities and public value did not differ significantly between the services and goods, our reporting emphasized cross-case differences in innovativeness. Our reasoning modifies the theory of dynamic capabilities in public procurement by reconciling it with contextual idiosyncrasies, thereby making the analysis process mainly abductive (Ketokivi and Choi, 2014).

4. Findings

4.1 Value components

All the various value components in Table 1 were manifested in the interviews. Public procurement process effectiveness consists of transparency, error reduction, promotion of organizational learning and compliance in supplier selection. For example, it was mentioned that the tendering process enables similar centralized contracts for all service providers. This means that people who direct services to customers can easily acquire information about what the service includes and match the service need of the customer with the service

provided (PERSONAL ASSISTANCE). The development of well-functioning supplier markets creates stability and economic activity. Other organizations and companies can likewise be used as knowledge sources. For example, the suppliers were asked to describe how they aimed to create an ecosystem that encourages new and small companies to participate in the platform (HOME HEALTH CARE). The role of buyers in innovation generation and promotion was visible, especially in competitive negotiation procedures where suppliers and buyers could discuss the possibilities offered by technologies (LIGHTING). Environmental and social sustainability was a visible value whose aim was to reduce environmental impact in terms of energy savings and increased security (LIGHTING). Furthermore, some of the value components, such as the quality and availability of purchased products and services, were closely related to the expectations and satisfaction of users. Product and service quality and availability as a value were visible when the procurement target was related to health (FOOD) and accessibility (TAXI).

4.2 Sensing capabilities

In this section, we present the identified sensing capabilities connected to the value components of the research framework: a preliminary market analysis, listening to end users, synthesizing knowledge from substance experts and markets, sensing experience from previous procurement rounds, sensing other public institutions and using enterprises as knowledge sources (Figure 1). A cross in the figure describes an observed connection between a specific capability type and value objective in the specific case. The coloring differentiates between innovative and ordinary cases. The total numbers of identified capability–value objective connections in all the cases are presented as well.

A preliminary market analysis. The capability of a preliminary market analysis to investigate the market structure and identify well-functioning supplier markets was deemed essential for ordinary cases, whereas innovative cases applied such capability to investigate

		VALUE OBJECTIVES																					
SENSING CAPABILITIES	Ordinary cases	Public procurement process effectiveness				Well-functioning supplier markets				Innovation generation and promotion				Quality of product or service				Availability of product or service				Environmental and social sustainability				Innovative cases
A preliminary market analysis	ACCELERATOR	—	X			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			X	X			—	X			—	—			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	—			—	—			—	—			—	—			LIGHTING
	FOOD	—	—			X	—			—	—			—	—			—	—			—	—			TAXI
Listening to end users	ACCELERATOR	—	—			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			—	—			—	X			—	—			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	X			—	—			—	—			X	—			—	—			—	—			LIGHTING
	FOOD	—	X			—	—			—	—			X	—			—	—			—	—			TAXI
Using enterprises as knowledge source	ACCELERATOR	—	—			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			—	X			—	—			—	—			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	—			X	—			—	—			—	—			LIGHTING
	FOOD	—	—			X	X			—	—			X	X			—	—			—	—			TAXI
Sensing other public institutions	ACCELERATOR	—	—			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			—	—			—	—			—	—			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	—			—	—			—	—			X	—			LIGHTING
	FOOD	X	—			—	—			—	—			X	—			—	—			X	—			TAXI
Sensing experiences from previous procurement rounds	ACCELERATOR	—	—			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			—	—			—	—			—	—			X	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	—			—	—			—	—			—	—			LIGHTING
	FOOD	X	—			—	—			—	—			—	—			—	—			—	—			TAXI
Using substance experts	ACCELERATOR	X	X			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	X	—			—	—			—	X			—	—			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	X			—	—			—	—			—	—			LIGHTING
	FOOD	—	X			—	—			—	—			—	—			—	—			X	—			TAXI
Synthesizing knowledge from substance experts and from the supplier markets	ACCELERATOR	—	—			—	—			—	—			—	—			—	—			—	—			EYE
	PERSONAL ASSISTANCE	—	—			—	—			—	—			—	X			—	—			—	—			HOME HEALTH CARE
	FACILITY	—	—			—	—			—	—			—	—			—	—			—	—			LIGHTING
	FOOD	—	—			—	—			—	—			X	—			—	—			—	—			TAXI
		4	5			3	3			0	4			6	2			1	0			3	0			

Source: Figure created by authors

Figure 1.
Sensing capabilities

existing supplier offerings. Thus, both kinds of cases applied the preliminary market analysis capability, albeit with different foci.

In the EYE case, the interviewee described that they aimed to perform the preliminary market analysis well, which implies making "make or buy" decisions early and effectively, thereby avoiding engagement in unnecessary development projects and increasing the effectiveness of the overall public procurement process. In the same case, market analysis was conducted through a supplier survey to understand existing solutions. As no solutions were available, the analysis supported the innovation partnership procurement process as the information was then used to justify the inclusion of innovation elements in the procurement. Another starting point for market analysis was the determination of needs (HOME HEALTH CARE). Supplier market analyses also enabled the buyer to better use suppliers for specific needs that can be supportive of suppliers' market development (HOME HEALTH CARE). Public buyers can take even more direct actions that support well-functioning supplier markets, but they need to sense supplier markets to identify the market structure, including small enterprises and their drivers and barriers to participating in tendering (FOOD, PERSONAL ASSISTANCE).

The results regarding the ordinary cases presented aspects related to the market in the preliminary market analysis, such as sensing how centralized the market is and what this means for smaller enterprises (FOOD). An overly centralized market poses a risk to buyers due to insufficient competition among companies. One of the most important values identified by the suppliers was the positive effect of public procurement on supplier market development. The sampled organizations acknowledged local supplier growth as an important value for the city. Public procurement emphasizes the importance of supplier market knowledge accumulation achieved, especially through market dialogues (FOOD). The innovative cases did not mention aspects related to the market structure but emphasized further investigation of supplier offerings.

Listening to end users. The capability of listening to end users was emphasized in the planning phase of the innovative cases as potentially enabling innovation generation and promotion and procurement process effectiveness. Listening to end-user expectations was found to be important for procurement process effectiveness in the case of service procurement, possibly due to the nonstandard characteristics of services among end users. This capability was emphasized in the ordinary cases during the contract period and may contribute to product or service quality. The FOOD and FACILITY cases reported that they listened continuously to end users during the contract period and beyond through a systematic process of end-user reclamations related to quality improvements. In these ordinary cases, listening to end users was connected to contract monitoring rather than procurement planning.

Conversely, in the innovative cases, procurement process effectiveness increased when the needs of end users were prioritized, which ensured the right focus areas (TAXI, LIGHTING). For instance, taxi customers asked how several customers could share a taxi ride for safety issues. The public buyer could then identify this kind of customer feedback and respond to them during the planning phase. Listening to end users was emphasized more frequently in innovative cases than in ordinary cases as co-development with end users was aimed at innovation generation and promotion (HOME HEALTH CARE).

Using enterprises as knowledge source. The capability of using companies as knowledge sources was found to be equally important in both innovative and ordinary cases and in services or goods procurement because it contributed to well-functioning supplier markets and product or service quality. In the TAXI case, the public buyer had to learn about the abilities and IT readiness of taxi service providers to join a dynamic purchasing system (DPS) and thus have a good-quality taxi service and a well-functioning supplier market. The taxi drivers communicated their readiness to implement the DPS. However, many

service providers strongly resisted joining the DPS due to fears of increased competition. These dissenting providers united during a market dialogue organized by the public buyer, attempting to obstruct the establishment of the DPS. In the FOOD case, supplier firms could inform the buyer how novel criteria about nutrition matched the existing product portfolio. This information could ensure that the tender documents set reasonable goals for quality. In the FACILITY case, companies had the latest expert knowledge about EU directives on fire extinguishers, ensuring the quality of the fire-related specifications of the extinguishers and, consequently, the equipment.

In the case of HOME HEALTH CARE, the capabilities to understand supplier markets, economic issues and existing supplier performance were seen as important areas for improvement. The informants valued the courage of suppliers to make new openings that emphasized novel solutions or service concepts. The suppliers provided knowledge on how to build business models in a way that combines societal needs and business activities. This knowledge was deemed beneficial in avoiding problems regarding imprecise definitional requirements from buyers, which may cause potential suppliers to refrain from participating in tendering, for example, due to uncertainty relating to the resources required to serve customers at a certain price (HOME HEALTH CARE).

Sensing other public institutions. The capability of sensing other public institutions was emphasized more frequently in the ordinary cases as contributing to environmental and social sustainability, product or service quality and procurement process effectiveness. Training and exchange of experiences with other procurement units improved the procurement process (FOOD), making it more effective. The sensing of other institutions also took the form of context-specific guidance, for example, nutrition recommendations in the food supply or construction guidelines in facility services (FOOD, FACILITY), which contribute to improved product or service quality. Similarly, environmental and social sustainability was enhanced by following external guidelines relating to, for example, sustainable fish farming certification or criteria concerning working conditions in the food supply chain. These guidelines included aspects about quality of nutrition. These guidelines were received from a governmental company that provides consultations to public administration and municipalities (FOOD). Internal specialists of environmental impact were also consulted to advance these practices. In the FACILITY case, suppliers were obligated to hire long-term unemployed individuals to promote inclusivity, in line with national guidelines.

Sensing experiences from previous procurement rounds. The ordinary cases emphasized more frequently the capability of sensing experiences from previous procurement rounds in contributing to procurement process effectiveness and product and service quality and availability than did the innovative cases. Sensing experiences from previous procurement rounds helped in the case of PERSONAL ASSISTANCE to plan the cost structure in a new way, resulting in increased round-the-clock service availability and service providers for end users. Memories from previous rounds increased the effectiveness of FOOD's procurement process because it accelerated the planning process for tender documents. The same substance experts involved in previous tender rounds were capable of describing the pros and cons of the existing procurement cases and imprecisions in the tender documents (PERSONAL ASSISTANCE). If certain service providers participated in previous tender rounds but later ceased, then it is a negative signal (and potential threat) that the buyer should investigate further.

Using substance experts. The innovative cases demanded capabilities to use both internal and external substance experts to create multi-professional views of user needs, thereby contributing to innovation generation and promotion. The capability of sensing internal substance and legal knowledge contributed to public procurement process effectiveness in both the innovative and ordinary cases. Internal guidance on how to organize internal

substance knowledge and support for procurements was linked to public procurement process effectiveness (ACCELERATOR, PERSONAL ASSISTANCE, LIGHTING). For ACCELERATOR, the sensing of internal substance knowledge was based on a list of needs by substance experts, which made the procurement process more efficient in its first phases. Similarly, the PERSONAL ASSISTANCE informant emphasized organized ways of collecting substance knowledge and the resulting positive impacts on procurement process effectiveness.

Professionals who understand varying user needs may be the best substance experts for selecting solutions that provide sufficient economic outcomes. A procurement team was created for case-specific needs in several of the innovative procurement cases. Internal multi-professional collaboration contributed to product or service quality and worked toward cost-effective solutions (HOME HEALTH CARE). The centralized and multi-professional competencies of substance experts were valuable in responding to user needs and creating innovation (LIGHTING). The HOME HEALTH CARE informants maintained that the complex organization of procurements may complicate the multi-professional approach because of the potential difficulty identifying persons for specific needs. Therefore, they maintained that procurement needs should be determined by those who understand the service content, who should be responsible for procurement in its entirety. Consequently, the procurement function acted as an expert regarding the procurement process, legislation, and so forth. The need for a clear coordinator and contact point for each procurement was evident. The multi-professional approach was also complicated by the various "languages" (legislation, IT issues) of the experts (EYE).

Synthesizing knowledge from substance experts and supplier markets. Synthesizing knowledge from substance experts and supplier markets was equally important for the innovative and ordinary cases as it contributed to product and service quality. Determining procurement needs in the procurement planning phase is deemed a key driver of value (HOME HEALTH CARE, FOOD). However, quality failures in procurement often relate to unsuccessful needs determination. Procurement needs require substance knowledge of the items to enable realistic descriptions of the desired benefits, including current market performance (HOME HEALTH CARE). For example, two HOME HEALTH CARE interviewees emphasized product or service quality with sufficient market analysis; otherwise, the specification would fail. Although it is important to gather broad enterprise knowledge from markets, it has to be combined with knowledge from internal substance experts who, for instance, synthesize knowledge on environmental aspects or nutrition criteria (FOOD).

4.3 Seizing capabilities

In this section, we present the seizing capabilities connected to value components: seizing interaction with suppliers, seizing the tendering process, seizing tender specification and seizing tender attractiveness (Figure 2).

Seizing interaction with suppliers. The capability of seizing interaction with suppliers contributes to innovation generation and promotion and well-functioning supplier markets, and it was more frequently emphasized by the innovative cases. Wide-ranging supplier competencies were available through interaction, contributing to service quality (FACILITY). Interaction with suppliers included avoiding unnecessary dependence on them as they might otherwise neglect the needs of public buyers, for instance, in IT projects, and lower innovation value (EYE). Well-functioning supplier markets could be assured through the capability to gather supplier comments to tender drafts, potentially influencing their participation (TAXI, PERSONAL ASSISTANCE).

SEIZING CAPABILITIES	Ordinary cases	VALUE OBJECTIVES: Public procurement process effectiveness		Well-functioning supplier markets		Innovation generation and promotion		Quality of product or service		Availability of product or service		Environmental and social sustainability		Innovative cases
Seizing interaction with suppliers	ACCELERATOR	—	—	—	X	—	—	—	—	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	—	X	X	—	X	—	—	—	—	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	—	—	X	X	—	—	—	—	—	LIGHTING
	FOOD	—	—	—	X	—	—	—	—	—	—	—	—	TAXI
Seizing of tendering process	ACCELERATOR	—	X	—	—	—	X	—	—	—	—	—	—	EYE
	PERSONAL ASSISTANCE	X	X	—	—	—	X	—	—	X	—	—	—	HOME HEALTH CARE
	FACILITY	—	X	X	—	—	—	—	—	—	—	—	—	LIGHTING
	FOOD	—	—	X	—	—	—	—	—	—	—	—	—	TAXI
Seizing tender specification	ACCELERATOR	—	X	—	—	—	X	—	—	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	—	—	X	—	X	X	X	—	—	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	—	—	X	X	—	—	—	—	X	LIGHTING
	FOOD	—	—	—	—	—	—	X	—	—	—	X	—	TAXI
Seizing tender attractiveness	ACCELERATOR	—	X	—	—	—	—	—	—	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	X	X	X	—	—	—	—	—	—	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	X	—	—	—	—	—	—	—	—	LIGHTING
	FOOD	—	—	—	X	—	—	—	—	—	—	—	—	TAXI
		1	6	4	7	0	7	4	1	1	0	1	1	

Source: Figure created by authors

Figure 2.
Seizing capabilities

The ability to interact with suppliers may enable both parties to use their strengths and is especially important in innovative procurement. This interaction supports innovation generation and promotion through finding a balance between needs and offerings (HOME HEALTH CARE). Benefits for both parties need to be clear to enable fruitful collaboration. The innovative cases often applied contracts that included co-development, which required good negotiation skills and the ability to compromise (HOME HEALTH CARE). Various groups, such as the steering and project groups with recurring meeting practices, were used to improving supplier involvement and interaction (HOME HEALTH CARE).

Seizing the tendering process. The ability to break down the tender project to ensure well-functioning supplier markets was deemed more relevant for the ordinary cases. In contrast, the ability to plan the tendering process and apply the right methods to ensure public procurement process effectiveness and innovation generation and promotion was deemed more relevant for the innovative cases.

The EYE interviewee highlighted that public procurement should focus not only on bureaucratic activities but more on the main objectives of the procurement project. Notably, as the formal and complex process of carrying out procurement is difficult to change, the internal ability to communicate openly and effectively was deemed crucial for successfully implementing the procurement project (EYE). The tendering process included negotiation rounds (EYE, LIGHTING), which contributed to innovation generation and promotion. The capability of using various procurement methods can be enhanced by a mentor who can help apply novel methods for the first time (LIGHTING).

Public procurement develops markets for SMEs by dividing main purchases into smaller projects with independent tendering processes (FOOD, FACILITY), with nondiscrimination of firms deemed fundamental (FOOD). Larger projects can benefit from the capability to separate projects into smaller purchases based on financial and geographical components (FACILITY). Although the smaller projects attracted more offerings (as smaller companies can fulfill demand), it required more organizational resources from public buyers (e.g. extra effort in the planning stage and overall project coordination owing to a larger number of smaller partners). Procurement from local SMEs was prioritized when reasonable to reduce unemployment and facilitate business growth in the region (FOOD, FACILITY). Nevertheless, from the buyer's point of view, the ability to use centralized procurement where multiple service providers have the same terms of contract might lead to public procurement process effectiveness and better contracts (PERSONAL ASSISTANCE).

Seizing tender specification. The capability to seize a specification contributed to innovation generation and promotion in the innovative cases. This capability concerns performing specifications that respond to user needs but are not overly strict. The capability to seize a specification contributed to product or service quality in the ordinary cases and involved performing specifications containing desired product or service attributes.

Seizing tender specifications in tender documents and contracts was deemed an essential means to ensure value creation and potential risk reduction (FACILITY, FOOD, HOME HEALTH CARE, EYE). The careful use of obligatory requirements contributed to service quality (PERSONAL ASSISTANCE) but required monitoring and verification during the contract period (FOOD). Seizing tender specifications under clear sustainability requirements might also lead to supply-side innovation generation and promotion (LIGHTING). Furthermore, proactive actions capturing the emergence of urgent needs are essential in seizing tender specifications because of delays caused by the formal tendering process (FACILITY). Failure to seize specifications might complicate the whole process and cause delays, reducing public procurement process effectiveness (HOME HEALTH CARE).

Flexibility is also required in seizing tender specifications. Traditionally, detailed procurement content would be determined at the beginning, though some parts of the process would be difficult to predict. Nevertheless, when the cost of procurement needs to be clearly defined at the beginning, there is less room for subsequent changes. This created problems when changes were required. However, contracts are fixed instruments. FACILITY's informant highlighted the need to establish tendering projects that cover all aspects of the qualified service and to create flexible contracts for multiple suppliers. When innovations are sought, the starting definitions regarding the solution should not be overly detailed. Seizing tender specifications through flexibility also requires tolerance for uncertainty, trust, openness between partners and good collaboration (HOME HEALTH CARE, EYE). The informants of HOME HEALTH CARE and LIGHTING pointed to the multi-professional view of capturing user needs in specifications, which contributed to innovation generation and promotion and sustainability. EYE's informant maintained that seizing tender specifications involved reminders to other professionals, including the administrative side, to maintain focus.

Seizing tender attractiveness. The capability of seizing tender attractiveness contributes to well-functioning supplier markets and public procurement process effectiveness and does not depend on the item or service purchased or its innovativeness. Public buyers can have an impact on the level of visibility that the tender receives or how much suppliers focus on it beforehand and support well-functioning supplier markets (LIGHTING, HOME HEALTH CARE, PERSONAL ASSISTANCE). The public procurement process cannot be effective if potential suppliers fail to bid because of missing information or unattractive tender information (HOME HEALTH CARE, EYE). The buyer can even provide technical support to leave a bid if service providers have no previous experience of the tendering process (TAXI).

4.4 Transforming capabilities

Facilitating global impacts. The capability to create strategies that lead to global impacts was emphasized more frequently in the innovative cases as contributing to innovation generation and promotion and product or service quality ((Figure 3). In the case of HOME HEALTH CARE, the goal of the development of the supplier market was supported through external funding. The procurement enabled the creation of a new solution with broad market potential for the supplier because of its high scalability and its potential to be adopted in other healthcare sectors. In the case of EYE, there was also a scalable business

TRANSFORMING CAPABILITIES	Ordinary cases	VALUE OBJECTIVES: Public procurement process effectiveness		Well-functioning supplier markets		Innovation generation and promotion		Quality of product or service		Availability of product or service		Environmental and social sustainability		Innovative cases
Facilitating global impacts	ACCELERATOR	—	—	—	—	—	X	—	X	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	—	—	X	—	X	—	X	—	X	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	—	—	X	—	—	—	—	—	—	LIGHTING
	FOOD	—	—	—	—	—	—	—	—	—	—	—	—	TAXI
Smart measuring	ACCELERATOR	—	—	—	—	—	—	—	X	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	—	—	—	—	—	—	X	—	X	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	—	—	—	—	—	—	—	—	X	LIGHTING
	FOOD	—	—	—	—	—	—	—	—	—	—	—	—	TAXI
Transformation through integration	ACCELERATOR	—	—	—	—	—	—	—	X	—	X	—	—	EYE
	PERSONAL ASSISTANCE	—	—	—	X	—	X	—	—	—	—	—	—	HOME HEALTH CARE
	FACILITY	—	X	—	X	—	—	—	X	—	—	—	—	LIGHTING
	FOOD	—	—	—	—	—	—	—	—	—	—	—	—	TAXI
Facilitating suppliers to learn needs of public buyers	ACCELERATOR	—	—	—	—	—	—	—	—	—	—	—	—	EYE
	PERSONAL ASSISTANCE	—	—	—	—	—	—	—	—	—	—	—	—	HOME HEALTH CARE
	FACILITY	—	—	—	—	—	—	—	—	—	—	—	—	LIGHTING
	FOOD	—	—	X	—	—	—	—	—	—	—	—	—	TAXI
		0	1	1	3	0	4	0	6	0	3	0	1	

Figure 3.
Transforming capabilities

Source: Figure created by authors

solution that the supplier could diffuse. The supplier retained the rights to the solution, which supported its business development. Similarly, in the case of LIGHTING, the IoT platform was developed to enable further business opportunities for firms. This strategy of supporting wider market opportunities required openness and acceptance of errors by the public buyer during the development process.

In these innovative procurement cases involving transforming capabilities supportive of global impacts, targets related to service quality and availability for the public were clearly emphasized. For example, technology-supported home care services would increase the time available to serve customers (less need to travel) and more flexible times for contact nurses or doctors, thus increasing safety. Remote technologies may also support the prevention of health problems by transferring health data to professionals, for example, via distant monitoring of cardiac insufficiency (HOME HEALTH CARE). In the EYE case, an essential element of novelty in the new data-driven solution was the definition of an appropriate quality of care level at multiple eye clinics. However, quality-related issues still received too little attention, narrowing down to indirect aspects of the purchased offering, such as specific skills or competencies of suppliers (HOME HEALTH CARE).

Smart measuring. The capability of using smart measuring, which was deemed more important for the innovative cases, contributes to product or service quality or availability and sustainable public procurement. Smart measuring can occur during the contract period or procurement process. The EYE case had an exercise for potential suppliers during the tendering process to more concretely assess the service quality provided by providers. EYE also performed productivity measuring during the project and did not allow novel IT systems to slow down other activities in the eye clinics. In the LIGHTING case, the long-term calculation of energy savings reduced costs and contributed to sustainability targets. Overall, the smart measuring abilities were especially evident in the objective of cost-effective service provision. For example, the purchase of digital solutions may provide measurement information that supports the definition of appropriate levels of care for specific client needs and eventually improve the availability of care with limited resources (HOME HEALTH CARE).

Transformation through integration. The transforming capability to integrate data contributes to product or service quality. The transforming capability to integrate the actors of an ecosystem contributes to well-functioning supplier markets and innovation generation and promotion. It also featured more prominently among the innovative cases.

Innovation generation in the HOME HEALTH CARE and LIGHTING cases was linked to the creation of a technological solution with open interfaces for suppliers. It related closely to the idea of developing supplier markets by making the solution area open to all companies (often smaller ones), further enabling them to use similar solutions in other services and markets, both nationally and internationally. In these cases, flexibility can relate to both the solution itself and the suppliers involved, that is, flexibility in creating the ecosystem for service provision.

Sometimes, organizational structures or silos hinder innovation projects that combine resources from multiple but distinct functions; however, integration capabilities support innovation generation and promotion (HOME HEALTH CARE). Similarly, the capability to integrate previously fragmented data sets contributes to product or service quality through optimization and public procurement process effectiveness (LIGHTING). In the EYE case, previously fragmented patient data sets were successfully integrated when predefined data structures came into use. Common data structures in the tools used were enabled by a centralized procurement process at multiple eye clinics (EYE). This enabled advanced measurement, which supported service quality and availability (EYE).

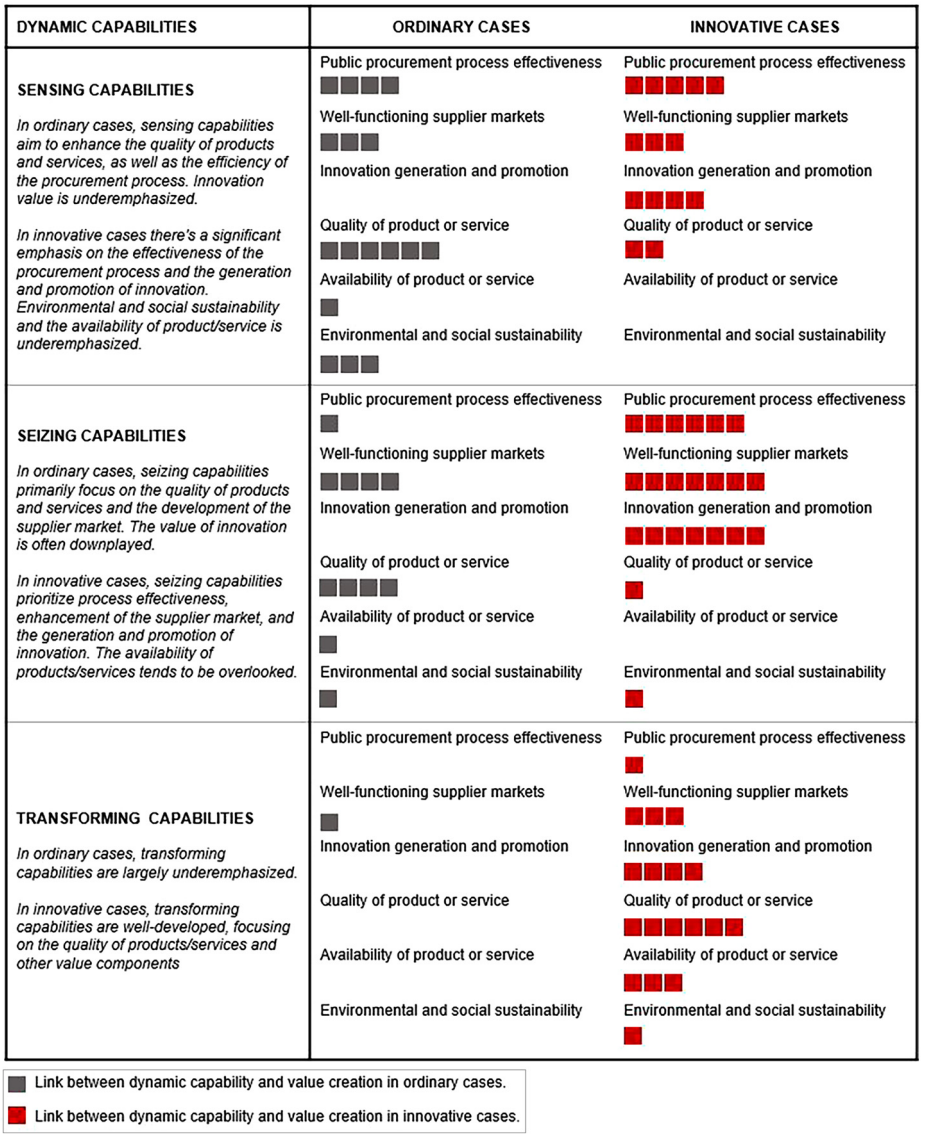
Facilitating suppliers to learn the needs of public buyers. The transforming capability to direct markets toward the long-term needs of buyers contributes to well-functioning supplier markets and featured more prominently among the ordinary goods cases. Public procurement can be considered a relatively secure and predictable partner by the supplier; thus, suppliers may avoid additional risks and allocate more resources to production (FOOD). When suppliers learn the needs and preferences of a public buyer, there is an on-going, long-term development toward the needs in supplier offerings (FOOD). We interpret this as buyers being able to influence this development through their own actions.

5. Discussion

5.1 Summary of findings

The summary of findings is illustrated in (Figure 4 and will be elaborated in the subsequent section. The summary was developed based on the observed relationships between dynamic capabilities and value components in both ordinary and innovative public procurement cases, as depicted in Figures 1–3. The summary illustrates how specific dynamic capabilities, namely, sensing, seizing and transforming, influence the value components in the two types (i.e. ordinary and innovative) of procurement cases. Figure 4 shows connections rather than the strength of the relationships due to the qualitative research approach.

In Figure 4, ordinary cases clearly exhibit a more limited connection between various dynamic capabilities and value components compared to innovative cases. Dynamic capabilities in ordinary cases tend to contribute to the quality of the product or service and the effectiveness of the procurement process. While a notable relationship exists between sensing and seizing capabilities and value creation, transforming capabilities seldom lead to value creation in ordinary cases. This suggests that when dealing with ordinary procurement, public buyers rarely approach them as opportunities for transformation, such as reshaping the supplier market or achieving environmental sustainability. This finding is of concern, as the majority of procurement cases are usually ordinary and expected to deliver societal value, which also requires transformation. This result underscores the need for a paradigm shift in public procurement practices to ensure that every opportunity, whether ordinary or innovative, is leveraged for maximum societal benefit with the help of dynamic capabilities.



Source: Figure created by authors

Figure 4.
Summary of findings regarding successful value creation

Contrary to ordinary cases, the dynamic capabilities used in innovative procurement cases frequently lead to various types of value creation. As anticipated, values such as innovation generation are prominently observed in our findings. However, innovative cases use dynamic capabilities not just for generating innovation but also for developing the supplier market, enhancing procurement process effectiveness, and more. Transformation

capabilities, in particular, are leveraged to refine product and service quality, create innovative value and evolve market dynamics.

5.2 Theoretical implications

By adopting the dynamic capability view and its dimensions (sensing, seizing and transforming) (Teece, 2012), we examined the necessary capabilities for shifting public procurement aims toward broader public value benefits. By doing so, we sought to contribute to discussions on dynamic capabilities in public procurement. We addressed the need to explore the conditions under which the different capabilities lead to different types of value, thereby also considering various degrees of innovativeness that might be inherent to a service/good being purchased (Holma *et al.*, 2022; Santos and Cabral, 2022). The lack of existing research on the differences between innovative and ordinary procurement cases in the context of capabilities has previously been identified as a research gap (Holma *et al.*, 2022).

Public procurement process effectiveness. The capability to memorize previous procurement rounds contributed to purchasing process effectiveness, which was found to be meaningful for the ordinary cases. In line with this, Santos and Cabral (2022) discussed knowledge management capability, including lessons learned and knowledge codification, as employee turnover is inevitable. They found that the lessons learned contributed to bid and contract management capability, which is comparable to the value of purchasing process effectiveness. Similarly, using substance experts in an organized way has a strong link to process effectiveness. The capability of listening to end users ensured the right focus areas and, consequently, process effectiveness in innovative cases. It was likewise previously connected to other types of value, especially usability (Torvinen Ulkuniemi 2016). In addition, our findings show that the innovative cases could add process effectiveness by seizing the tendering process (e.g. planning and right methods) and its attractiveness. These capabilities are necessary to reach transparency and an adequate number of bids.

Well-functioning supplier markets. We found that the sensing capability of preliminary market analysis was connected to well-functioning supplier markets, especially in the ordinary cases. This outcome seems to be explained by the contractual continuity of the ordinary cases under scrutiny. An appropriate contract size and duration fit the market structure, previously reported as a barrier to firms if sensing fails (Edler *et al.*, 2015; Uyarra *et al.*, 2014). The capability of using enterprises as knowledge sources contributed to well-functioning supplier markets since the current conditions of suppliers in terms of their offerings and capabilities would otherwise remain unknown. Holma *et al.* (2022) understood this inquiry as a component of interactive capabilities because knowledge is transferred in interaction and used in forming requests for quotations regarding public procurement. Similarly, seizing interaction with suppliers is connected to well-functioning supplier markets because neglecting their viewpoints and incentives could negatively impact their interest to participate.

In the ordinary cases, the capability of seizing the tendering process was connected to well-functioning supplier markets. There are multiple tendering practices that favor supplier markets that direct the business activities of SMEs toward the public sector (Flynn and Davis, 2016), and we found that the ordinary cases held the key role in this matter. The capability of seizing tender specification was similar to that of bid and contract management, which has previously been connected to increased levels of collaboration and trust (Santos and Cabral, 2022). The capability of seizing tender attractiveness impacts the participation of suppliers and, in turn, well-functioning supplier markets. This connection is an important addition to current literature about public procurement capabilities. Facilitating suppliers to learn the needs of public buyers and the capability to direct this

progress is similar to that of shaping markets over time (Miller and Lehoux, 2020), leading to well-functioning supplier markets.

Innovation generation and promotion. Our findings show that the capability of seizing interaction with suppliers contributed to innovation generation and promotion. The seizing of interaction with suppliers is closely connected to the skill of organizing interactions with suppliers (Holma *et al.*, 2022); as a result, the buyer can use the strengths of suppliers for innovation generation. There is more balance between buyers' needs and existing technologies because of interaction capabilities. The interactive capability of public buyers has previously been connected to successful market dialogues and the use of enterprise knowledge in preparing tender documents (Holma *et al.*, 2022). Seizing the tendering specification and process was connected to innovation generation and promotion in innovative cases. The tendering process should support interaction between buyer and suppliers, for instance, in negotiation rounds.

As an important addition to previous knowledge, we found that transforming capabilities featured mainly among the innovative procurement cases. The capability of facilitating global impacts changes the existing mode of operation, which results in innovation generation and promotion or better knowledge about quality. This capability can be compared to catalytic procurement, where the public buyer acts to "catalyse the development of innovations for broader public use" (Edquist and Zabala-Iturriagagoitia, 2012, p. 1759) rather than only fulfilling its own mission. Transformation through integration is a capability that we interpreted as being closely related to catalytic procurement outcomes (Edquist and Zabala-Iturriagagoitia, 2012).

The capability to use substance experts is linked to innovation generation and promotion in our findings. Assessments of needs and innovation-oriented procurement may be hampered by a lack of technical skills in procuring organizations (Uyarra *et al.*, 2020). This can be interpreted as a lack of capability to use substance expertise, which typically relates to the core content of a public product or service.

Quality and availability of product or service. The capability to synthesize market and substance knowledge balances the internal needs and existing quality or performance of services and goods in the market. Without this synthesis, we argue that a buyer lacks specification ability, with the description of the service quality remaining weak (Holma *et al.*, 2022). The capability of listening to end users was connected to innovativeness and customer satisfaction regarding quality, which is a similar finding to that of Torvinen and Ulkuniemi (2016). Nevertheless, there was a subtle difference as the ordinary cases listened to end users because of quality, whereas the innovative cases did so because of innovation promotion.

Transforming capabilities such as facilitating global impacts, smart measuring and transformation through integration are linked to quality and availability of product or service. In our findings, quality or availability improvements happened because of novel ways of doing, even if the resource base remained almost the same. Clausen *et al.* (2020) described how buyers' changes in resource allocation and building of new thinking are necessary for value for society, especially in the context of transforming capabilities.

Environmental and social sustainability. The capability of sensing other public institutions was clearly connected to the ordinary cases rather than the innovative ones: a recurrent procurement of goods or services enabled the dispersion of general instructions. We found that sensing other public institutions impacted environmental and social sustainability. Such sensing has previously been recognized in the context of collaborative procurement, where knowledge sharing has contributed to purchasing process effectiveness and product or service quality (Schotanus *et al.*, 2011). In general, the innovative cases might have also sensed other institutions and reached value benefits by doing so; however, we did

not observe this from our data. Rainville (2016) found that environmental impact was reduced by shared standards between procuring organizations. The capability of seizing tender specification is linked to environmental sustainability since a buyer's demand is a driver for environmental product innovations (Krieger and Zipperer, 2022).

5.3 Managerial implications

Strategic management of public procurement requires sensing, seizing and transforming capabilities to provide public value. While the training of individuals is a noteworthy action, many of the dynamic capabilities found in this research require the empowering of procurement units as a whole, similar to the proposal of Miller and Lehoux (2020). In particular, the application of transforming capabilities is a resource-intensive activity that often demands capabilities such as strategies aimed at global impacts and transformation through integration.

An important implication for managers is that innovative and ordinary procurement cases require different sets of dynamic capabilities. The set of capabilities featured in the innovative cases was more extensive and included transforming capabilities. Nevertheless, some capabilities contributed to public value irrespective of the kind of procurement case (innovative or ordinary). For example, the effectiveness of procurement can be improved by using substance experts and seizing the tendering process in accordance with the procurement target. In terms of creating a supplier market and ensuring the quality of products or services, market analyses are important, as well as adequate breakdowns of offers and direct interactions with companies.

Dynamic capabilities allow procurement to be more responsive to demands for innovative solutions (di Mauro *et al.*, 2020) and create additional value for suppliers through market development. For this reason, we emphasize the capability of directing suppliers' progress in learning the needs of buyers and shaping markets. Seizing capabilities is managerially important for well-functioning supplier markets, even though the base for market understanding is created through sensing capabilities. Market development directly benefits focal public organizations when competition increases and strengthens the market.

Procurement managers must balance different forms of value creation; for instance, in our data, the creation of environmental and social value through dynamic capabilities was limited in innovative cases. This result could suggest that there is a predominant emphasis on more immediate forms of value creation, potentially overshadowing the longer-term benefits of environmental and social considerations. Such a trend, if not addressed, could lead innovative procurement to miss out on holistic, sustainable development, which is essential for future resilience and superior value creation for society.

6. Conclusion and limitations

This study explains how dynamic capabilities contribute to public value creation (Obwegeser and Müller, 2018; Patrucco *et al.*, 2017). Drawing from multiple procurement cases, we found the connections of capabilities to public value. We found that various dynamic capabilities are needed depending on procurement type. In addition to single capabilities and value connections, it is important to acknowledge that dynamic capabilities also work in unison to pursue different value benefits. Sensing and seizing capabilities, such as using substance experts and seizing the tendering process, are central when the aim is public procurement process effectiveness. Innovation generation and promotion especially benefit from sensing and seizing capabilities, such as preliminary market analysis and seizing interactions with suppliers. The various forms of dynamic capabilities all support the aims of creating well-functioning supplier markets and achieving superior quality.

However, this study has limitations that point to suggestions for further research. We focused on dynamic capabilities for value creation, but other types of resources, processes and organizational cultures could have an impact on value components as well (Meehan *et al.*, 2017), especially when moving beyond value creation toward sustaining public value. We connected capabilities and value components in our analysis when the interviewees mentioned them together. There is also a possibility of capability–value component pairs that were not present in our cases. For instance, aside from the dynamic capabilities already identified in this study, there might be other capabilities that enhance environmental and social sustainability. Our contribution is based mainly on interview data, and although there were secondary data, such as tender documents and reports, we used these more for supportive purposes, which limited the comparison between data sources. This case study was aimed at theory elaboration in a range of case contexts. It is important to note that we focused in our research only on successful cases of value creation and did not include unsuccessful cases. Hence, as in many other case studies, the degree of generalizability remains to be determined in further studies. Thus, future research could test the findings through a quantitative study. The role of dynamic capabilities in the quest for sustainability benefits might be an interesting avenue for future research.

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Further reading

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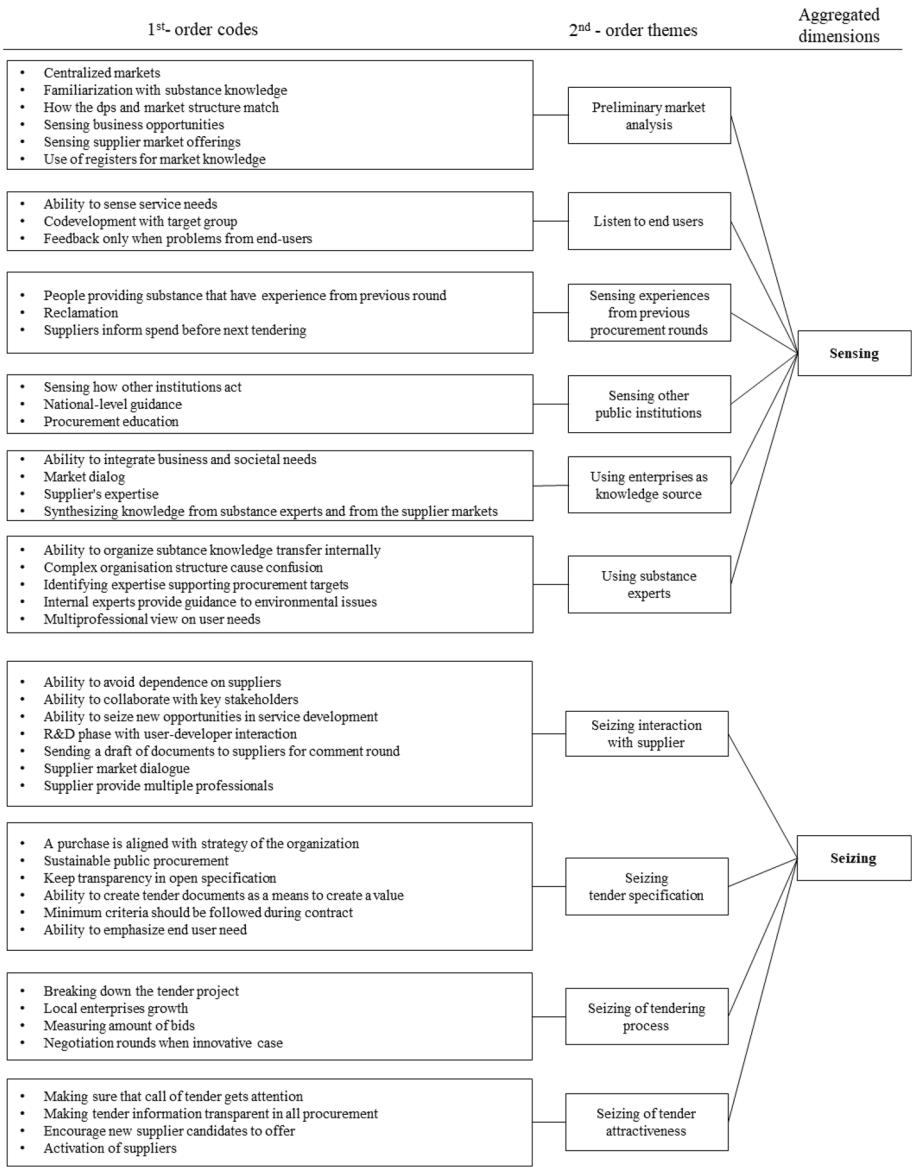
Appendix



(*continued*)

Figure A1.
Coding tree

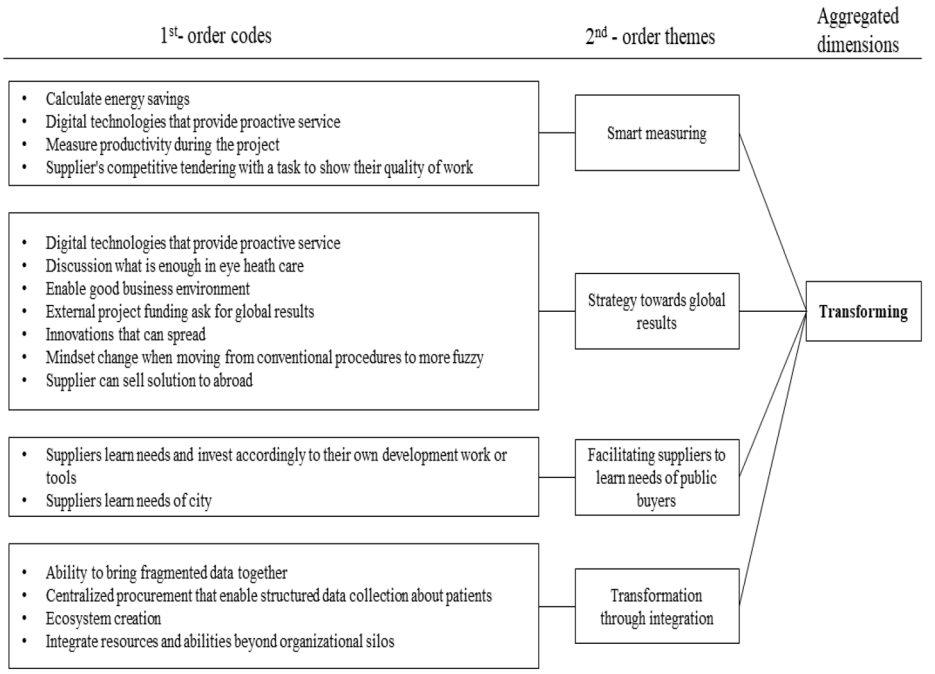


Figure A1.

Source: Figure created by authors

	Definition	Reference
Sensing		
a preliminary market analysis	A buyer's capability to analyze supplier market	(Clausen *et al.*, 2020)
Listen to end users	Capability to gain need related knowledge from end users of procured goods/services.	end-user engagement (Torvinen and Ulkuniemi, 2016)
Synthesizing knowledge from substance experts and from the supplier markets	A capability to synthesize substance and supplier market knowledge	(Clausen *et al.*, 2020)
Sensing experiences from previous procurement rounds	A capability to sense experience from procurement history	lessons learned (Santos and Cabral, 2022)
Sensing other public institutions	A capability to sense other public organizations and their practices	Use of external knowledge (Clausen *et al.*, 2020)
Using enterprises as knowledge source	A capability to receive external knowledge from enterprises	(Clausen *et al.*, 2020)
Using substance experts	A capability to access and integrate product/service related substance knowledge to the procurement process, both internally within the buyer organization and externally	knowledge scanning (Brandon-Jones and Knoppen, 2018)
Seizing		
Seizing tender attractiveness	The buyer's capability to create tender that is appealing to suppliers	N/A
Seizing tender specification	The buyer's capability to form tender specifications which fulfils their key objectives	description and specification ability (Holma *et al.*, 2022), specification (Santos and Cabral, 2022)
Seizing interaction with suppliers	The skills and knowledge regarding interaction with suppliers	interactive capability (Holma *et al.*, 2022)
Seizing of tendering process	The buyer's capability to design and implement tendering processes to fulfil their key objectives	The bid and contract capability (Santos and Cabral, 2022)
Transforming		
Facilitating suppliers to learn needs of public buyers	A capability to direct the markets towards buyer's needs in the long term	demand ability (Holma *et al.*, 2022)
Facilitating global impacts	A capability to create strategy that leads to global impacts for businesses and societies	policy coordination capabilities (Kattel and Mazzucato, 2018)
Transformation through integration	Capability to facilitate integration of technologies or stakeholders	innovation capabilities (Clausen *et al.*, 2020)
Smart measuring	Capability to integrate measurement to both procurement process and the use of procured goods/services	N/A

Source: Table created by authors

Table A1.
Additional file: "Coded"