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Recent research on public procurement: Should it become a subfield of public administration?

Abstract: This article presents a descriptive review of public procurement research conducted between 2010 and 2018 based on the coding of a sample of 743 relevant articles. We use the results to build a case for making public procurement a subfield of public administration research. We first present a systematic framework for studying public procurement that lays the ground for the coding strategy. Second, we outline the scope and method of the research, and then describe our findings regarding the most important topics, journals and authors in the recent literature on public procurement. Finally, we suggest how to improve the visibility and relevance of public procurement research in public administration journals.

Sommaire : Dans cet article, nous présentons un examen descriptif de la recherche sur les marchés publics menée entre 2010 et 2018, en fonction du codage d'un échantillon de 743 articles pertinents. Nous utilisons les résultats pour établir des preuves en faveur de faire des marchés publics un nouveau champ d'études de la recherche sur l'administration publique. Nous présentons tout d'abord un cadre systématique d'étude des marchés publics qui propose une stratégie de codage. Ensuite, nous donnons un aperçu de la portée et de la méthode de la recherche, avant de décrire nos résultats concernant les sujets, les revues et les auteurs les plus importants dans la littérature récente sur les marchés publics. Enfin, nous suggérons comment améliorer la visibilité et la pertinence de la recherche sur les marchés publics dans les revues d'administration publique.

Introduction

In the last few years, many scholars have surveyed the field of public procurement (PP) using various methods (Flynn and Davis 2014; Koala and Steinfeld 2018; Lange et al. 2014; Patrucco et al. 2017; Trammell et al. 2020). Their research provided significant insights about why and how PP has been studied until now. Nevertheless, most of these reviews were limited by methodological choices made consciously by the authors, namely the choice to analyze articles from only one journal: the *Journal of Public Procurement* (JPP).

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This article is a descriptive review that seeks to map out the field of peer-reviewed research on PP across academic journals. Unlike previous studies, this review does not only look at PP's maturity in terms of theorization, but also confirms a fragmentation problem in PP studies, whereby the most influential research is published neither in the JPP nor in public administration journals, but rather in journals from other fields (e.g., urban planning, environmental studies or economics), where it is treated as a one of many policy instruments aimed at achieving strategic or socioeconomic goals. Even in public administration journals, PP remains a marginal topic at best (Trammell et al. 2020).

We contend that, like policy analysis or human resources management, PP should constitute a subfield of public administration of its own. The first reason is linked to the importance of PP in the day-to-day activities of governments. Indeed, PP spending accounts for 12% of the GDP of OECD countries and thus constitutes "a core administrative function of public organizations" (McCue et al. 2020: 2). The second reason is that, consequently, PP is slowly becoming more professionalized with the identification of a "body of knowledge" of specific competences and abilities (McCue et al. 2020), which constitutes a reason to study it critically. Finally, the third reason, is that several review articles have, in the last two decades, pointed to the need for a consolidation of the growing academic literature on PP.

Furthermore, in a more practical way, the COVID-19 pandemic and the race to acquire medical equipment and vaccines have highlighted the importance that PP plays in our societies, as well as the strategic and operational roles of governments in ensuring the functioning of supply chains. The growing reliance on private sector suppliers in providing public services and infrastructure also underlines the importance of establishing procurement governance frameworks and developing contract management competencies in the public service. Policymakers require informed research, which this article aims at surveying.

The article is divided into four sections: the first section presents a systematic framework for studying PP that lays the ground for the coding strategy; the second section presents the scope and method of the research; the third section describes the results of the descriptive review; and the fourth section makes suggestions to improve the visibility and relevance of PP research in public administration journals.

Literature review

In this first section, we define PP, introduce a four-level framework for understanding its many facets, and review the contribution of previous review articles.

Framework for understanding public procurement

PP is essentially the implementation of an executive-branch decision to acquire goods or services from the private sector, though this definition is ambiguous and tends to vary between scholars (McKevitt et al. 2014; Prier and McCue 2009) and practitioners (Schapper et al. 2006; Snider and Rendon 2008). For the sake of clarity, we use the OECD's definition:

Public procurement refers to the purchase by governments and state-owned enterprises of goods, services and works. As public procurement accounts for a substantial portion of the taxpayers' money, governments are expected to carry it out efficiently and with high standards of conduct in order to ensure high quality of service delivery and safeguard the public interest (OECD n.d.).

PP must therefore be understood as a process that extends beyond the contract's signature and that includes legal, administrative, and political elements. It also brings together, through formal and informal links, many private and public sector actors (Roman 2014).

When describing procurement systems, the research distinguishes between: 1) objectives (normative performance criteria); 2) external environmental elements (including laws and regulation, institutions, market forces, political pressures, professionalization and ethics); 3) structures; and 4) managerial processes. Conceptually, each element contributes to our understanding of PP.

Objectives

The practice of PP can be described as an attempt to reconcile three objectives: value-for-money, due process and overall policy coherence (Schapper et al. 2006). Goods and services must be acquired at the right price (value-for-money), while respecting the law and regulations (due process) and in a way that is consistent with the government's goals (overall policy coherence). Most procurement legislation will rely on a set of principles that can be classified into one of these three objectives (e.g., transparency, affordability, equal access, evidence-based needs justification). For example, the Canadian Financial Administration Act (article 40.1) mentions that "the Government of Canada is committed to taking appropriate measures to promote fairness, openness and transparency in the bidding process for contracts."

Environment

For Thai (2001), the PP environment¹ is characterized by five elements:

1. Economic conditions where goods and services are exchanged, with the government acting as a buyer and the private sector acting as a supplier.

2. A legal environment where economic activities are subject to government regulation.
3. A political environment where governance is shared between democratic actors having different interests, influencing procurement decisions through formal and informal means.
4. A social environment where citizens and civil society institutions participate and provide oversight for procurement decisions being made.
5. International trade agreements that constrain governments into opening their markets.

In a more recent text, Thai (2017b) argues that PP's environment is becoming increasingly complex because it involves tensions between global trade agreements and national socioeconomic objectives and because maximizing competition between bidders has been interpreted as the best way to achieve fairness and equity. He also argues that this increased complexity can also be seen in the politicized nature of PP. Indeed, many stakeholders (individuals, private sector firms and trade associations) are actively involved in PP:

Having various interests, objectives and beliefs, interest groups are involved in the public procurement system in several ways such as lobbying legislative bodies to pass or alter procurement statutes, influencing implementation of these statutes, and influencing budget authorization and appropriations processes. Normally, a government program that is eventually adopted is a compromise among different views of interest groups, policy makers and management (Thai 2017b: 4).

Schapper et al. (2006) nevertheless warn that political interference should not be confused with legitimate political representation and that PP specialists must juggle many conflicting objectives, including good governance and contractual performance.

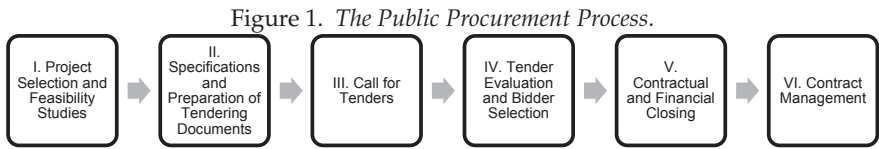
Structures

Thai (2001) also suggests that PP systems are composed of four types of structures²:

1. A set of procurement laws and regulations generally aimed at ensuring due process.
2. PP organizations centralizing procurement know-how and ensuring oversight of tenders.
3. A PP workforce competent at undertaking procurement projects and managing contracts.
4. Processes and methods aimed at systematizing the way procurement projects are undertaken.

Processes

With regard to the PP process, Snider and Rendon (2008) use systems theory to describe the way in which a procurement process operates. Like any



Source: Hudon and Garzón (2016).

general system, a procurement system relies on an input/output/feedback loop design (Easton 1953) that aims at converting executive-branch demands for goods and services into acquired goods and services. The steps (subsystems) involved in PP are generally fairly standard across jurisdictions and are shown Figure 1.

Overview of public procurement research through review articles

A few review articles published in the last two decades paint a very detailed portrait of the evolution of PP research. This evolution can be broadly divided into three phases: phase 1 (2000-2009), which defined and conceptualized PP; phase 2 (2010-2019), which evaluated the level of theorization of PP; and phase 3, which just began and tries to legitimate PP as a subfield of public administration.

In the first phase, work focused on the definition of general concepts and boundaries of the field. The objective was both practical (to clarify the proper role and responsibilities of PP practitioners) and theoretical (to identify the most important concepts of PP and to define their boundaries).

Thai's (2001) contribution is considered as a starting point,³ and his approach of PP as a "nested structure of systems within systems" (2001: 40) is still the predominant view. A second contribution in the first research phase was Prier and McCue's (2009) work. To address what the authors considered the limitations of a muddled definition of PP and ill-defined boundaries, they proposed the following conceptual definition: "PP is the designed legal authority to advise, plan, obtain, deliver, and evaluate a government's expenditures on goods and services that are used to fulfill stated objectives, obligations, and activities in pursuant of desired policy outcomes" (p. 329). Furthermore, Prier and McCue (2009) proposed a conceptual framework to classify PP based on important elements: 1) the legal basis for practitioners' activities; 2) the organizational and structural boundaries of activities; and 3) the intended outcomes of the practice used in the pursuit of governmental obligations.

In the second phase, review articles focused on evaluating the state of the literature by examining the role of theory in PP research and by providing insight and suggestions for future research.

A first contribution was Lange et al.'s (2014) work. The authors' purpose was to conduct a systematic review of the most influential literature in the highly fragmented PP field because "a clear synthesis is still lacking, which in turn inhibits the establishment of a clear body of knowledge" (p. 1). A second contribution was Flynn and Davis's (2014) work, which presented a systematic review to "map and address the existing intellectual territory" of PP research (p. 142). A third contribution by Patrucco et al. (2017) provided a structured review of research topics and identified the main gaps in the existing literature using content analysis. Table 1 presents a synthesis of the key insights found in the second phase of research.

We also conjecture that we have now entered, with the publication of this review article as well as Trammell et al.'s (2020), into a third phase which involves legitimizing PP research as a specific subfield of public administration research. This third phase is happening simultaneously to a practical legitimization effort, through which practitioners are looking for recognition and during which a differentiated set of skills is being identified in the hope of making PP a recognized profession (McCue et al. 2020). It is with advocacy in mind that we undertake this thorough analysis of the state of PP research across journals and research fields in the last decade.

Scope and method

In this section, we describe the link between our preoccupation with contributing to the consolidation of PP research and the scope, format, and methodology of our descriptive review. We also describe the method used in selecting which articles to review, in developing a code list and in coding and analyzing the data.

Scope

In this descriptive review, our aim is to describe the current state of peer-reviewed research on PP across academic journals and across disciplines. Specifically, we would like to answer the following questions:

- Which topics and themes are most/best represented in the academic literature?
- Who are the most important authors?
- What are the most important journals?
- Which disciplines and theoretical frameworks are most often used?
- Which empirical verification strategies are the most used?
- Which economic sectors and countries/regions are the most studied?
- What are the theoretical and empirical "holes" in the current research?

Table 1. *Insights from Existing Review Articles*

Publication Status	<ul style="list-style-type: none"> • The yearly number of publications has been constantly increasing since the end of 1990s, showing an increased relevance of the field. • The high number of individual authors and the high number of journals in which the papers are published highlight the cross-disciplinary character of PP research.
Strategic Research and Methods	<ul style="list-style-type: none"> • There is a relative lack of theoretical underpinnings in PP research; but this finding should be nuanced by the fact that papers attempt to contribute to the theoretical enrichment. • Empirical methodologies predominate, particularly case studies and surveys, which points to the highly practical nature of PP research. • Literature reviews are also often neglected, making it difficult to pool findings or to apply them to further analyses. • Qualitative and quantitative methodologies are applied almost equally often.
Theories Used and Dominant Disciplines	<ul style="list-style-type: none"> • Where articles were found to be theoretically grounded, the most common theories were auctions and competitive bidding theory, principal-agent theory, contract theory, transaction cost economic theory and general systems theory. In sum, the field of economics is the one that contributes the most to the theorization of PP. • Apart from economics, the other disciplines on which PP research is based are sociology, management, and psychology; if economics still dominate, management theory is clearly increasing in use during the most recent years. • Findings showed that research in PP is theoretically eclectic.
Focus of PP Research	<ul style="list-style-type: none"> • High variability in research topics was observed. • A large proportion of articles reviewed focused on PP strategy and goals, PP processes, and PP performance; only a small proportion of articles focused on PP organizational design, PP processes and tools and PP environment. • A consistent shift towards more specific themes is observed: topics such as ethics and sustainability, social, environmental, and economic impacts of PP are attracting more researchers in recent years. • With regard to PP processes, operational activities (supplier selection and bid evaluation criteria, negotiation and awarding, and contract management activities) have been deeply debated, and strategic activities (budget and demand management, requirement definitions, and supplier scouting and bid design) have been neglected; that seems to be consistent with the perception that PP is a "practical" discipline. • E-procurement has been considered a "hot" topic since the early 2000s. • Surprisingly, not many articles on PP organizations and structures exist, and only a few address the topics of centralization and organizational design activities directly. • Micro-organizational topics were more common: competences, training programs, resource specialization, behaviour and trust, and knowledge management. • Some research on PP performance considered cost, quality, and time; other related topics such as innovation and sustainability were only partially studied.

Table 1. (Continued)

Contextual Variables of Research	<ul style="list-style-type: none"> • In general, research was not very specific with respect to geographical setting, jurisdiction or industry; more than half of papers did not specify a jurisdictional level and a similar number were grouped into unspecified industries or sectors; only a third of the papers mentioned a specific type of product. • Where contextual variables were specified, data showed that many aspects of PP may depend on the country, the sector, or the type of public administration on which the research focuses. • Consequently, many papers focused on a specific country or industry instead of adopting a comparative approach. • Central governments prevailed in terms of research focus, but their proportional relevance decreased as the municipal level research increased over time. • The most influential countries, both as producers and objects of research, were the USA and the UK, but their importance decreased with time as more countries, especially in Europe, have rapidly increased their research activities. • Defence, construction, and healthcare were the most studied industries and sectors, but important differences appear among reviews. • Regarding regional focus, the American and British literature looked at the different levels of government, while other literatures prefer to focus on central governments (Africa) or local institutions (Italy and Northern Europe).
Limitations	<ul style="list-style-type: none"> • A general limitation in all these contributions is the exclusion of articles published in languages other than English, which may have yielded a language bias. • Another important limitation is that grey literature was not reviewed, despite its quantitative importance. • Both Patrucco et al. (2017) and Flynn and Davis (2014) recognized that “a one-journal literature review limits generalizability of the results to the whole landscape, even though the review considers the most important journal in the field” (Patrucco et al. 2017: 40). • Literature review of papers published in other peer-reviewed academic journals may suggest other evidence.

In particular, the question regarding the most important journals is very important for assessing the legitimacy of PP research. If the research is published in “top” generalist public administration journals, the research in PP is gaining legitimacy in the field of public administration as a whole and its impact is more important than if publication is limited to specialized journals. The other questions will be used to assess the state of the research as well as to determine whether the problems identified in the review articles are persistent or have been overcome.

Method

Article selection

A first list of articles used was compiled by running multiple queries on the ProQuest and ScienceDirect databases in the months of December 2016 and January 2017. To make sure the descriptive review was as up to date as possible, a second list was generated in August 2018. For both databases, only peer-reviewed articles published in English in academic journals between 2010 and 2018 were retained. The list of keywords used is presented in Table 2. These keywords were chosen based on our knowledge of the literature and were tweaked using query tests. Indeed, it was found that some keywords like “procurement” on its own, “IT procurement” or “acquisition” yielded too many results that concerned exclusively the private sector or other fields altogether. For instance, “procurement” is often used in logistics to describe private-sector supply chain issues, and “acquisitions” yielded too many results from the financial and accounting literature concerning mergers and acquisitions. The query was also limited only to the “title” and “abstract” fields because searching for the keywords in the body of the articles led to too many imprecise responses.

A third list containing all the articles from the JPP—whether or not they met the keyword criteria—was compiled, from January 2010 up to August

Table 2. *List of Keywords Used*

“defence procurement”	“government purchase”	“public purchases”
“defense procurement”	“health procurement”	“public purchase”
“education procurement”	“infrastructure procurement”	“electronic procurement”
“government contracts”	“municipal procurement”	“e-procurement”
“government procurement”	“procurement theory”	“public contracts”
“government purchasing”	“public procurement”	“government contractors”
“government purchases”	“public purchasing”	“public contractors”

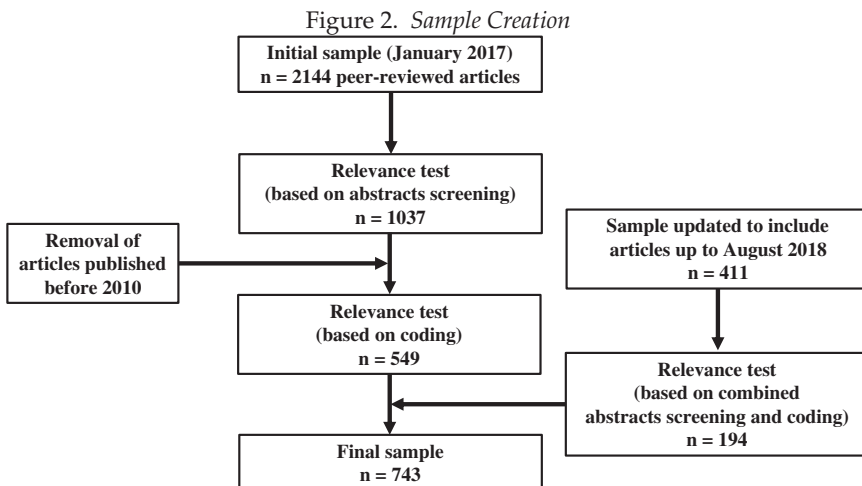
2018. This list was created because we assumed all the articles published in JPP were relevant.

All three lists were combined into a single list of relevant articles. The combined list was then cleaned up by removing duplicates (which were numerous, due to the overlap between databases), articles with no authors or anonymous authors, book reviews, editorials, “in memoriam” articles and introductions to special issues.

After a coding test run, it became obvious that many articles had to be removed because they did not concern PP directly—most of them were related to other topics (e.g., macroeconomics or computer science) and only mentioned PP as a peripheral element. A first relevance test, performed by systematically reading the abstracts, was done to remove off-topic articles in the two lists. Finally, during the coding phase, in which two coders looked at the actual paper contents, some articles were also removed. Both coders identified articles for removal through discussion. Also, the discussions allowed a common understanding of the codes and increased the coding coherence. A final sample of 743 articles was retained (see Figure 2). For each article, the number of Google Scholar citations was manually added in early February 2019 to compute research impact.

Code definition

The initial list of codes was drafted using the authors’ personal knowledge about the topic, and following Thai’s (2001) overview of the field as well as Flynn and Davis’s (2014) analysis. The initial list was then sent to experts⁴ in the field for review. Based on their responses a new code list was compiled after a consensus among authors was reached.



A first coding dry run was performed on a small number of articles to test whether the code list was usable, which led to a streamlining of codes and categories. A second dry run was then performed. Two entire categories were removed because they were deemed too general, and some codes were merged or removed to avoid overlap or ambiguity. Upon satisfactory results, the updated list was retained as the final codes list. Table 3 summarizes the coding categories.

Table 3. *Coding Categories*

<i>Category</i>	<i>Description</i>
1.	REMOVED DURING CODING
2.	REMOVED DURING CODING
3. Procurement Process Phase	Identifies which of the procurement process phases is the main topic of the article (for example: "bid evaluations" or "contract negotiation").
4. Specific Subtopics	Identifies specific subtopics of procurement (for example: "green procurement" or "e-procurement").
5. Implications for Practitioners	Identifies whether practical implications for practitioners are explicitly stated (yes/no).
6. Theory Used	Identifies which theoretical field or discipline is used (for example: "economics," "law" or "political science").
7. Type of Paper	Identifies the type of paper: "conceptual/theoretical," "empirical, all or mostly quantitative," "empirical, all or mostly qualitative," "empirical, mixed methods," "comparative," "discussion/policy analysis," "exploratory," or "case study."
8. Sample	For empirical papers, identifies the kind of sample used (for example: "large sample analysis (n>=30)," "small sample analysis (n < 30)" or "case studies").
9. Data Collection Method	For empirical papers, identifies how the data was collected (for example: "interviews" or "documents").
10. Actors	Identifies which stakeholders are the focus of the article (for example: "public buyers," "suppliers" or "regulators").
11. Geographic Focus	Identifies the geographic focus of the article (for example: "USA," "EU" or "Central Asia").
12. Jurisdictional Level	Identifies the jurisdictional level that is the focus of the article (for example: "national government" or "municipal government").
13. Sector	Identifies the economic sector that is the focus of the article (for example: "health," "utilities" or "defence").

It is important to note that the coding categories were designed to cover most of the elements presented in the framework for understanding public procurement and to create variables relevant to answering the specific research questions listed above.

Coding

Coding was done blindly by two independent coders. When differences arose, they were settled through discussion. For example, the theory code (6) was almost always subject to debates given how authors often used more than one theoretical lens. For each category, at least one code had to be selected, although that code could be “None/Does Not Apply (DNA).” In some categories, codes could be added manually by selecting “Other” and by writing down a new word. The coding was finished in March 2019.

Limits

Contrary to Trammell et al. (2020), who looked only at public administration journals, one of our objectives was to see in which fields PP research was published. Therefore, we did not limit our search to specific journals, but instead used a longer list of more specific keywords to capture articles in many different journals. Although our conclusions are generally aligned with Trammell et al.’s (2020), our respective methodologies and specific results are difficult to compare directly. Our aim was different, and our code list was much wider. Also, given the sheer amount of work involved in coding, we decided only to include articles until mid-2018. A larger search could be undertaken in a follow-up paper.

Results

In this section, we analyze the results of our descriptive review and demonstrate the eclectic character of PP research.

General trends

The 743 articles from our final sample come from 331 different journals and 1,311 authors. Of the 331 journals represented, 288 have only contributed 1 or 2 articles to the sample, thus suggesting a highly fragmented field.

The 743 articles have, altogether, been cited 12,775 times on Google Scholar as of February 2019.

Most frequent and most cited journals

Apart from the JPP, which is obviously disproportionately represented because all its articles since 2010 are included in the sample, regardless of the keyword criterion, it should be noted that the journal that supplied the largest number of articles to our sample was a PP publication, the *Public Contract Law Journal* (PCLJ), published by the American Bar Association. Except for

JPP and PCLJ, virtually all other journals are generalist journals in their own fields. The *International Journal of Procurement Management* is the notable exception, though it could be argued that even it is more of a logistics journal than a PP journal.

Only two public administration journals, the *International Journal of Public Sector Management* (IJPSM) and *International Journal of Public Administration* (IJPA) are represented in the list of most frequent journals and, of these two, only the IJPSM is in the list of most cited journals.

When one looks at citations, the unconsolidated nature of the field is even more apparent. Except for the JPP, the 10 most cited journals are generalist journals from the field of economics, operations management, public management, or urban studies. Tables 4 and 5 summarize these findings.

Most important articles

We also looked at which articles were the most cited in the sample. To identify research trends, we looked at the top 50 most cited articles (which account for 47.3% of all the citations in the sample) and compared their characteristics to the remainder of the sample. Perhaps the most significant difference between the top 50 articles and the other 693 is the high propensity for the top 50 articles to focus on specific subtopics. Indeed, only 9 of the top 50 articles could not be classified in either of the specific subtopics we had identified (coding category 4). As shown in Figure 3, the most popular subtopics in the top 50 articles were green and sustainable procurement (13 articles), innovation (10 articles), corruption and collusion (10 articles) and

Table 4. *Journals That Contribute the Most Articles to the List*

<i>Rank</i>	<i>Publication title</i>	<i>Number of articles</i>
1	<i>Journal of Public Procurement</i>	138
2	Public Contract Law Journal	35
3	International Journal of Public Sector Management	21
4	Journal of Purchasing and Supply Management	16
5	Journal of Cleaner Production	15
6 (tied)	Innovation	12
6 (tied)	Public Money & Management	12
6 (tied)	International Journal of Public Administration	12
9	International Journal of Procurement Management	10
10 (tied)	Procedia Economics and Finance	6
10 (tied)	International Journal of Industrial Organization	6
10 (tied)	Procedia Engineering	6

Table 5. *Total Number of Citations per Journal*

<i>Rank</i>	<i>Publication title</i>	<i>Google Scholar citations</i>
1	<i>Journal of Public Procurement</i>	1405
2	International Journal of Public Sector Management	613
3	Journal of Purchasing and Supply Management	471
4	Journal of Cleaner Production	467
5	Research Policy	411
6	Journal of Rural Studies	397
7	International Journal of Operations & Production Management	367
8	European Planning Studies	364
9	Review of Finance	362
10	International Journal of Industrial Organization	285

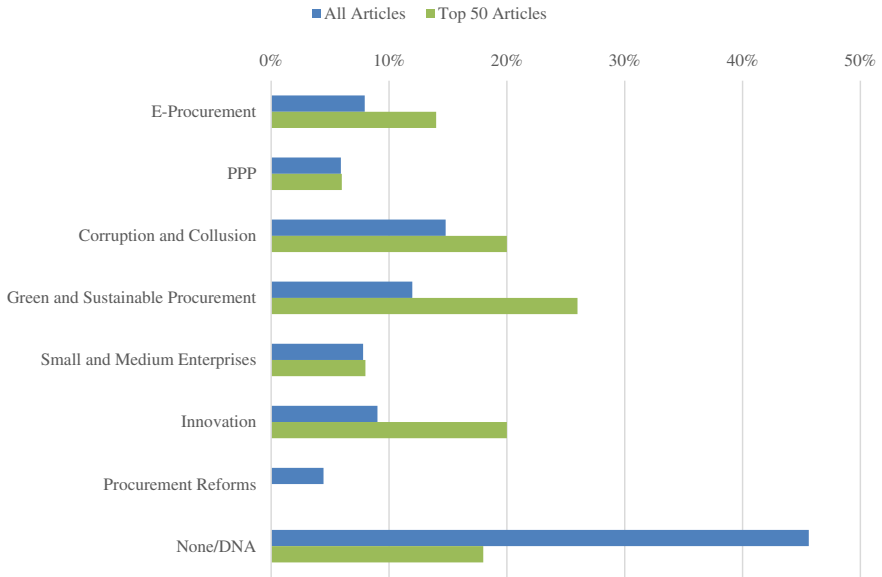
e-procurement (7 articles). This finding could also explain *why* these articles are more cited, as they tend to be published in journals in their topical field (which attract greater readership) than in PP or public administration journals. Theoretical frameworks inspired from management, project management and accounting were also disproportionately represented in the top 50 articles.

Another important difference is that the top 50 articles tend to be more classical in their structure, presenting both a theoretical framework and an empirical verification of theories. Conversely, very few were discussion papers, policy analyses or legal analyses. The use of interviews as a data collection method was also more frequent in the top 50 papers.

The top 50 articles were significantly biased toward the main actors of the principal-relationship (i.e., the public buyers and the private suppliers) as opposed to other peripheral actors such as policy makers, regulators, or tribunals. Geographic focus is much more Anglo-Saxon and Asian in the top 50 articles than in the entire sample. Thirty-six percent focused on either the USA, the UK, Canada, Australia, or New Zealand compared to 27% in the original sample of articles. Asia was also disproportionately represented (20% vs. 10%). Surprisingly, none of the top 50 articles concerned defence procurement, despite military management having had a very important influence on public management in general and on PP in particular.

Most important authors

To identify who are the most important authors, we looked at the most cited authors (by number of Google Scholar citations of their articles in the

Figure 3. *All Articles vs. 50 Most Cited Article by Specific Subtopic*

sample) and the most frequent authors (by total number of articles in the sample). The results are presented in Tables 6 and 7.

Eight of the top cited authors tend to cluster around three subtopics: innovation (Uyarra; Edler; Yeow), green procurement (Walker; Brammer), and political connections (Goldman; Rocholl). It is important to note that these authors seemed to be more cited because they have published a few (two or three, usually) highly cited articles in generalist journals from non-public administration fields.

Further examination, perhaps using social network analysis, could be used to identify wider networks and clusters of authors and themes. Further research would also be needed to identify which authors are the most associated to “traditional” or “core” themes of PP such as bid selection, contract negotiation, or tendering.

Overview of the research published in the JPP

We also checked if the research published in the JPP was illustrative of the research in the field as a whole. To do that, we compared the proportion of each code within a category for all JPP articles to the proportion of each code within a category in the remainder of the sample (for example: the proportion of articles focusing on the USA or the EU in JPP articles compared to proportion of articles focusing on the USA or the EU in the rest of the sample). Globally, the JPP is very representative of the entire sample, though its

Table 6. *Authors Contribute the Most Articles to the List*

<i>Rank</i>	<i>Author's name</i>	<i>Number of articles</i>
1 (tied)	McCue, C.	11
1 (tied)	Davis, P.	11
3	Flynn, A.	9
4 (tied)	Rendon, R.	7
4 (tied)	Roman, A.	7
4 (tied)	Lundberg, S.	7
7 (tied)	Rizzo, I.	6
7 (tied)	Ntayi, J.	6
7 (tied)	Prier, E.	6
7 (tied)	Fazekas, M.	6
7 (tied)	Guccio, C.	6
12 (tied)	Uyarra, E.	5
12 (tied)	Tammi, T.	5
12 (tied)	Saastamoinen, J.	5
12 (tied)	Placek, M.	5
12 (tied)	Reijonen, H.	5
12 (tied)	McKevitt, D.	5
12 (tied)	Kidalov, M.	5
12 (tied)	Iraldo, F.	5

research is more focused on the USA. It also included more articles looking at defence procurement, which is hardly surprising given its more American focus. The JPP's articles were also less cited than other journals in the field, coming in only at the 117th rank out of 331 journals in terms of average Google Scholar citations per article.

More important differences arose when we compared JPP articles to the 50 most cited articles. Almost 60% of JPP articles did not focus on a specific topic (green procurement, procurement innovation, corruption), while only 18% of the top 50 articles did not. Unsurprisingly, it could be said that JPP is a "generalist" PP journal. The generalist nature of the JPP can be observed in the greater variety of theoretical frameworks such as legal studies (12% in JPP and only 4% in the 50 most cited articles) and the lower predominance of articles from the field of management. Furthermore, only 6% of the top 50 articles were discussion papers, policy analyses and legal analyses, while those types of papers accounted for 17% of JPP's articles. This finding suggests a lesser methodological concern in JPP articles than in the field's most

Table 7. *Total Number of Citations per Author*

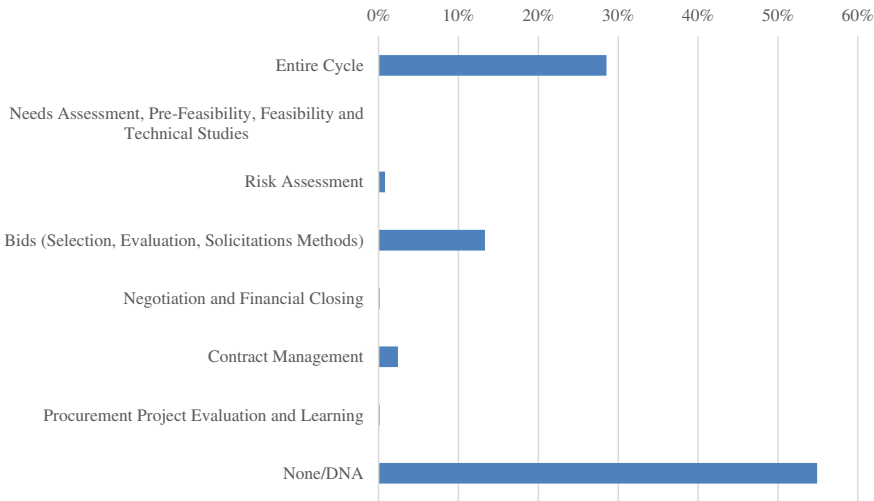
<i>Rank</i>	<i>Author's name</i>	<i>Google Scholar citations</i>
1	Uyarra, E.	677
2	Walker, H.	561
3	Brammer, S.	510
4 (tied)	Yeow, J.	435
4 (tied)	Edler, J.	435
6 (tied)	So, J.	362
6 (tied)	Rocholl, J.	362
6 (tied)	Goldman, E.	362
9	Georghiou, L.	338
10	Flanagan, K.	323
11 (tied)	Kledal, P.	308
11 (tied)	Mercado, G.	308
13 (tied)	Hjortsø, C.	308
14	Zabala-Iturriagoitia, J.	304
15	Edquist, C.	296

Coauthored papers are counted as one citation per author.

cited articles. The JPP only contributed two articles to the top 50 most cited articles, despite being the only journal focused solely on PP.

Specific trends by coding category

The first coding category looked at the phase of the procurement cycle with which articles were mostly concerned (see Figure 4). We define the procurement cycle as: 1) needs assessment, pre-feasibility, feasibility and technical studies, 2) risk assessment, 3) bidding process (selection, evaluation, solicitation methods), 4) negotiation and financial closing, 5) contract management, and 6) procurement project evaluation and learning. Just under a third (29%) of articles looked at the entire cycle, and 13% studied the bidding process. It is particularly noteworthy that no article in the entire sample looked specifically at needs assessment and feasibility studies, and that risk assessment, negotiation and financial closing, and procurement evaluation and learning were also almost completely absent. Contract management was the focus of a mere 2% of articles. More than half of the articles were coded "None/DNA," which could be interpreted as those articles not being tied to a "core"

Figure 4. *Proportion of Articles by Cycle Phase*

aspect of the procurement process, and rather being concerned with more peripheral issues.

It is particularly noteworthy that no article in the entire sample looked specifically at needs assessment and feasibility studies, and that risk assessment, negotiation and financial closing, and procurement evaluation and learning were also almost completely absent.

Topical articles (e.g., those articles that focused on a subtopic of PP such as e-procurement, green procurement) were particularly numerous. We could identify a specific theme for more than half the articles. Articles on corruption and collusion in PP were the most frequent (15%), followed by green and sustainable procurement (12%) and PP innovation (9%). As we were coding, another category of PP emerged: social procurement, which covered issues like minority-business suppliers, women-owned businesses, and socially responsible procurement.

The most used theories were from management/project management/accounting (62%), followed by economics/finance (36%), political science/public policy (20%) and law (17%). Sociology/organizational theory as well as HR/OB/psychology was relatively absent from the sample with only 8% and 3% of articles, respectively. Previous findings had shown that, in

the cases of theoretically grounded articles, managerial theory was becoming increasingly important in procurement research (Patrucco et al. 2017). The managerial theories used were, however, often grounded in agency and public choice economic theories, as well as New Public Management (Trammell et al. 2020).

Over a third (36% and 38%, respectively) of articles are conceptual and quantitative papers, while 20% were qualitative articles and 19% were policy and legal analyses. Very few papers were comparative (5% of the entire sample).

Large sample analyses ($n \geq 30$) were the most common (45% of articles), followed by sporadic illustrations (28%) and case studies (19%). Virtually all articles used secondary sources and documents, while interviews and questionnaires were each used by 22% of articles. This finding suggests that field work, in the social sciences sense of the term, is not very common in PP research.

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With regard to actors, 42% of articles looked at public entities (i.e., the demand side of PP), while 29% looked at the private sector (i.e., the supply side). Articles focusing on PP's environment (policy makers, auditors, regulators, tribunals) accounted for less than 10% of articles.

Thirty-seven percent of articles had the EU or EU countries⁵ as a focus, while 17% concentrated on the USA. Sub-Saharan Africa was well represented with 8% of articles, followed by the UK with 7%. The EU, the USA and the UK represented respectively 32%, 20% and 14% of the top 50 most cited articles. Seventy percent of all articles focused on national governments, while articles looking at the local, regional and supranational levels accounted for 21%, 16% and 18% respectively, with some overlaps between levels. This finding suggests a gap in the empirical literature concerning non-national levels of governments, especially in highly decentralized countries.

Finally, just under 50% of articles looked at specific sectors. The sectoral focus was extremely fragmented: 10% focused on multiple (≥ 2) sectors, 8% focused on general building construction, 7% on services, 7% on transportation, 5% on defence, and 5% on health.

Discussion and conclusion

Globally, what we observe is a highly fragmented field that, perhaps, has not fully matured yet. The state of the field can be summarized as follows:

- As specific research objects, some admittedly important themes—such as feasibility studies, risk assessments, contract negotiations, contract management, *ex post* evaluations and HR—are almost entirely absent from the academic literature, despite constituting an important part of the practitioners’ day-to-day activities (McCue et al. 2020). Globally, there seems to be little academic research done on the core activities of PP (i.e., the various steps of the process), and only slightly more on governance and strategic issues related to public contracts.
- The most cited works on PP concern very specific subtopics of procurement research that, epistemologically, could feel equally at home in other fields such as environmental studies, innovation studies, or criminology. This research is often also published in journals that have very little to do with PP or public administration, the notable exception being the *IJPSM* (and the *IJPA* to a lesser extent).
- PP research has few articles based on analytical methods very common in public administration studies, such as comparative analysis, program/policy/project evaluation, and institutional analysis. Furthermore, no “classic” case studies or comparative articles exist in the field of PP as they do in so many other subfields of public administration.

Increasing the presence of public procurement research in public administration journals

We believe public administration academics need to pay more attention to PP as a subfield of its own. They need to take on a more systematic approach to the analysis of PP, studying it horizontally (at each step of the procurement cycle) and vertically (focusing not only on the buyer-supplier relationship, but also on procurement policy, governance framework and institutions), and looking at environmental variables such as market conditions, available human resources, and political concerns. Thai’s (2001) introductory article in the *JPP* beautifully laid out a plan for such a systematic analysis.

We also would like to provide few guidelines to improve the visibility and relevance of PP research in public administration journals:

- Because in recent years new subtopics such as sustainable PP (including green and social procurement), e-procurement, corruption and ethics studies related to public contracts have gained considerable interest, PP journals (or public administration journals with a particular interest in PP) should give more space to research dealing with these topics.
- An important proportion of PP does not use a specific theoretical framework (our findings, as well as Trammell et al. 2020); and when a theory is used, it is very often a managerial theory derived from neoclassical

economics. We believe opening PP studies to other theoretical frameworks used in public administration (e.g., institutional theory, bureaucratic autonomy, public value) and using new methodologies (e.g., mixed methods, process tracing, fuzzy-set qualitative comparative analysis) could contribute to shedding new light on the subject and to increase interest among public administration and political science scholars.

- Our analysis shows that the national and state/provincial levels are over-represented in research compared to the local level. Though municipalities account for a significant portion of the public sector's procurement spending, they are often ill-equipped, both in terms of policy-making and monitoring capabilities, thus making PP capacity-building a significant avenue for improving governance and accountability. The same could be said of decentralized organizations in the healthcare and education sector (hospitals, colleges, and universities, namely).

Finally, we hope that this article constitutes a call to action for PP scholars to consolidate the research into a more coherent and epistemologically grounded subfield of public administration. This consolidation would require leadership from one or more journals or conferences to push for a systematic research agenda focused on the core activities of PP; the anchoring of research into diverse theoretical perspectives, analytical methods, and empirical settings; and a commitment to keeping research close to the day-to-day preoccupations of practitioners.

Several academic books on PP have been published in recent years (amongst others: Khan 2018; Lember et al. 2014; Piga and Tatrai 2015; Thai 2017a), showing how the topic is gaining traction as a full-fledged subfield. The common feature of these books is their focus on the core activities of procurement (as opposed to showing PP as a mere tool), as well as their concern for theorizing well-entrenched practices.

Limitations and further work

Limitations

We are aware of some limitations to our analysis, which need to be considered when interpreting the results. The first one is that coding, in and of itself, can be problematic: a very deliberate choice was made to code only articles that talk mainly or significantly about the coding elements. Articles that mentioned some categories tangentially were not coded as such. This coding choice probably contributed to our assessment that some topics were "ignored" by the literature, despite being mentioned in articles that used a higher level of analysis.

Three other deliberate methodological choices also constitute limitations. First, the fact that we only looked at articles published in English certainly influenced the geographic focus we observed, but may also have skewed the results towards some theoretical frameworks and methodologies. Second, because we willingly overlooked the grey literature, some quasi-academic work, which could have covered some of the gaps we identified, may have been ignored. In fact, we cannot but wonder if academic research in PP does not trail behind institutional research produced by organizations such as the OECD and the World Bank. Third, because we wanted to see in which fields PP research was published, we did not filter journals; instead, we applied a longer list of more specific keywords on entire databases.

Finally, we realized too late in the coding phase that code 9a “Secondary Sources/Documents” was ambiguous, as it could combine many different categories such as other scientific papers, quantitative databases, policy and legal documents, grey literature and methods manuals. Separating those secondary sources into more relevant subtypes could have produced greater insight on the types of analyses that were performed.

Further work

We also hope that the considerable amount of work invested in coding 743 articles will serve as a basis for other, more focused, lower-level analyses. Social network analyses could be used to potentially identify clusters of authors and research themes. Furthermore, our database of articles could be the starting point of more specific systematic reviews of innovative procurement subtopics such as corruption in PP, green and sustainable procurement, or social procurement. A larger search that would include the literature published after mid-2018 could also be undertaken in a follow-up paper.

Notes

- 1 Here, we are referring to environmental variables in the sense used by Thai (2001), which can be equated to contextual variables.
- 2 The structures that Thai (2001) refers to are institutions in the sociological sense, which included normative frameworks, formal organizations, and communities of practice.
- 3 A special issue of *Public Policy and Administration* published in 2000 also focused on PP. It did not, however, provide an integrated framework for surveying PP research the way Thai’s (2001) article does.
- 4 The authors would like to thank Khi V. Thai, Cliff McCue, Christopher Bovis, Anthony Flynn, Sue Arrowsmith, J. Gordon Murray and Alexandru V. Roman for their generous responses.
- 5 In this category (11), an article looking at PP in Italy would have been coded “EU,” just like one looking at the European Union’s procurement reforms. Category 12 (jurisdiction) distinguishes between local, regional, national and supranational levels of government.

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