

Challenges of the Scientific Puzzle: Article-Based Dissertations in Public Administration

Desafios do Quebra-Cabeça Científico: Teses por Artigos em Administração Pública

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ABSTRACT

This article discusses epistemological, methodological, and analytical challenges of article-based dissertations in the field of public administration. As an interdisciplinary field, epistemological decisions shape research design and the choice of methods. We analyzed 139 Brazilian doctoral dissertations (2014–2022), of which 17 were structured as article-based. The findings reveal difficulties in integrating theory and method, especially when combining qualitative and quantitative approaches. We argue that this model demands specific skills and careful planning, which are not always present among early-stage researchers. We conclude that, although the model offers productivity advantages, its adoption should take into account the doctoral training process and the research objectives.


Keywords: Epistemology; Theorization; Research Strategies; Methods; Public Administration.


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RESUMO

Este artigo discute desafios epistemológicos, metodológicos e analíticos das teses por artigos no campo da administração pública. Trata-se de um campo interdisciplinar, no qual decisões epistemológicas moldam o desenho da pesquisa e a escolha de métodos. Analisamos 139 teses brasileiras (2014–2022), das quais 17 foram estruturadas por artigos. O resultado revela dificuldades na articulação entre teoria e método, especialmente ao combinar abordagens qualitativas e quantitativas. Argumentamos que esse modelo exige competências específicas e planejamento rigoroso, o que nem sempre ocorre entre pesquisadores em formação. Concluímos que, embora haja vantagens em termos de produtividade, a adoção do modelo deve considerar o processo formativo do doutorando e os objetivos da pesquisa.

Palavras-chave: Epistemologia; Teorização; Estratégias de Pesquisa; Métodos; Administração Pública.

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Introduction

Traditionally, the doctoral thesis has been conceived across various fields of study as a unified and comprehensive document intended to demonstrate the researcher's ability to conduct an independent and rigorous investigation (Alexander & Davis, 2019). This model is dominant in most countries and in higher education and research institutions, and it consists of a document with several sections or chapters, including an introduction, literature review, methodology, results, discussion, and conclusion (Alexander & Davis, 2019).

In many contexts, doctoral theses are still evaluated as lengthy printed volumes; however, there has been a growing movement to make this process more efficient. Increasingly, scholars have suggested that doctoral theses should be shorter and more focused, benefiting not only students but also advisors and examiners (Gould, 2016; *Nature*, 2016). There is broad consensus that a thesis should be useful for future research rather than merely a decorative object. It should contribute to scientific advancement, and its data and findings should be shared and published in some form, thereby expanding the research's impact beyond the author's immediate circle and allowing other researchers to build upon these findings (Gould, 2016; *Nature*, 2016).

The growing emphasis on the rapid and wide dissemination of scientific knowledge has encouraged doctoral candidates and higher education and research institutions to consider structuring theses as collections of articles (Burroughs-Boenisch, 2016; Alexander & Davis, 2019). This model involves a document that compiles research articles that the doctoral candidate has published or intends to publish in peer-reviewed journals. It is common in some regions of the world, such as Scandinavia and Australia, and has been gaining popularity elsewhere (Alexander & Davis, 2019).

This study advocates that article-based doctoral theses may be shaped by the dynamics of the academic field, including incentives associated with research productivity, which remains a relevant, though not exclusive, factor in determining, for example, higher academic salaries, as observed in parts of Europe (Kwiek, 2018). These theses are also not immune to the broader contexts in which they are produced. The COVID-19 pandemic, for instance, exacerbated existing inequalities and

negatively affected academic productivity, particularly among women and parents (Breuning et al., 2021).

Beyond the aspects discussed above, article-based doctoral theses in public administration may be influenced by distinctive editorial positions, leading to a disproportionate focus on specific topics or theoretical perspectives and thereby constraining knowledge production. As editors act as gatekeepers of knowledge, they possess the power to define research priorities and, consequently, to influence which studies are published (Feeney, Carson, & Dickinson, 2018).

Moreover, it is important to consider the findings of a recent study that examined articles published in leading public administration journals worldwide (Hendren et al., 2023). That study showed that: (a) published articles generally lack explicit discussion of authors' epistemological positions, transparency regarding methodological decisions, and/or justification for those decisions; and (b) key elements of methodological planning and reporting for both qualitative and quantitative research approaches, elements that are crucial for producing reliable and persuasive findings in mixed-methods studies in public administration and public policy, are insufficiently presented in a substantial proportion of these articles.

These shortcomings may affect the article-based doctoral thesis model and raise epistemological, theoretical, and strategic methodological issues that must be carefully considered in public administration, given what counts as knowledge in this field (Raadschelders, 2008, 2011; Fitzpatrick et al., 2011; Wessels, 2023). Epistemological positions determine whether research adopts quantitative, qualitative, or mixed methods and influence the selection of analytical techniques and whether analyses are framed as objective or subjective. In the interdisciplinary field of public administration (Raimondo & Newcomer, 2017; Hendren, Luo & Pandey, 2018), it is important, both in traditional doctoral theses and, even more so, in article-based theses, to combine strategies and adapt data collection methods to the specificities of each paradigm and theoretical approach.

This study is based on an analysis of 139 Brazilian doctoral theses in public administration and public policy, defended between 2014 and 2022. Of these, 17 article-based theses were identified and subjected to systematic content analysis. Most of these studies fail to integrate theoretical models with methodological considerations, particularly when combining qualitative and quantitative methods.

This research contributes to the field by highlighting the advantages and limitations of article-based doctoral theses and emphasizing the need to carefully consider epistemological, theoretical, and methodological issues when opting for this model. These issues require competencies that may not yet be fully developed among less experienced researchers. This article does not intend to be a guide on how to write an article-based doctoral thesis. Rather, it stresses that the emphasis on the final production of articles, within a potential context of academic productivism, should not override the primary objective of doctoral education: the doctoral candidate's analytical reflection and the formation of the researcher.

This article is organized into six sections, including this introduction. The next section addresses the epistemology and theorization issues involved in both traditional and article-based doctoral theses. The subsequent section discusses research strategies, methods, and analytical approaches in these models, with particular emphasis on article-based theses. The fourth section presents the methodology and data sources, focusing on doctoral theses in public administration and public policy defended in Brazil between 2014 and 2022. Next, the advantages and disadvantages of the article-based thesis model are discussed, along with implications for practice. The sixth and final section presents the conclusions.

Epistemology and Theorization in Public Administration

According to theoretical discussions and findings in the international literature, particularly in leading journals indexed by the ABS, the main epistemological positions in public administration include positivism, constructivism, and pragmatism, each of which guides research approaches in distinct ways (Raadschelders, 2008, 2011; Fitzpatrick et al., 2011; Whetsell & Shields, 2013; Wessels, 2023). Research from a positivist perspective, for example, tends to employ experiments, surveys, and statistical analyses to test specific hypotheses (Su, 2018; Creswell, 2013). In this context, theory construction is grounded in empirical data aimed at generalization and prediction, and theories are expected to be testable and falsifiable. Common analytical techniques include statistical analysis, hypothesis testing, and quantitative modeling, with an emphasis on variable measurement and the identification of causal relationships (Su, 2018).

Within constructivism, theories emerge through the interaction between researchers and participants, emphasizing the co-creation of knowledge and reflexivity (Holstein & Gubrium, 2013). Reality is understood as socially constructed, and participatory and collaborative methods, such as action research and participatory inquiry, are commonly employed (Cunliffe, 2008; Burr, 2015). Analytical techniques typically include discursive and conversational analyses, focusing on how individuals and groups construct their realities.

In pragmatism, theories are evaluated by their practical usefulness and their ability to address specific problems, allowing continuous adaptation and modification as needed (Simpson, 2008, 2018; Nicolini, 2009; Feldman & Orlikowski, 2011; Cook & Wagenaar, 2012). Oriented toward practice and outcomes, pragmatism combines quantitative and qualitative methods, selecting those most appropriate for answering the research question (Simpson, 2008, 2018). Accordingly, analytical techniques vary based on their utility for solving the research problem and may include statistical analyses, content analysis, case studies, among others (Nicolini, 2009; Feldman & Orlikowski, 2011; Cook & Wagenaar, 2012).

The positivist position remains hegemonic in public administration and warrants attention (Raadschelders, 2008, 2011; Fitzpatrick et al., 2011; Whetsell & Shields, 2013). Within this tradition, adherence to rigorous methodological standards that promote universality, precision, and researcher independence is assumed to enable the identification of objective, self-explanatory facts (Lin, 1998; Latham, 2014; Carminati, 2018). Positivists generally assume that reality is objectively given and can be described in terms of measurable properties independent of the observer and their instruments (Carminati, 2018).

Researchers grounded in post-positivism adopt a scientific approach informed by the social sciences that recognizes causal relationships as probabilistic, multicausal, and complex (Patomäki & Wight, 2000; Phillips & Burbules, 2000; Denzin & Lincoln, 2005; Creswell, 2013; Corry, Porter, & McKenna, 2018). Post-positivists value multiple perspectives rather than a single, fixed reality and conceptualize research as a sequence of logically connected stages. They also employ rigorous qualitative data collection and analysis procedures, apply multiple levels of analysis to ensure rigor, make use of computer-assisted tools to support data interpretation, and encourage validation strategies (Creswell, 2013).

Feminist theories, for example, often focus on themes of domination, particularly gender domination, and incorporate principles from postmodern and post-structuralist critiques, thereby challenging social injustices. More recent critical developments include the incorporation of intersectionality into feminist research, which examines the intersections of race, class, gender, sexuality, physical ability, and age (Chafetz, 1997; Thomas & Davies, 2005; Olesen, 2011; Allen, 2023). Critical theory, in turn, is used to investigate social institutions and processes of change, interpret the meanings of social life, and address historical issues such as domination, alienation, and social struggle (Fay, 1987; Madison, 2005; Nitzschner, 2022).

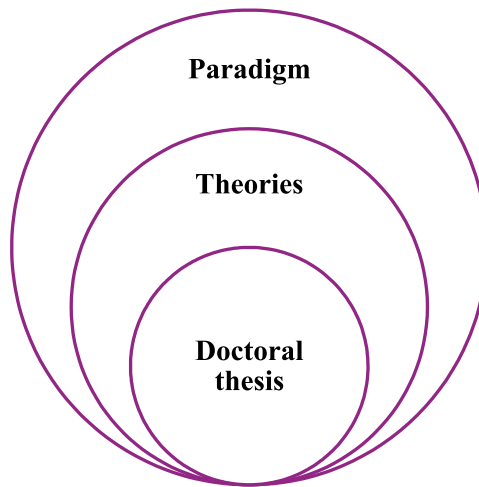
Postcolonial perspectives involve the development of new epistemologies that advance the investigation of power relations across different domains of social activity and cultural analysis, taking into account distinctions such as ethnicity, class, and gender (Burawoy, 2003; Carey & Raciborski, 2004; Bhambra, 2007; Bhambra & Holmwood, 2018). These perspectives challenge Western narratives of modernity and serve as tools for examining hegemonic relations and the coloniality of knowledge, resisting systems that sustain the hierarchical ordering of differences, such as Eurocentrism (Bhambra, 2007; Bhambra & Holmwood, 2018).

Although it is not necessary for all research to be framed within a single epistemological orientation, whether in traditional doctoral theses or article-based formats, a doctoral thesis must maintain unity with respect to the paradigms and theoretical perspectives adopted. As in the traditional thesis model, each article in an article-based thesis should consistently reflect the overarching theoretical framework. Thus, while each article must be self-contained, it should also contribute to a coherent understanding of the research problem addressed by the doctoral thesis as a whole. This requirement calls for careful reflection on how the different components of the research interact and complement one another.

In traditional doctoral theses, epistemological positions exert a significant influence on research design and theory construction. The same holds true for article-based theses, since innovation in format does not alter what the field recognizes as valid scientific knowledge. As in the traditional model, the articles that compose a thesis must be underpinned by theoretical coherence, ensuring that, even when read independently, they contribute to an integrated understanding of the doctoral thesis. In this regard, Breimer and Mikhailidis (1993) argue that

articles should be complementary and demonstrate a coherent development of thought. The authors further emphasize that theoretical coherence facilitates not only the interpretation of results but also the connection of their implications within the broader research context, thereby reinforcing the credibility and depth of the academic study.

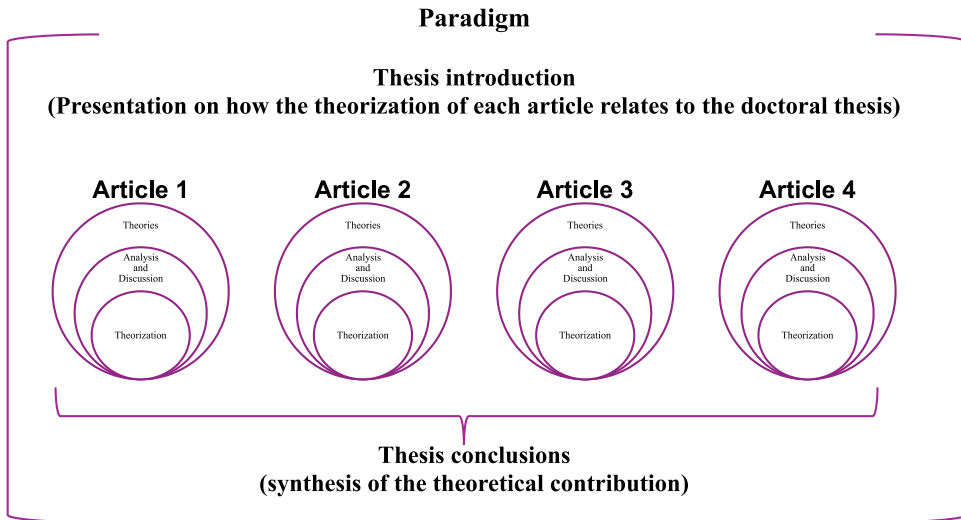
Figure 1. Epistemological and theoretical coherence in a traditional doctoral thesis.



Elaborated by the authors.

We emphasize that such paradigmatic and theoretical coherence is essential across all approaches, from positivist to postcolonial. Compared to a traditional doctoral thesis, an article-based thesis increases the risk of decontextualizing findings and isolating them from the broader theoretical framework. A traditional monograph-style thesis allows readers to follow the logical progression of the research, from the literature review through the discussion of results to the final conclusions. In contrast, individual articles may become overly focused on specific aspects of the research, thereby compromising the holistic integrity of the original thesis and potentially leading to partial or distorted interpretations of the findings and their implications for theorization.

Figure 2. Epistemological and theoretical coherence in an article-based doctoral thesis.



Elaborated by the authors.

In the positivist tradition, theoretical coherence ensures that methods, analyses, and results are consistent and replicable. In post-positivism, it allows for the cohesive integration of diverse perspectives, supporting a deeper and more comprehensive understanding of the phenomenon under study. In feminist approaches, coherence ensures that analyses of multiple forms of domination and social injustice are integrated and consistent, while in critical theory, it supports interpretations of institutional change and social struggle. In postcolonial perspectives, coherence reinforces investigations of power relations and resistance to Eurocentrism, fostering a comprehensive understanding of the dynamics of hegemony and coloniality.

In public administration, fragmenting the theorization process into autonomous articles poses the challenge of maintaining a coherent narrative aligned with the adopted paradigm and of ensuring that each article clearly communicates its connection to the whole. This challenge requires meticulous planning so that each article contributes meaningfully to knowledge production. It is essential to recognize that each article forms part of the doctoral thesis as an integrated whole and that, al-

though theoretical emphases may vary across articles, they must remain consistent with the underlying epistemological paradigm.

Ultimately, what should guide a doctoral thesis in public administration, whether traditional or article-based, are the assumptions of each paradigm: empirical and testable generalization in positivism; contextual and co-constructed knowledge creation in constructivism; and the flexibility and evaluation of theories based on their practical applicability in pragmatism. Each epistemological position provides a distinct lens through which knowledge is understood and produced, a distinction that is not always clear to less experienced researchers. Because epistemological positions influence all phases of the research process, both traditional and article-based doctoral theses must maintain internal coherence with respect to the thesis as a whole to be accepted and shared within the field – a requirement that may pose greater challenges for article-based models.

Research strategies, Methods, and Analyses in Public Administration

Different research strategies in public administration make distinct and complementary contributions to understanding the phenomenon under study, enabling more comprehensive and in-depth analyses. Among these strategies, the case study is one of the most commonly used. It provides a detailed and contextualized understanding of a specific case, in which the unit of analysis may consist of a single case (a within-site study) or multiple cases (a multisite study), supporting the analysis of broader theoretical or empirical themes (Gerring, 2008; Yin, 2009; Rummery & Fine, 2012; Creswell, 2013). In a traditional doctoral thesis or in an article-based format, the case study may focus on a concrete and detailed example that offers in-depth insight. In an article-based doctoral thesis, each article may be devoted to a within-site or multisite case study.

The ethnographic strategy also relies on data collection through field observations, interviews, and cultural artifacts, and may be used to situate the case study within a broader cultural or social context (Abbott, 2007; Morton et al., 2017; Shan-

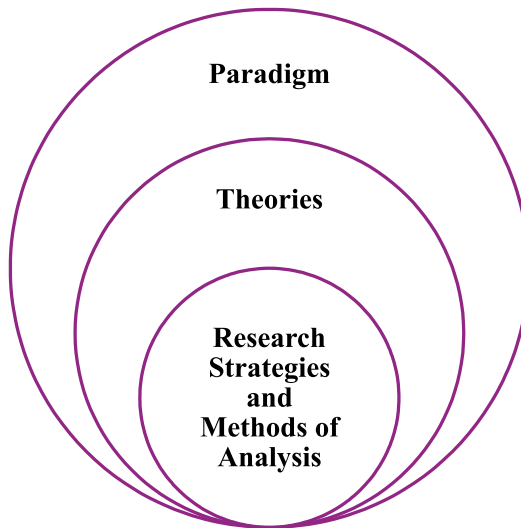
non, Soltani, & Sugrue, 2023). While the case study provides a detailed analysis of a specific situation, ethnography expands this perspective by embedding the case within the surrounding cultural practices, meanings, and beliefs. Narrative research, in turn, collects information from documents, open-ended interviews, participant observation, and informal conversations (Fenton & Langley, 2011; Creswell, 2013). This approach enriches case analysis by incorporating the personal stories and lived experiences of the individuals involved. In one or more articles, narrative research may focus on the experiences and perspectives of case study participants, adding a human and interpretive dimension to the analysis.

The phenomenological approach, which primarily relies on interviews with a relatively small number of participants, is particularly useful for deepening the understanding of subjective experiences (Creswell, 2013; Gill, 2014; Riach & Davies, 2018). In one or more articles, phenomenology may be applied to explore the meanings and interpretations participants attribute to the phenomenon under study, complementing the more contextually and descriptively oriented data generated by other qualitative strategies. Grounded theory, by contrast, draws on interviews, observations, and documentary sources to support the development of an emergent theory (Corbin & Strauss; Gioia, Corley & Hamilton, 2012; Timmermans & Tavory, 2012; Chun Tie, Birks, & Francis, 2019). This strategy may be used to synthesize findings from case studies and from ethnographic, narrative, and phenomenological research into a coherent theoretical framework. In one or more articles, grounded theory can integrate and theorize across datasets, providing a framework to explain emerging patterns and relationships.

According to Hendren et al. (2023), analyses of leading public administration journals worldwide indicate that mixed-methods research is on the rise. However, this growth is not consistently accompanied by the effective integration of qualitative and quantitative approaches, nor by robust engagement with methodological literature in sections devoted to research design and methods (Hendren et al., 2023). Earlier research similarly found that, despite the increasing number of publications, the promise of mixed-methods research in public administration depends on a more explicit recognition of the added value of mixed-methods designs, greater investment in strengthening qualitative components, and closer integration between qualitative and quantitative strands (Hendren, Luo, & Pandey, 2018).

There are also clear differences in advisory structures and doctoral thesis formats across fields of knowledge. In the natural and medical sciences, doctoral theses are often organized as a series of publishable articles, encouraging dissemination during the doctoral program. In contrast, in the social sciences and humanities, doctoral theses continue to predominantly adopt the monograph format (Larivière, 2011; Burrough-Boenisch, 2016). In public administration, structuring a doctoral thesis around publishable articles requires a carefully articulated strategy that preserves the research’s analytical coherence and depth while enhancing its visibility and impact.

Figure 3. Coherence of research strategies, methods, and analysis in a traditional doctoral thesis.



Elaborated by the authors.

Combining research strategies within a traditional doctoral thesis or across multiple articles in an article-based doctoral thesis allows researchers to explore different dimensions of the phenomenon under study while maintaining coherence with the adopted paradigm. The case study provides a detailed, contextually grounded foundation; ethnography broadens the analysis by incorporating cultural context; narrative research foregrounds personal experiences; phenomenology deepens in-

sight into subjective meanings; and grounded theory integrates these elements into an emergent theoretical explanation. This integrated approach supports a rich and nuanced analysis, contributing to a more comprehensive understanding of the phenomenon. As noted by Creswell (2013), data collection is central to the construction of a doctoral thesis. Both the traditional thesis and each article in an article-based thesis can be planned and executed with consideration of the particularities of the chosen research strategy.

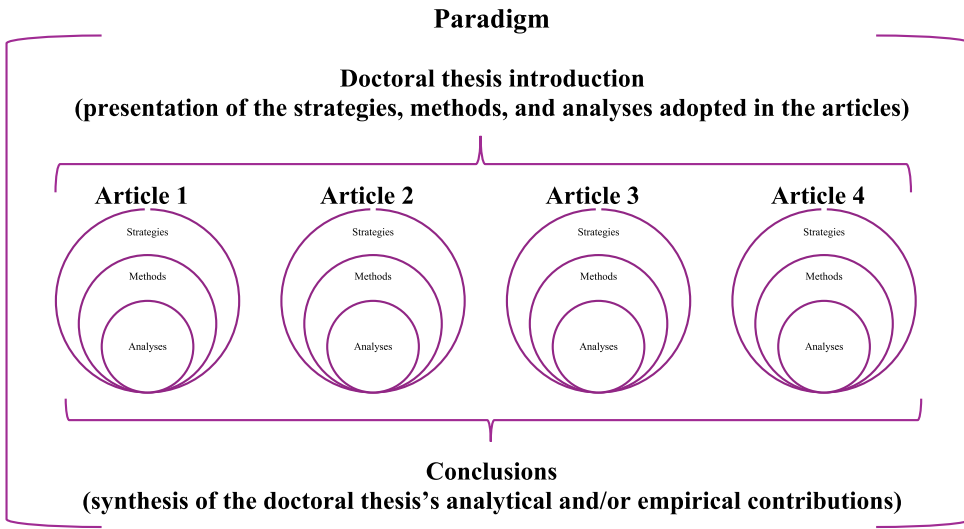
As in a traditional doctoral thesis, careful adaptation of data collection, recording, and storage techniques is essential to ensure that each article of an article-based thesis contributes meaningfully to the thesis as a whole and remains aligned with its overarching paradigm and theoretical foundations. The strategic combination of methods can yield a more complete and in-depth understanding of the object of study (Creswell, 2013). For example, a doctoral thesis based on articles may include one article combining case study and ethnography, another employing participant observation to capture distinct dimensions of the phenomenon, and a further article drawing on action research or applied research to support practical interventions and problem-solving.

In public administration, the combination of research methods and analytical techniques can deepen and enrich empirical inquiry (Raimondo & Newcomer, 2017; Hendren et al., 2023). Interviews may be paired with observations to capture both verbal accounts and observed behaviors. Document and archival analysis can complement data from visual methods or autoethnography, providing broader historical and institutional context. Computer-assisted qualitative data analysis supports the organization and interpretation of large datasets, improving analytical accuracy and efficiency. Content analysis enables the study of discourses and narratives, while focus groups can generate insights into group dynamics and shared meanings.

The integration of these methods and analyses ensures that multiple dimensions and perspectives of the object of study are examined rigorously and coherently (Hendren, Luo, & Pandey, 2018; Hendren et al., 2023). Whether in a traditional or article-based doctoral thesis, each article should clearly justify its methodological choices in light of the paradigms and theories underpinning the research. For instance, an article adopting a phenomenological approach should explain how in-depth

interviews reveal the essence of participants' experiences and how this aligns with an interpretive paradigm.

Figure 4. Coherence of research strategies, methods, and analysis of an article-based doctoral thesis.



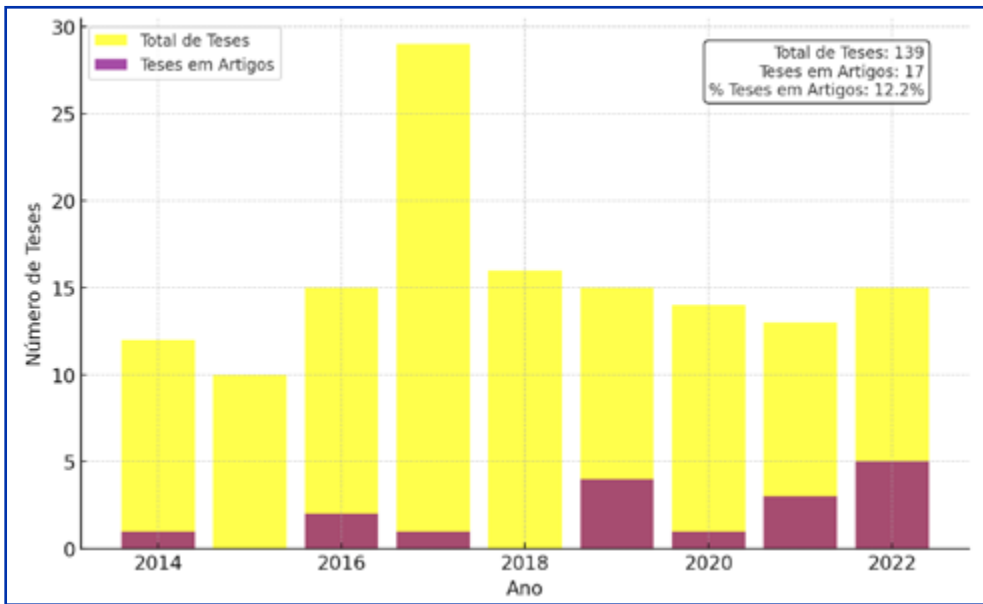
Elaborated by the authors.

Maintaining coherence across articles in an article-based format also requires careful integration of data collection and analytical procedures. Each article must clearly delineate its methods and explain how these contribute to understanding the phenomenon within the thesis's broader theoretical framework. Consistency in data management and analytical practices facilitates comparability and synthesis across articles. Although analytical techniques vary depending on the methodological strategy employed, all approaches must adhere to rigorous standards that ensure the validity and reliability of the findings. Drawing particularly on the results reported by Hendren et al. (2023), article-based doctoral theses may pose additional challenges for less experienced researchers and do not necessarily enhance doctoral students' analytical development or research training, which should remain the central objective of doctoral education.

Results

Figure 1 presents the annual number of doctoral theses defended in public administration in Brazil between 2014 and 2022, highlighting the article-based doctoral theses. The figure indicates an increase in thesis production over time, albeit with some fluctuations. The red bars represent the number of article-based theses per year, with the highest number recorded in 2022, when five theses adopted this format.

Figure 1. Number of doctoral theses in public administration and public policy (2014–2022).



Elaborated by the authors based on CAPES data (Brazil). Total de Teses = Number of traditional doctoral theses Teses em artigos = Number of article-based doctoral theses Traditional doctoral theses: 139 Article-based doctoral theses: 17 % of article-based doctoral theses: 12.2% Y = Number of doctoral theses X = Year

A comparison of the two bars indicates that, despite overall growth in the total number of theses, the proportion of article-based doctoral theses does not follow a clear upward or downward trend over the period analyzed. In 2022, although

the total number of theses was relatively low (15), the proportion of article-based theses was comparatively high, with five cases, corresponding to 33.3% of the total for that year. Overall, the proportion of theses structured as articles represents 12.2% of the total number of doctoral theses analyzed (N = 139). This suggests that, while the article-based format is relatively common, it is not predominant, indicating that some graduate programs encourage the dissemination of research results through articles, whereas others continue to favor other formats of academic dissemination.

The analysis and classification of the theses provide a comprehensive overview of the paradigms and theories employed in the studied context. Table 1 presents the identified paradigms and their frequencies. The expected predominance of positivism was confirmed, with 14 occurrences. This paradigm, centered on scientific and empirical approaches to knowledge production, remains the most influential in public administration research. Post-positivism, constructivism, and pragmatism appear only sporadically, suggesting lower adoption or representation in article-based doctoral theses in public administration in Brazil. Table 2, in turn, lists the theories identified in the articles, ranging from historical institutionalism and rational choice to theories of political communication, reflecting an interdisciplinary approach to the phenomena analyzed. Taken together, these findings suggest that the studied context prioritizes empirically oriented and methodologically rigorous approaches, as reflected in the predominance of positivism, while maintaining theoretical diversity.

Table 1. Predominant paradigms in article-based doctoral theses (2014–2022).

Aspect	Description	Number of theses
Paradigm	Positivism	14
	Post-positivism	1
	Constructivism	1
	Pragmatism	1

Elaborated by the authors.

Tabela 2. Teorias e as teses em artigos (2014-2022).

Aspect	Description
Theories	Historical institutionalism and rational choice theory; theories of power; theories of bureaucracy; elite theory; auction theory; corporate social responsibility theory; transaction cost theory; organizational change theory; regional development theory; theories of political communication

Elaborated by the authors.

Table 3 presents three research strategies and their frequencies. Qualitative research occurs 3 times, indicating lower adoption than the other strategies. Quantitative and mixed (qualitative/quantitative) research each occur 7 times, indicating a balanced preference for both purely quantitative and mixed approaches. In turn, Table 4 lists various research methods, encompassing a wide range of techniques, from qualitative methods such as interviews and content analysis to advanced quantitative methods such as regression and structural equation modeling.

Table 3. Research strategies and article-based doctoral theses (2014-2022).

Aspect	Description	Number
Research strategy	Qualitative	3
	Quantitative	7
	Mixed (Qualitative/Quantitative)	7

Elaborated by the authors.

Consistent with the findings of Hendren et al. (2022) regarding publications in leading public administration journals, our analysis of 17 article-based doctoral theses indicates that while the theoretical input of individual articles is generally identifiable, their combined theoretical contribution is rarely articulated into a cohesive and meaningful whole. The introductions of these theses frequently fail to specify their theoretical framing, and the individual articles exhibit similar limitations. Consequently, the theoretical thread guiding the research – and its relationship to

the adopted paradigm – is often insufficiently explicit, thereby compromising a comprehensive understanding of the academic work.

Table 4. Methods and article-based doctoral theses (2014-2022).

Aspect	Description
Methods	Case study; content analysis; document analysis; interviews; semi-structured interviews; linear regression; multivariate regression; quantile regression; panel data regression; regression discontinuity; data compatibility analysis; structural equation modeling; confirmatory factor analysis; qualitative comparative analysis; randomization; randomization-based inference

Elaborated by the authors.

Moreover, most of the analyzed theses attempt to combine multiple theories, yet these combinations are not clearly articulated in relation to the paradigm. Although such theoretical pluralism is not inherently problematic, it places substantial demands on doctoral candidates, who must demonstrate in-depth knowledge of diverse theoretical traditions and the paradigms that inform them. Presenting and justifying these choices within the typically limited space of journal articles further increases this level of complexity, particularly at an early stage of academic formation.

Another recurring issue concerns the internal structure of the articles that compose the theses. Many doctoral theses consist of articles with markedly different structures. In several cases, articles lack a clearly defined theoretical framework in the introduction or in a dedicated section, with theoretical elements emerging only in the analysis, discussion, or even the conclusion. This structural heterogeneity further obscures any shared epistemological and theoretical thread across the thesis, making it difficult for readers to understand how the articles connect to form a unified body of knowledge.

Additional problems were identified in the methodological sections. Quantitative theses tend to provide more detailed methodological descriptions than qualitative theses, corroborating the findings of Hendren et al. (2022). However, a critical issue emerges across both qualitative and quantitative theses: there is of-

ten insufficient information regarding the criteria guiding methodological choices and research design decisions. Theses that combine qualitative and quantitative approaches, commonly referred to as mixed-methods studies, exhibit the most pronounced shortcomings in this respect, underscoring the need for greater rigor and transparency in the presentation of methodological procedures.

Discussion and Practical Implications

Writing a doctoral thesis marks the transition from student to independent researcher, one who formulates questions and conducts original investigations (Gould, 2016; Nature, 2016). The thesis represents the end of formal education and the beginning of a new phase, often coinciding with significant personal events and the establishment of lasting connections with colleagues and mentors (Gould, 2016; Nature, 2016). When evaluating a thesis, it is important to focus on the relevance of the research question, the approach adopted, and the rigor of the analysis. Nevertheless, minor errors and deviations along the way should be understood as part of the learning process and research training. The doctoral thesis is, above all, a learning opportunity, within which experimentation and failure are integral components of academic formation.

This process offers substantial benefits, including the development of research skills and the opportunity to devote sustained effort to an original and creative project (Gould, 2016). Despite the difficulties encountered, completing a thesis provides a strong sense of accomplishment and pride and constitutes an essential stage in the development of a scientist (Nature, 2016). Ultimately, the PhD or doctoral evaluation should focus more on the researcher than solely on their work. Assessing the ability to address real-world and academically ambiguous problems may better prepare doctoral students for their future careers (Gould, 2016).

Regarding the advantages and limitations of an article-based thesis, Hagen (2010) argues that this model offers several benefits over the traditional monograph, including greater visibility and dissemination of research findings, the development of publication-related skills, contributions to the doctoral student's career, and the promotion of collaboration and integration into research networks. Hagen (2010)

emphasizes that publishing articles in scientific journals allows research results to reach a broader audience, thereby increasing the visibility of doctoral work within the scientific community.

Regarding visibility and dissemination, each article reaches a specific and diverse audience, potentially amplifying research impact (Hagen, 2010). Here, impact refers to changes in awareness, knowledge and understanding, ideas, attitudes and perceptions, as well as policies and practices resulting from research (Morton, 2015a). Interest in methods for assessing research impact has grown steadily, driven by researchers, academic institutions, and research funders alike (Morton, 2015b; Williams, 2020). This trend is reflected in the exponential rise in the use of the term “research impact” in Google Ngram Viewer over recent decades, particularly since the 2000s, with a marked intensification during the 2010–2019 period.

In addition, compared with the traditional model, the process of writing and submitting articles helps doctoral students develop essential academic writing and peer-review skills that are valuable for their future academic and research careers (Hagen, 2010). Submissions to scientific journals provide ongoing feedback from reviewers and the broader academic community. This iterative review and revision process can enhance research quality and generate insights that inform subsequent investigations.

Badley (2009) defends the article-based model by arguing that “publishability” is a relevant criterion for evaluating doctoral-level work. Indeed, having articles published prior to degree completion can strengthen a doctoral student’s curriculum vitae and increase competitiveness for postdoctoral fellowships and academic positions. Furthermore, co-authorship with other researchers fosters collaboration and facilitates the integration of doctoral students into research networks, thereby supporting future partnerships and collaborative projects, as also emphasized by Hagen (2010). In this sense, submitting a doctoral thesis as a compilation of research articles can be advantageous for early-career scientists (Burrough-Boenisch, 2016).

Publication activity during doctoral training is also a significant indicator of students’ integration into the scientific community and is positively associated with degree completion and postdoctoral research productivity (Larivière, 2011; Burrough-Boenisch, 2016). However, doctoral training policies often fail to sufficiently promote interaction between newly enrolled students and more experienced research-

chers throughout the program. Strengthening such integration could foster greater collaboration and position scientific publication as a core component of researcher training (Larivière, 2011; Burrough-Boenisch, 2016).

Dividing the thesis into articles also allows greater flexibility in presenting results (Burrough-Boenisch, 2016). Researchers can tailor each article to different audiences and journals, addressing specific aspects of the research with greater depth and focus. In the Netherlands, for example, doctoral research articles – often co-authored with the advisor – are interspersed between introductory and concluding chapters. The thesis is published before the examination board review and public defense, assigned an ISBN, and then made available online (Burrough-Boenisch, 2016).

Nevertheless, Hagen (2010) also highlights important limitations of the article-based thesis model. Authorship attribution can be complex and contentious, particularly in multi-authored works, and traditional conventions for assigning authorship credit may not accurately reflect individual contributions. Moreover, an increasing number of co-authors can dilute the perceived contribution of the doctoral candidate to each publication, potentially affecting assessments of independence and research competence.

In addition, there is no consensus regarding the precise number of publications required to constitute a doctoral thesis, which may lead to uncertainty and variability across programs and disciplines. Responsibility for regulating this issue typically rests with the relevant academic authorities.

As Hagen (2010) notes, assembling a thesis from multiple articles can pose challenges related to cohesion and integration across chapters, requiring additional effort to ensure that the work is perceived as a coherent and consistent scientific contribution. Compounding this challenge is the fact that project management skills are often insufficiently developed during the doctoral program (Allison, 2015).

Effective planning is therefore essential for successfully structuring a thesis as a collection of articles. Time management becomes particularly important in balancing the writing and submission of articles with other academic and professional responsibilities. Developing a detailed timeline that includes deadlines for drafting, submission, revision, and resubmission can help maintain steady progress and prevent overload.

From the outset of doctoral training, it is helpful to consider how different aspects of the research can be developed into standalone articles. This involves identifying subtopics or chapters that are sufficiently deep and original to stand as independent studies. In short, careful project management helps ensure that each article has a clear purpose, a robust methodology, and a distinct contribution to the field. These conditions, as emphasized throughout this article, are not always easily met by less-experienced researchers.

Pressure on doctoral students to publish in high-impact journals may encourage an emphasis on quantity over quality (Alexander & Davis, 2019). This concern applies to both traditional theses and article-based formats. In particular, dividing a thesis into articles may satisfy publication requirements during doctoral training while simultaneously increasing the risk of superficial or redundant publications that contribute little to substantive knowledge advancement.

Accordingly, each article must be substantial in its own right and offer an original and meaningful contribution to the literature, an expectation that may be difficult for inexperienced researchers to meet consistently. Excessive publication pressure may also inhibit the development of creative and independent thinking among doctoral students (Alexander & Davis, 2019). Students who focus narrowly on producing publishable articles may forgo opportunities to shape a coherent and personally meaningful research agenda (Gould, 2016). One possible alternative is the adoption of more concise formats even within traditional theses, modeled on research articles with shorter chapters on methods, analysis, and discussion, which could increase focus and encourage examiners to engage more fully with the entire document (Gould, 2016).

Contextual factors and disciplinary dynamics also influence doctoral students' participation in academic publishing, including funding availability, research assistance, and the role of advisors (Larivière, 2011). For instance, students who receive scholarships or work as research assistants are more likely to publish during their doctoral studies (Larivière, 2011).

In the specific context of public administration, the decision to pursue an article-based thesis must also consider Breuning et al.'s (2021) findings on the negative impact of the COVID-19 pandemic on academic productivity, particularly among women. This pattern may be linked to earlier findings by Feeney, Carson,

and Dickinson (2018) on editorial selection policies in public administration journals, which highlight the underrepresentation of women in editorial positions and the risk of implicit bias. These authors argue that increasing female representation in editorial leadership is essential to promoting diversity and inclusion and to ensuring that knowledge production reflects a broader range of perspectives and experiences.

Our review of article-based doctoral theses defended in Brazil identified recurring problems in theoretical and methodological clarity that must be addressed to strengthen these studies' academic contribution and to fulfill the broader objectives of doctoral training. While we observed positive examples of public administration research that clearly and succinctly justify methodological choices and the use of multiple methods, our findings, consistent with Feeney, Carson, and Dickinson (2018), suggest that researchers often fail to fully exploit the benefits of genuinely integrating theory and method.

Greater effort is needed to realize the full potential of qualitative approaches, to treat qualitative strands as equal and respected components of mixed-methods research, and to improve the conduct and reporting of mixed-methods studies. Expanding the use of mixed methods can enhance understanding of complex public administration challenges, but doing so requires greater rigor in qualitative components and more detailed methodological reporting.

As Hendren, Luo, and Pandey (2018) argue, advancing the use and value of mixed methods research entails questioning the assumptions, interpretations, and limitations of dominant quantitative methodologies. We agree with Hendren et al. (2023) that mixed-methods studies are particularly valuable when quantitative analyses are deliberately complemented and extended through qualitative inquiry, thereby enabling the inclusion of participant and stakeholder perspectives and enriching contextual understanding.

Effective integration in mixed-methods research requires a deliberate dialogue between quantitative and qualitative approaches. This entails clearly articulating and applying standards of evidence for both approaches, ensuring neither is subordinated. Transparency must also extend across all dimensions of the research process, including data sources, collection procedures, analytical strategies, and reporting practices. Ultimately, however, these methodological ideals lose their meaning in

the face of excessive productivism, which constrains critical reflection and undermines the formative goals of doctoral education.

Conclusions

The article-based doctoral thesis format offers advantages and limitations that doctoral candidates and their advisors should carefully consider. Its main advantage is greater visibility and dissemination of research results, which can accelerate doctoral candidates' academic careers by facilitating publication in high-quality scientific journals and promoting integration into research networks.

In addition, the experience of writing and submitting articles during doctoral training can provide continuous feedback and improve research quality. In public administration, participation in major conferences and academic events in the field can be an effective strategy for doctoral candidates considering the article-based doctoral thesis model. Such events offer valuable opportunities to identify current research trends, better understand journal editors' expectations, and establish professional networks with other researchers. In this way, doctoral candidates can make more informed decisions about the structure of their thesis and increase their chances of academic success.

However, the article-based doctoral thesis model also has significant limitations. Doctoral candidates may lack the experience needed to manage an article-based thesis project, which demands in-depth knowledge of the field and familiarity with the editorial orientations of leading public administration journals. The complexity of authorship attribution and the need to ensure cohesion across the different chapters of the thesis represent additional challenges.

Above all, researcher maturity is a critical factor in this context, since the ability to plan and execute a research project structured as a set of articles requires well-developed project management skills. Not all research topics and objects are suitable for division into articles; moreover, some themes may be better explored through a traditional monograph, in which theoretical cohesion can be more readily maintained.

In addition to these considerations, the main finding of this article is that most article-based doctoral theses defended in public administration in Brazil fail

to clearly define or articulate the epistemological and methodological dimensions throughout the work as a whole. This shortcoming results in conceptual weakening, thereby reducing the explanatory power of the thesis's empirical findings. The effects of this problem extend beyond the individual researcher, as they hinder the accumulation of higher-quality academic knowledge produced by Brazilian doctoral candidates. Consequently, the impact of this issue is systemic, affecting the entire field of public administration.

In light of this interpretation, the appropriate response is not simply to abandon the article-based doctoral thesis model, whose benefits have also been acknowledged in this study. Rather, the priority should be to better prepare graduate programs and researchers to articulate epistemological and methodological components more effectively in theses written as a collection of articles. Such theses require a clearer, more coherent, and more consistent conceptual foundation. By following this path, early-career scholars will benefit from stronger formative training, and the field will accumulate more structured, robust knowledge to advance understanding of Brazilian public administration.

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