

ARTICLE

Following the Trail of Words: Mapping the Trending Topics of Graduate Research in the Brazilian IR Scholarship (1987-2018)^{*,**}

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This paper advances our understanding of the Brazilian IR scholarship by exploring the topics addressed and the geographic scope adopted by its authors, tracing their evolution over time. We utilize data from 2417 master's theses and doctoral dissertations from all IR graduate programs in the country, spanning the years 1987 to 2018. By employing a structural topic model, we identify latent topics present in the abstracts of these documents. This analysis not only allows us to trace a thematic profile of the Brazilian IR scholarship but also provides evidence that the expansion of the Brazilian IR scholarship in the 2000s has led to 01. an increased diversity of topics explored by researchers, and 02. analyses with a broader geographic scope, extending beyond the immediate region. Therefore, as the Brazilian IR scholarship has consolidated, there has been a transition from a policy-oriented approach to a more active involvement in international debates across different subjects and regions.

Keywords: Global IR; scientometrics; international relations in Brazil; text as data; structural topic model.

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Scholars have increasingly recognized the predominant US-centric and limited nature of the International Relations (IR) field, which has led them to reflect on their fundamental assumptions (ACHARYA and TUSSIE, 2021; GAREAU, 1981). The demand for a more authentic expansion and enrichment of the existing knowledge is on the rise. This includes the diversification of theories, methods, and topics that are developed and explored in other regions of the world (ACHARYA and BUZAN, 2017; BIERSTEKER, 2009; HOFFMANN, 1995; LOHAUS and WEMHEUER-VOGELAAR, 2020; WÆVER, 1998). This demand has culminated in the emergence of a 'Global IR' literature during the 2010s, an invitation for scholars to integrate perspectives from various countries and regions into the study of IR (ACHARYA, 2014; ACHARYA and BUZAN, 2019).

In Brazil, this agenda resonated with a group of scholars who were already dedicated to understanding the development of IR scholarship in the country and its immediate region (ALMEIDA, 1998; HERZ, 2002; LESSA, 2005; MIYAMOTO, 1999). Therefore, IR scholars have already reached a reasonable understanding of which are the methods and theories currently mobilized in the discipline in the country (CARVALHO, GABRIEL, and LOPES, 2021; DALL'AGNOL, BATISTA, and CARVALHO, 2021; LOPES, GABRIEL, and CARVALHO, 2022; MEDEIROS et al., 2016; MOURA, SCHWETHER, and SILVA, 2019). However, there is still a lack of systematic studies about the topics addressed in this scholarship. These studies could provide insights into the features of this scholarship, such as how policy-dependent and oriented it is, how focused on other countries/regions, and how integrated into global debates it became after its consolidation.

In this article, we contribute to the understanding of the IR scholarship in Brazil by answering the question: What have been the main topics discussed by Brazilian IR academics? Answering this question will also allow us to respond to others, such as: how did the approach to these topics vary over time? What is the geographic scope of the Brazilian IR scholarship? To answer these questions, we analyze the abstracts of 2417 master's theses and doctoral dissertations produced within graduate departments in the country. Our goal is to map the trending topics of the Brazilian IR scholarship between 1987 and 2018.

We focused on theses and dissertations instead of scientific articles for two reasons. First, an official database compiled by the Coordination for the Improvement of Higher Education Personnel (CAPES) includes key IR graduate-level research conducted in the country from its inception, during the 1980s, until present time. This repository facilitates a systematic and longitudinal comparison, thereby enabling us to trace the evolution of the field in Brazil. Secondly, in Brazil, scientific and academic production is significantly driven by the contributions of graduate students as they were either the current or incoming professors who shaped the field. By scrutinizing their research, we acquire a broad perspective of the discipline in Brazil.

In our analysis, we employed a structural topic model (STM), a well-suited technique to analyze text as data. Leveraging the correlations between word usage in different documents, the STM captures the underlying topics in these documents. At the same time, the use of a non-supervised machine learning algorithm reduces the margin for research-based bias in coding text data, while also allowing us to work with a large volume of information (ROBERTS et al., 2014).

Our analysis confirms two characteristics of the Brazilian IR scholarship that have previously been discussed in the literature about its policy-oriented attribute: 01. this scholarship is mainly focused on Brazil and Latin America, and 02. it mostly addresses topics apparently related to the Brazilian foreign policy, governmental funding, and the international context (ALEJANDRO 2019; HERZ, 2002; MILANI, 2021; TICKNER, 2009). We contribute with two new additional findings. First, we found that the expansion of the Brazilian IR scholarship increased the diversity of topics explored by its researchers. As a result, the Brazilian IR discipline was strengthened and now examines a greater diversity of phenomena. It has moved beyond its policy-oriented approach, which was driven by state needs and foreign policy practices (TICKNER, 2008). This shift has allowed Brazilian IR to better engage in global academic debates, as it now discusses topics, concepts, and theories that are also addressed elsewhere. Second, our research reveals that Brazilian scholars have been expanding their analytical scope by delving into the affairs of other countries and regions.

The remainder of this article is organized as follows. In the first part, we discuss the consolidation and expansion of IR scholarship in Brazil, presenting some

potential factors that boosted its academic production. Second, we introduce our research design. Subsequently, we present and discuss the results. Finally, we conclude.

The consolidation of the Brazilian IR scholarship

The consolidation of IR as a scholarship in Brazil was relatively delayed, mostly induced by government policies, as is usually the case in the Global South (ALEJANDRO, 2019; GAREAU, 1981; TICKNER, 2009). While the first department of international politics in the world was created in 1919, the first IR undergraduate course in Brazil emerged in 1974, followed ten years later by the first graduate program in 1984, both at the University of Brasília (UnB). The second graduate program was only established in 1987, at the Pontifical Catholic University of Rio de Janeiro (PUC-Rio). Before that, research on international politics in the country was restricted to specific groups, such as diplomats, military personnel, journalists, and scholars who were engaged in disciplines such as political science, history, and sociology (MILANI, 2021).

Additional graduate programs were only established in the 2000s, in large part because of governmental policies. One such instance was the San Tiago Dantas Program, initiated by the government to promote the teaching of International Relations (2001). This program led to the creation of IR graduate programs in the Fluminense Federal University (UFF), the Federal University of Rio Grande do Sul (UFRGS), and the San Tiago Dantas consortium, comprising the São Paulo State University (UNESP), the State University of Campinas (Unicamp), and the Pontifical Catholic University of São Paulo (PUC-SP). The Renato Archer Program (2006), which provided funding for research “on fundamental matters for the Brazilian foreign policy, supporting the establishment of cooperative research networks about these fundamental issues for the Brazilian foreign policy” (CNPq apud VIGEVANI et al., 2016, p. 17), free translation), was crucial for consolidating existing IR departments. At the same time, the proliferation of governmental scholarships and fellowships played an important role in easing the path for students to undertake graduate studies (LESSA, 2005; SANTOS and FONSECA, 2009; VIGEVANI, THOMAZ, and LEITE, 2016).

Another governmental policy adopted in the country in the 2000s was the REUNI (Restructuring and Expansion of Federal Universities – 2007), which provided funding to create several IR departments. While primarily focused on undergraduate courses, the REUNI provided more resources for departments and increased the demand for professors in these universities.

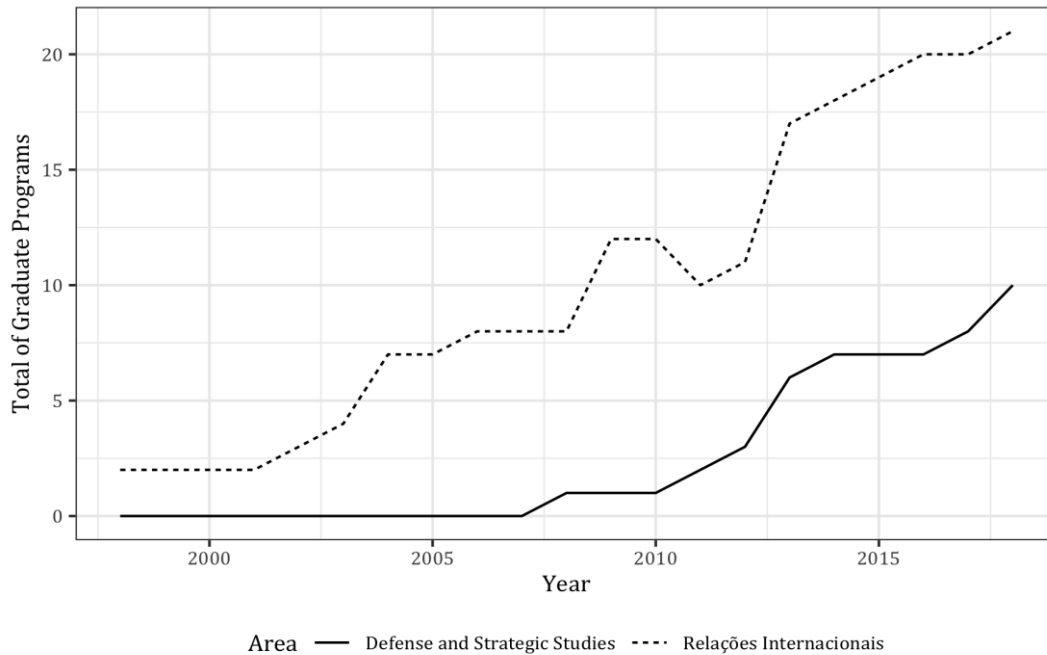
Additionally, there were policies aimed at supporting studies on national defense. Two programs provided funding for research on these matters: Pró-Defesa (Program to Support Teaching and Scientific and Technological Research on National Defense – 2005), and Pró-Estratégia (Program to Support Teaching and Scientific and Technological Research on Strategic Affairs of National Interest – 2012). Pró-Defesa was designed to support academic networks engaged in research related to national defense. Pró-Estratégia helped to strengthen academic networks focused on strategic studies. Graduate programs within military institutions such as the Naval War College and the Air Force University were also incorporated into the hall of IR programs available across the country (VIGEVANI, THOMAZ, and LEITE, 2016).

Increased governmental support and funding played a significant role in driving the expansion of the Brazilian IR scholarship. As Vigevani et al. (2016) note, in addition to the above-mentioned policies, governmental institutions such as the Brazilian Federal Foundation for Support and Evaluation of Graduate Education (CAPES), the National Council for Scientific and Technological Development (CNPq), and Brazilian state-level foundations were crucial for supporting researchers and institutions during this process. The number of IR graduate programs¹ in Brazil increased from 02 to 21 in 17 years, as shown in Figure 01. Undergraduate IR courses have also increased (BARASUOL and SILVA, 2016; FUNDAÇÃO ALEXANDRE DE GUSMÃO, 2021). Figure 01 also shows that the number of graduate

¹In line with the classification of the Brazilian Ministry of Education for IR courses in Brazil, we categorized the following as IR-related courses: International Policies Analysis and Management; Conflict Resolution and Development Cooperation; Diplomacy; International Political Economy; Contemporary Latin American Integration; Latin American Integration; IR; South American IR; and International Politics.

programs dedicated to defense and international security² has increased from 0 in 2007 to 10 in 2018.

Figure 01. Number of IR graduate programs in Brazil (1998-2018)



Source: Elaborated by the authors, based on CAPES (2021).

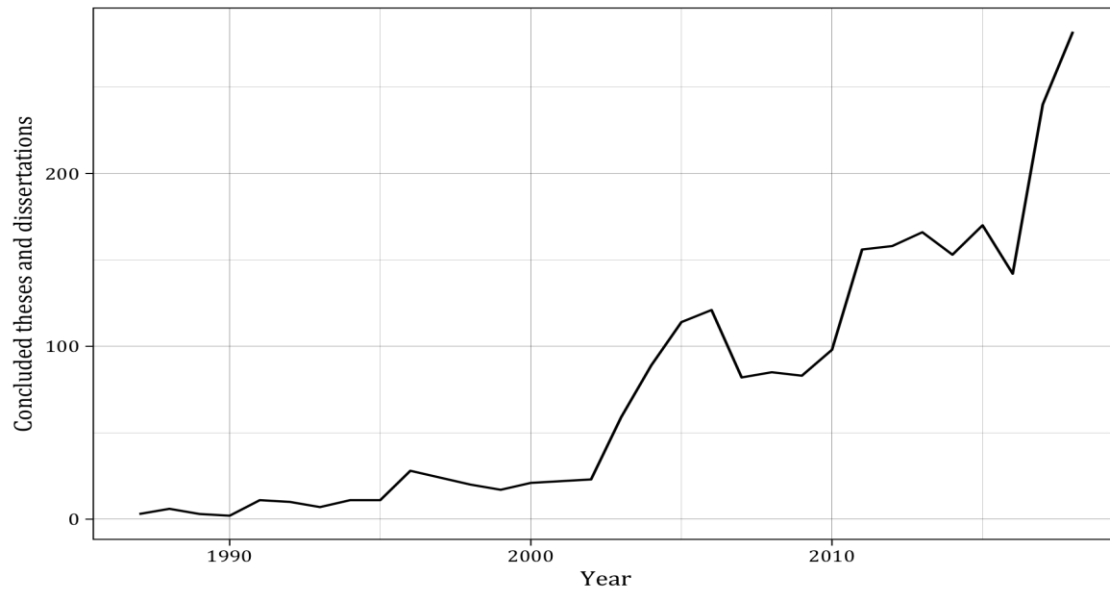
Figure 02 shows the expansion in the number of concluded theses and dissertations in Brazilian IR graduate programs³. While in 1987 only three theses and dissertations were concluded in these programs, this figure rose to 21

²We considered national defense-related courses: Aerospace Sciences; Military Sciences; Border Studies; Security and Defense Strategic Studies; International Strategic Studies; and Maritime Studies. According to the Ministry of Education, all these courses are under the IR umbrella.

³These data exclude theses and dissertations defended in political science (PoliSci) departments. We acknowledge that IR research takes place in these departments, but they were omitted from this study. This decision stems from several analytical reasons. First, although IR is often associated with political science, there is a certain level of separation between these fields in Brazil. While PoliSci usually focuses on domestic politics and public policy, IR often focuses on foreign policy and interstate or transnational relations. It also reflects in theoretical approaches, as IR scholars are mostly focused on IR theories such as realism, liberalism and constructivism (MALINIAK et al., 2017), and methodological approaches, as the Brazilian PoliSci increasingly uses quantitative techniques while IR is mostly qualitative (CARVALHO, GABRIEL and LOPES, 2021; NICOLAU and OLIVEIRA, 2017). Secondly, as we will discuss later, including PoliSci Departments in the analysis would reduce our capacity to identify topics through text analysis. Moreover, IR research in PoliSci departments is quantitatively minor: For instance, at the Federal University of Minas Gerais (UFMG), only 09 out of 137 theses and dissertations defended from 2015 to 2021 were dedicated to IR. For these reasons, we decided that it was analytically better to only investigate IR-related graduate programs – the complete list of which is available in the ‘Empirical Design’ section.

in 2000 and reached 282 in 2018. This development follows a logical progression: more funding led to more departments and scholarships, generating more vacancies for graduate students and consequently resulting in a higher number of theses and dissertations.

Figure 02. Number of concluded theses and dissertations from 1987 to 2018



Source: Elaborated by the authors, based on CAPES (2021).

During this process, academic forums emerged. During the 1980s, the Working Group on International Relations and Foreign Policy (GRIPE) was created within the National Association of Graduate Studies and Research in Social Sciences (ANPOCS) and, after its end, gave place to a Working Group on International Politics within the ANPOCS (MIYAMOTO, 1999). Debates on this matter also took place within the Brazilian Political Science Association (ABCP). In 2005, the Brazilian Association of International Relations (ABRI) was created, bringing together institutions and researchers dedicated to IR topics. In that same year, the Brazilian Association for Defense Studies (ABED) was established, with a specific focus on defense and international security issues (MILANI, 2021; VIGEVANI, THOMAZ, and LEITE, 2016).

As the Brazilian IR scholarship expanded, its profile seems to have changed. It has been moving away from a policy-oriented approach in pursuit of greater internationalization, despite the difficulties in accessing global journals with a high impact factor (LOHAUS and WEMHEUER-VOGELAAR, 2020; NODA,

2020). The leading IR journals in Brazil, namely the *Revista Brasileira de Política Internacional* (RBPI) and *Contexto Internacional*, have restructured their editorial processes to align with international standards. Changes included adopting English as the primary language, using international platforms for manuscript submission and review (e.g., Manuscript Central), involving international reviewers, and securing indexing on international platforms such as SciELO and Web of Science (ALEJANDRO, 2019; ALMEIDA, 1998; LESSA, 2014, 2005).

As the results of this expansion came into view, scholars developed an increasing interest in understanding the evolution of this field. They closely examined the epistemological, theoretical, and methodological paths followed by Brazilian researchers. Similar to other regions in the Global South, most IR scholars in Brazil prefer post-positivistic approaches and qualitative methodologies (ALEJANDRO 2019; BARASUOL and SILVA, 2016; CARVALHO, GABRIEL, and LOPES, 2021; FONSECA JR. and UZIEL, 2019; MALINIAK et al., 2017; MEDEIROS et al., 2016; MOURA, SCHWETHER, and MESQUITA 2019). However, there is still much to understand about the topics these researchers have been exploring.

According to the literature, until the mid-20th century, Brazilian diplomats, politicians, and military officials were primarily focused on understanding the country's role in the world, its national identity, and the means through which its territorial integrity could be consolidated. Brazilian relations with other countries in the 'La Plata' basin and with great powers remained the key topic addressed by those examining international politics in the country until the late 20th century. As academics began engaging in research on these matters, the issue of development and economic disparities began to emerge within analytical debates. Some attempts were made to develop genuine approaches to these topics, such as de Dependency Theory (FONSECA JR. and UZIEL, 2019; LIMA and CHEIBUB, 1983; LOPES, GABRIEL, and CARVALHO, 2022; MILANI, 2021).

In the 1990s, after the end of the authoritarian regime, data accessibility expanded, providing scholars with more opportunities to advance their understanding of Brazil's international behavior. This understanding improved as the field achieved greater consolidation. This phase witnessed greater incorporation

of more rigorous standards and methodological approaches, thus fostering the field's progression towards becoming more scientifically rigorous (LESSA, 2005). At the same time, Brazilian scholars had to make sense of the new developments resulting from the end of the Cold War, such as shifts in the international order and the closer alignment between Brazil and countries in the Southern Cone. In this context, as pointed out by Herz (2002), the Brazilian IR scholarship became increasingly dedicated to globalization, US-Brazil relations, and regional integration. Herz (2002) also notes that environmental studies became more prominent at the time, especially those related to the Amazon, as Brazil took a more proactive position on the global environmental agenda.

Moreover, as democratic Brazil aligned itself with international regimes on matters related to human rights, scholars progressively directed their attention to human rights issues. However, given the creation of the World Trade Organization (WTO) and the proposal for a Free Trade Area of the Americas, the Brazilian IR scholarship also delved into international trade regimes and agricultural negotiations. The goal was to understand Brazil's role in these processes (VIGEVANI, THOMAZ, and LEITE, 2016). Milani (2021) notes that the consolidation of this scholarship in the 20th century is closely intertwined with Brazilian foreign policy and geopolitical thought.

Similarly, Milani (2021) notes that the fact that presidential involvement with foreign policy increased during Fernando Henrique Cardoso's (1995-2002) and Lula da Silva's (2003-2010) presidencies prompted a surge in research on Brazilian foreign policy and its decision-making processes. At the same time, the 'horizontalization' of Brazilian foreign policy allowed actors such as non-governmental organizations (NGOs), subnational governments, and corporations to be included in foreign policy-making processes (FARIA, 2008; FARIAS and RAMANZINI JR., 2015). As the number of IR scholars in the country increased, the Brazilian IR scholarship progressively embraced new topics such as human rights, development, cooperation, security, and defense.

Governmental contributions to defense and security studies are also of significant importance. Attempts have been made to promote civil-military dialogues since the end of the military regime, especially after the Ministry of Defense was created, in 1999. During the 2000s, governmental funding, facilitated

by programs such as Pró-Defesa and Pró-Estratégia, played a significant role in advancing research on these issues in the country (MILANI, 2021; VIGEVANI, THOMAZ, and LEITE, 2016).

We note that IR research in Brazil was not only largely driven by the Brazilian foreign policy, as noted by the literature, but also became increasingly diverse during the 2000s, when apparently different topics were emphasized. At the beginning of the 21st century, the Brazilian scholarship was dedicated to understanding the international system (HERZ, 2002). At the same time, Milani (2021) observed a rise in research on issues such as human rights and the environment, which may not be directly related to Brazil. Conversely, Vigevani et al. (2016) noted Brazil's growing interest in China and Europe, while maintaining a continuous focus on Africa.

This diversification is evident in the establishment of research groups within IR graduate programs in Brazil. These groups are dedicated not only to Brazil but also to various other regions of the world and even encompass the entire international system. To mention just a few examples, there is the Center for Global Studies (Centro de Estudos Globais) and specific groups dedicated to Asia and Africa at the University of Brasília (UnB). PUC-Rio has forums conducting in-depth analyses of countries in the Global South, especially the BRICS⁴. Scholarly groups in PUC-Minas are examining middle powers and the Middle East.

Moreover, an examination of leading Brazilian publications reveals a growing number of papers dedicated to understanding beyond Brazil and its region. Notably, there are also Special Editions with broader scopes. For example, a Special Issue in 'Revista Brasileira de Política Internacional' investigated global climate governance, and another focused on China. An edition of 'Contexto Internacional' focused on gender in the Global South, while another explored the theme of global cities. In a study examining publications from 1979 to 2016, Alejandro (2019) found that approximately 39% of the articles published by Brazilian scholars did not address Brazil or its region. This trend is mirrored in academic events in Brazil.

While we acknowledge that Brazilian foreign policy and insertion have played pivotal roles in shaping the Brazilian IR scholarship, particularly during its

⁴Brazil, Russia, India, China, and South Africa.

period of consolidation, it is plausible to suggest that its expansion might have led to a shift in its profile. Consequently, it is essential to reevaluate whether old labels still apply to this academic field, given that recent developments might have changed its profile. We present in the next section the empirical design adopted in this article.

Empirical design

We analyze the academic production of Brazilian IR graduate programs using data from the 'Caderno de Indicadores CAPES⁵' and 'Dados Abertos CAPES⁶'. Our dataset encompasses 7,240 master theses and doctoral dissertations across graduate programs in international relations and political science – it is important to note that CAPES consolidates both areas into a single field. Our first challenge was to extract only IR-related works from the database. To do so, we only considered documents from graduate programs in the following areas: IR, Diplomacy, Political Science and IR, Latin American Integration, South American IR, Strategic Studies, Military Sciences, Aerospace Sciences, Marine Studies, Border Studies, and Analysis and Management of International Policies.

Despite the institutional connection between the disciplines of IR and PoliSci, these fields are relatively separated in Brazil (LIMA, 2013; MILANI, 2021). Additionally, it is worth noting that IR research in PoliSci departments is generally of limited quantitative significance. For instance, between 2015 and 2021, only 09 out of 137 theses and dissertations defended in the Department of Political Science at the Federal University of Minas Gerais, which is recognized as the best in the country by CAPES, were related to IR.

Additionally, there is a methodological reason for such an exclusion. We use an inductive, non-supervised technique to identify the topics present in these documents. Topic interpretation would be more ambiguous if PoliSci departments were included, as similar sets of words can have different meanings. For example, terms like 'voting', 'decision-making', and 'rules' could correspond to the topic of 'Legislative' in a PoliSci document, whereas in an IR document, they could be associated to the topic of 'United Nations'. For these reasons, we excluded from our sample documents produced in PoliSci departments. Finally, since most documents

⁵Available at <<http://conteudoweb.capes.gov.br/conteudoweb/CadernoAvaliacaoServlet>>.

⁶Available at <<https://dadosabertos.capes.gov.br/dataset>>.

are written in Portuguese, we removed those written in other languages (92 documents, or 3.08% of the sample). The resultant database contains 2,417 documents, featuring variables such as title, abstract, author, advisor, and institution. Figure 02 shows the longitudinal distribution of these documents over time.

Subsequently, we used a Structural Topic Model (STM) to extract the topics – i.e., sets of words – found in the abstract of each document⁷, using the *stm* package (ROBERTS, STEWART, and TINGLEY, 2019, 2016) to *R*. STM is a technique to analyze text as data, using a non-supervised machine learning algorithm to identify the topics available in a set of documents. It is similar to Latent Dirichlet Allocation – LDA (BLEI, NG, and JORDAN, 2003) – in that it captures which words belong to each topic based on the correlations between the mentions of these terms (ROBERTS et al., 2014, 2013).

However, STM differs from LDA because it allows for covariates to be included on the document level. It enables researchers to explore relations between document-related variables and topic prevalence and content. ‘Prevalence’ refers to the proportion of appearance of each topic in each document analyzed. ‘Content’ refers to the words used in each topic (ROBERTS et al., 2014). Therefore, for this article, it is crucial to consider the potential relations that 01. the institution, 02. the subfield to which a graduate program is related, and 03. the year of publication might have with the prevalence of each topic in the analyzed documents. This rationale prompted us to include these covariates in the model.

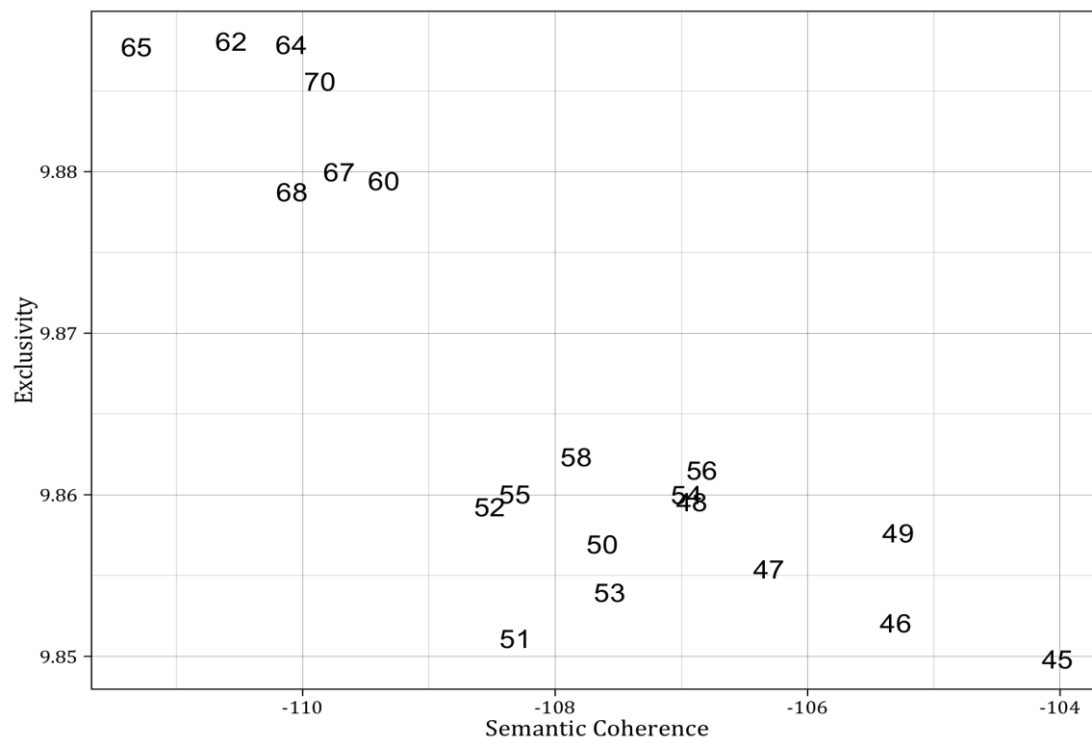
Before proceeding to the STM, we preprocessed the abstracts, following a standard procedure. We converted all the texts to lowercase, stemmed all words (using the ‘*ptstem*’ package), and removed common stopwords – e.g., prepositions and articles (GRIMMER and STEWART, 2013). We also removed another vector of stopwords derived from frequently occurring terms within the documents analyzed, such as ‘tese’, ‘dissertação’, ‘analisa’, and ‘explica’. These words are often used to provide context to the reader but contribute minimally to enhancing our understanding of the topics in each document. Then, we merged compound words that were used frequently, such as ‘política externa’ and ‘Estados Unidos’, to improve

⁷We only analyzed the abstracts as our database does not include the full text of each document.

topic identification. Finally, to avoid including excessively rare or overly common terms, we excluded words that appeared in less than 1% and more than $\frac{1}{3}$ of the 'corpus'. Both of these thresholds were defined following a document-term frequency analysis in accordance with the literature. The resultant document-term matrix contains 2,417 documents, 1,019 unique terms, and 100,538 tokens.

After preprocessing the 'corpus', we defined the number of topics (K) in our model. We relied on a standard STM procedure, choosing K based on a trade-off between semantic coherence and exclusivity. Semantic coherence involves assessing the frequency of co-occurrence among words within a topic. The most coherent topics are characterized by words that share a similar frequency. Exclusivity measures the extent to which the terms within a topic are exclusive – i.e., whether they belong exclusively to that topic or span across multiple topics (MIMNO et al., 2011; ROBERTS et al., 2014; ROBERTS, STEWART, and TINGLEY, 2016). Figure 03 exhibits the results for these indicators.

Figure 03. Exclusivity and semantic coherence, based on the number of topics



Source: Elaborated by the authors, based on CAPES (2021).

Among the different models considered, the one with $K=49$ had a better performance. Not only did it outperform the others, but it also showed interpretability and allowed the topics to be assessed with a certain degree of specificity. We labeled each topic, using two indicators: 01. the most frequently occurring terms, and 02. the Frequency-Exclusivity (FREX) score, which considers if a frequent term is also exclusive to a specific topic. To enhance their validity, all authors of this article checked each label. The topics and their labels are available in the Appendix. In the next section, we present and discuss the results of the STM.

Results and discussion

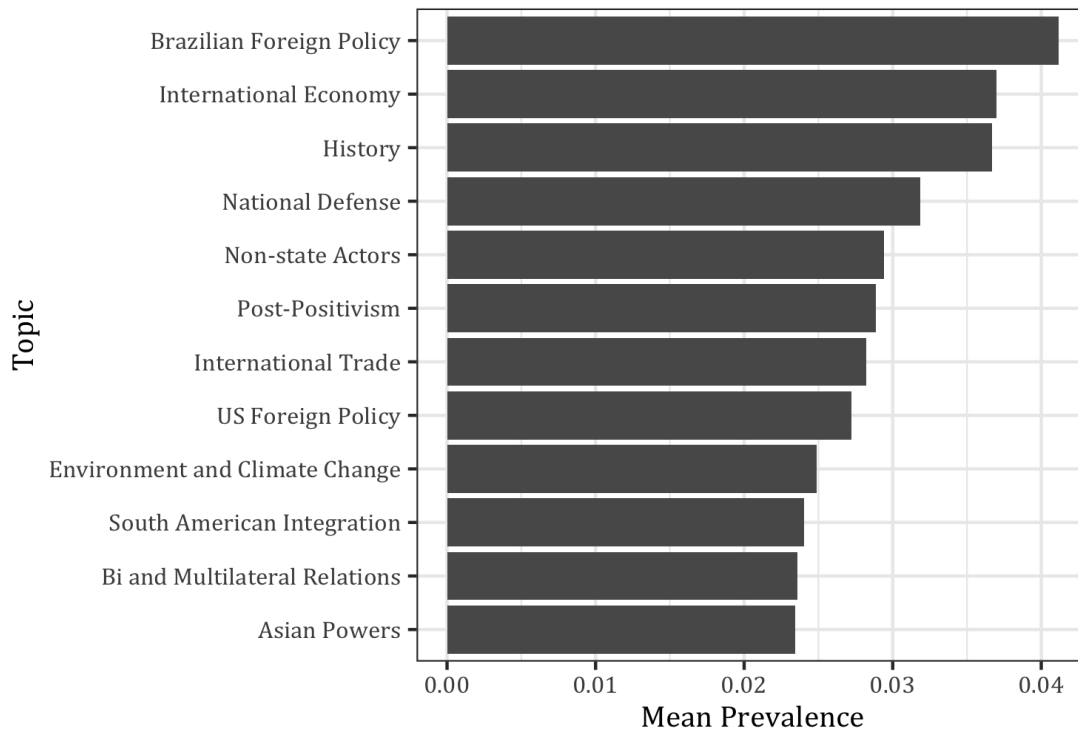
The first result of our empirical analysis is presented in Figure 04, where the most prevalent topics in our sample are shown. In line with what is established in the existing literature, Brazilian foreign policy emerges as the most frequently mentioned topic in the documents. International economy and IR history are also relevant, corroborating the current impression that Brazilian scholars have investigated trade-related matters concerning Brazil and adopted historical-descriptive approaches in their analyses. In addition, the incentives to research national defense issues also seem to have generated results, as indicated by the burgeoning interest in this topic in the country. This preliminary observation is consistent with the existing literature (FONSECA JR. and UZIEL, 2019; HERZ, 2002; LESSA, 2005; MILANI, 2021; VIGEVANI, THOMAZ, and LEITE, 2016).

Our results also point to new and interesting features, as shown in Figure 04. The Brazilian IR scholarship has also assimilated the global debate on post-positivist epistemology and theories (ACHARYA and BUZAN, 2017; ALEJANDRO, 2021; JØRGENSEN et al., 2017). Scholars seem to pay attention to global dynamics, especially the rise of Asian powers, which has become a prominent topic in the Brazilian scholarship. The presence of these two topics in the ranking suggests, to some extent, that this scholarship is not disconnected from global dynamics and debates.

It is important to note that these topics occur seasonally. Figure 05 presents the five most frequently mentioned topics in IR theses and dissertations in four

different years (1988, 1998, 2008, 2018). By the end of the 1980s, after the country's re-democratization, the recently created Inter-American Human Rights System was among the most frequently mentioned topics. Similarly, the topic of International Economic Crises also featured prominently, as several Latin American countries, including Brazil, were grappling with such crises.

Figure 04. The most prevalent topics in IR theses and dissertations in Brazil (1987-2018)



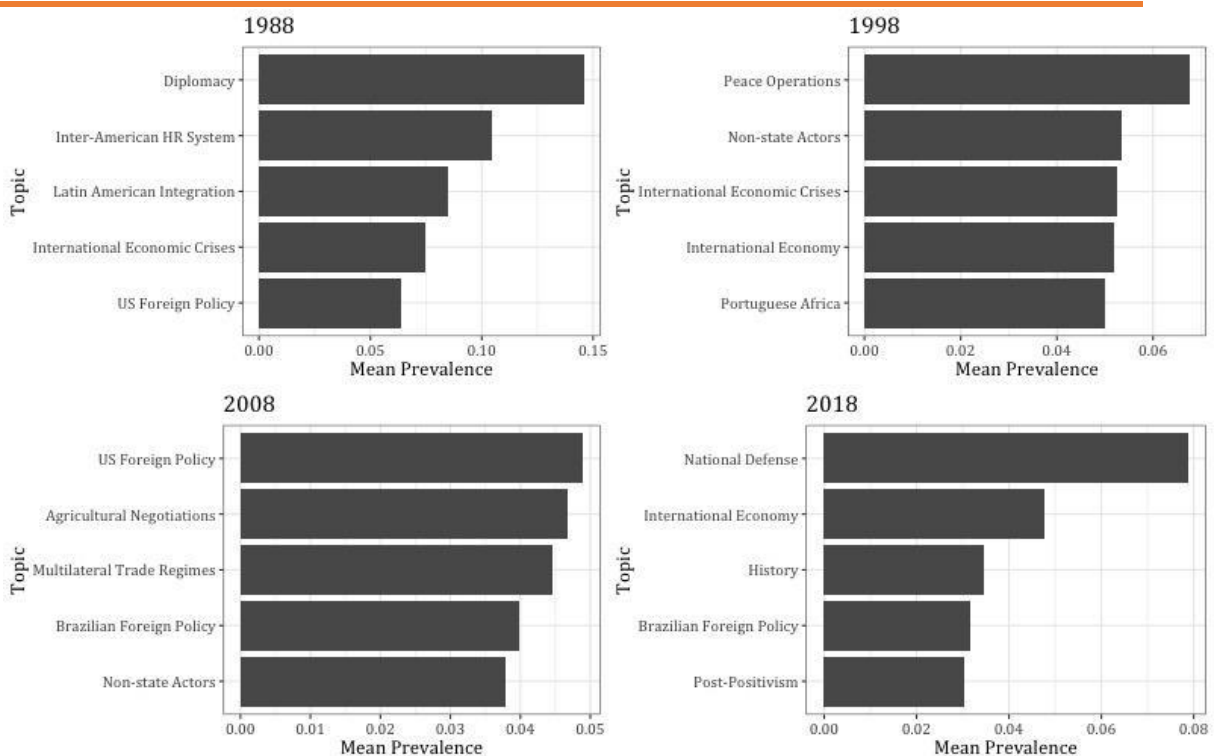
Source: Elaborated by the authors, based on CAPES (2021).

The situation changed ten years later. In 1998, peace operations became the most prevalent topic in IR theses and dissertations in Brazil. At the time, the number of UN peace operations had significantly increased (DIEHL, 2008; KENKEL, 2013). In the context of globalization and increasing trade negotiations, the significance of research on non-state actors in IR and the international economy also increased.

In another ten-year leap, in 2008, international trade negotiations and regimes became the most frequently mentioned topics. Also, Brazilian foreign policy and South American integration gained more prominence on researchers' agendas. Finally, in 2018, following governmental incentives, the topic of national defense joined the ranks of canonical IR matters in Brazil, alongside topics such as the history of IR, international economy, and Brazilian foreign policy.

This seasonality was largely driven by the expansion of the Brazilian IR scholarship. Figure 06 shows how the prevalence of the 464 STM-generated topics behaved from 1987 to 2018⁸. Each dot represents one thesis or dissertation. To more accurately determine the presence of a topic in the abstract of a document, we set a threshold at a prevalence exceeding 0.1. This determination stems from the perception that, below this value, the topic is not effectively present, consisting only of sporadic mentions of some of its terms.

Figure 05. Topics with the highest average prevalence per year



Source: Elaborated by the authors, based on CAPES (2021).

It is worth mentioning that topics are not assigned to documents in a mutually exclusive manner. Consider, for example, a thesis on the role of Brazilian public opinion in the context of agricultural negotiations at the WTO. In this case, the STM could result in a prevalence of 0.3 for the topic of 'public opinion', 0.15 for 'brazilian foreign policy', 0.5 for 'agricultural negotiations', and residual

⁸We removed three topics that emerged from the STM analysis because they were found to be uninterpretable.

values for the other topics. The sum of the prevalence of all topics in each document will always be 01.

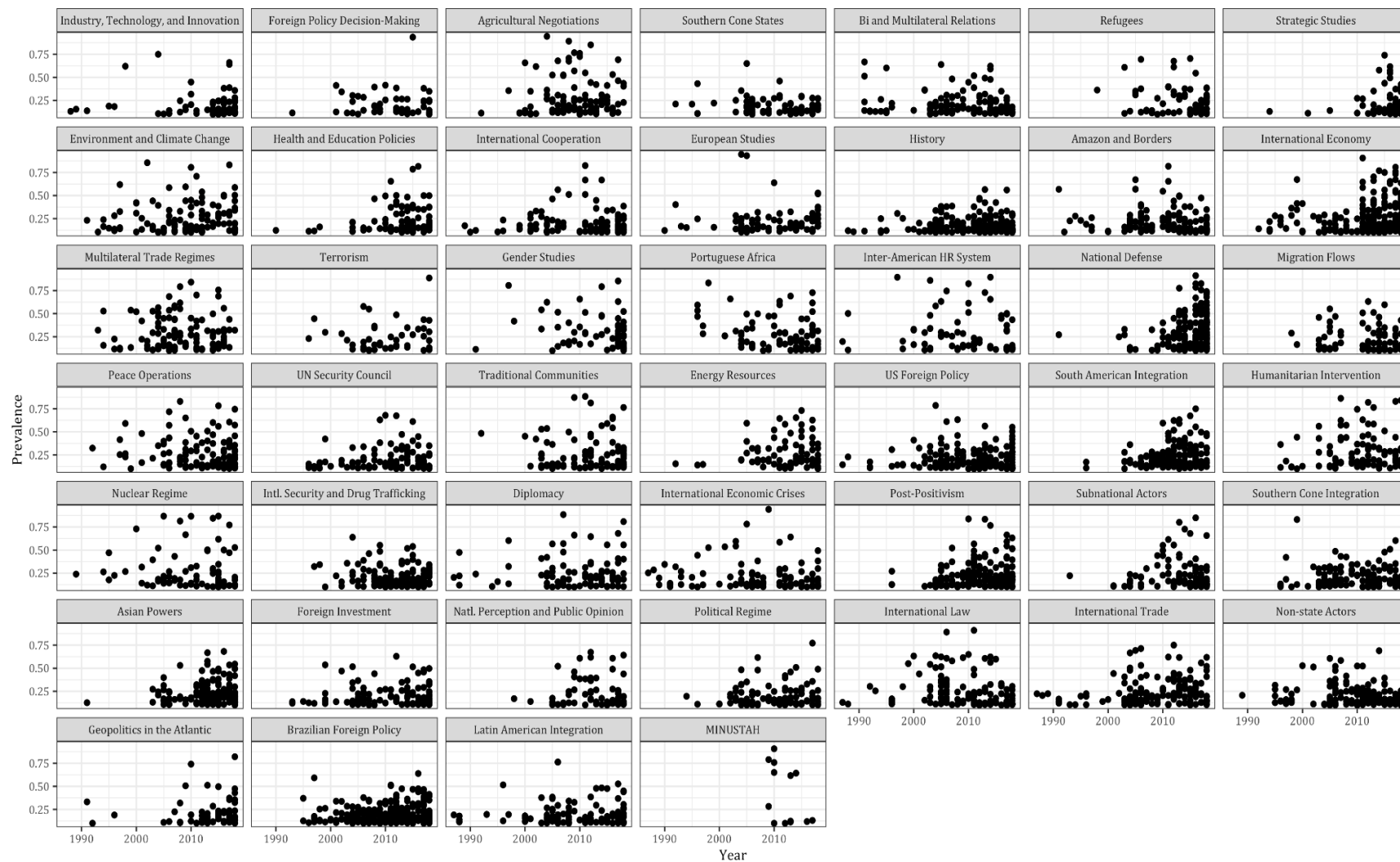
Indeed, it is evident that the field of international relations in Brazil has become more thematically diverse as it expanded over the last three decades. This development supports the claim that more funding led to more topics being investigated within this scholarship. Figure 06 shows that issues traditionally analyzed within the Brazilian IR scholarship, such as history, international economy, trade, and relations with great powers like the United States (HERZ, 2002; MILANI, 2021), remained subjects of examination discussed during the entire period under study. However, new matters were also incorporated into this scholarship.

During the 1990s, as the regional economic and commercial integration process deepened (FUENTES, 1994), discussions about the agricultural sector and the Southern Cone gained prominence, along with approaches related to foreign investments. Multilateral trade regimes also emerged on the agenda, reflecting the establishment of the WTO. In addition, given the shift in Brazilian engagement with the environmental agenda and the hosting of the Rio-92 Summit (LAGO, 2006), the topic of environment and climate change was incorporated into the agenda of Brazilian graduate programs, along with discussions about the Amazon.

At the same time, studies on foreign policy, previously analyzed from the perspective of diplomacy, underwent a shift in focus. Scholars were now investigating the actors involved in foreign policy and examining the African continent as a research subject. Finally, in the context of international security, the topic of UN peace operations, as mentioned above, experienced a surge in research, especially towards the end of the 2000s, coinciding with the expansion of UN-authorized missions (KENKEL, 2013).

Since the 2000s, the research agenda of the Brazilian IR scholarship has become more diverse. This diversity could be categorized into at least two strands: 01. new approaches to traditional matters and 02. the emergence of underexplored topics. The first strand indicates that while the Brazilian IR scholarship continues to address its historical core issues, scholars incorporated new analytical frameworks, models, and perspectives. The black box of Brazilian Foreign Policy was opened (FARIA, 2008). Scholars not only revealed the course of this policy but also examined policymakers and policy-making processes, along with other actors, such as non-state organizations and public opinion.

Figure 06. Prevalence of documents in different topics



Source: Elaborated by the authors, based on CAPES (2021).

Concurrently, Brazilian IR scholars redirected their focus towards different kinds of actors. Women, refugees, and traditional communities gained renewed attention from the 2000s onward. Recognizing the changing views about Brazil and its people (KRISTENSEN, 2020), these scholars embraced new analytical frameworks to study these new actors. Such new frameworks were offered by a global epistemological debate (ACHARYA and BUZAN, 2019, 2017; JØRGENSEN et al., 2017), where terms related to post-positivism gained prominence in the 2000s. By focusing on identity, ideas, and cultural and social interactions, they could use, for example, feminist epistemologies to study the role of gender in international relations or adopt constructivist approaches to explore refugee dynamics. Embracing post-positivistic frameworks also allowed for the use of decolonial approaches to discuss IR in the Global South. This shift entailed moving beyond mainstream approaches such as realism and liberalism and instead incorporating perspectives from the Global South into the discipline.

Figure 06 also reveals that Brazilian scholars increasingly addressed the developments in international politics during the 2000s. Following the 9/11 terrorist attacks in the United States, the topic of terrorism was included in the IR field. Similarly, with the creation of the Doha Round and the consolidation of the WTO and the Southern Common Market (Mercosur) (CESAR and SATO, 2012), there was a growing influence of subjects such as agricultural negotiations and trade regimes⁹. In the context where the Brazilian government was prioritizing South-South relations, there was a boost in research dedicated to the topic of international cooperation. Finally, with the rise of the Asian powers (STUENKEL, 2016), Brazilian scholars are increasingly dedicated to these nations.

As for international security, the Brazilian participation in the UN Stabilization Mission in Haiti (MINUSTAH) led to a greater focus on peace operations in the country. Also, as Brazil gained prominence in security discussions – and even assumed a role as a norm entrepreneur (TOURINHO, STUENKEL, and BROCKMEIER, 2016) –, the Brazilian scholarship shifted its attention to ‘humanitarian interventions’. Additionally, with discussions surrounding the reform of the United Nations Security Council (UNSC), this issue gained increased attention.

⁹These topics were more frequently mentioned in 2004, three years after the Doha Round. This time gap is not surprising since it takes at least two years to complete a master's thesis and four years for a doctoral dissertation.

Following governmental incentives, national defense and strategic studies became the most explored topics in the category of international security issues. As the evolution of both topics suggests (see Figure 06), research on these subjects increased after military programs were integrated into postgraduate programs in political science and international relations, not to mention the establishment of programs such as Pró-Defesa and Pró-Estratégia.

In sum, several different topics were addressed within Brazilian IR graduate programs from 1987 to 2018. The 2000s was a particularly diverse period, coinciding with the expansion of the Brazilian IR scholarship, largely fueled by increased funding. This scholarship was able to not only focus on Brazil and its region but also to analyze trends and shifts in the global political landscape, such as the post-9/11 relations and the emergence of Asian powers. Brazilian scholars were also attuned to international events, bringing up-to-date information to IR departments in the country.

Next, we conduct a more detailed analysis of our findings, observing and comparing longitudinal trends in the STM topics and identifying the evolving profile of this scholarship.

Exploring the evolution of topics based on their average prevalence

In this section, we intend to identify topics that became more or less prevalent in the Brazilian IR scholarship during its consolidation. To do so, we use a measure that facilitates a comparison of the frequencies of different topics. We standardized the prevalence of topics to bring them to a similar scale. To achieve this, we set the mean of the overall prevalence (0.0214) to a value of 0 and its standard deviation (0.0625) to a value of 01, both positive and negative. Then, the prevalence of each topic in each document was converted using the following formula¹⁰:

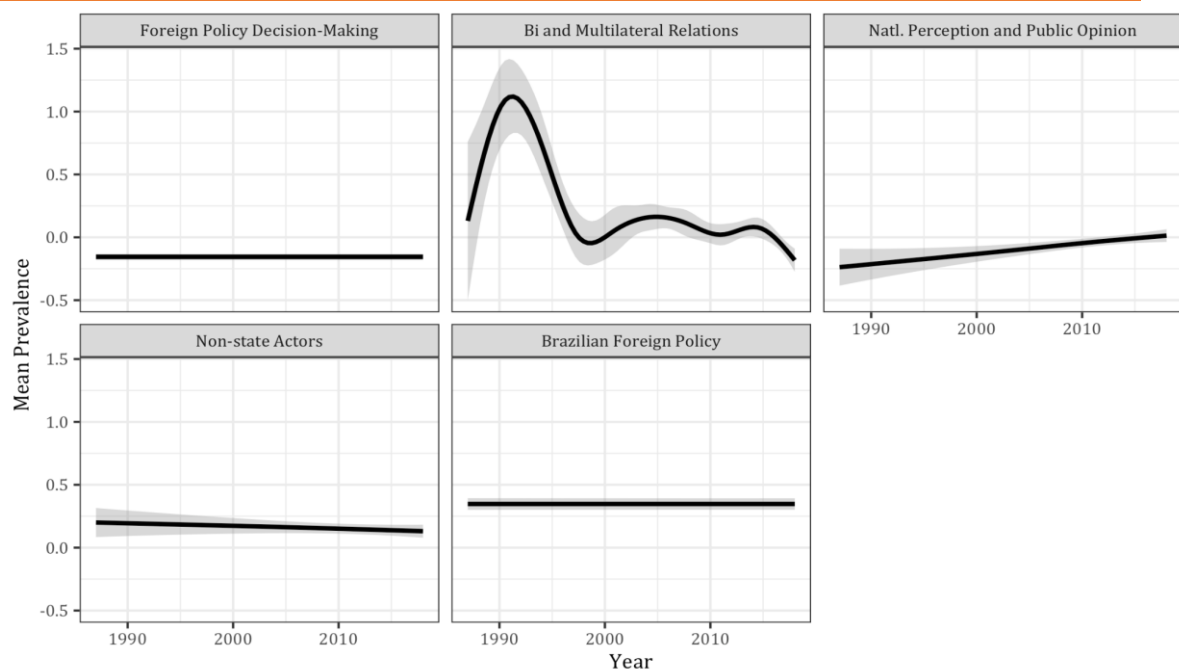
$$Z_{t,d} = \frac{x_{t,d} - \mu}{\sigma}$$

¹⁰Z is the standardized score, corresponding to the prevalence of topic t in document d, subtracted by the mean prevalence of all topics in all documents, divided by the standard deviation.

After the standardization, we analyzed how the mean prevalence for each topic behaved over time through polynomial models. These models generated curves based on yearly averages, allowing us to discern whether there have been increases or decreases in the mean prevalence of each topic over the years. In other words, the charts in Figure 07 show which topics have gained or lost prominence within the Brazilian IR scholarship over time when compared to other topics. The statistical results for the polynomial models are available in the Appendix, corroborating all the variations we will discuss next.

Figure 07 illustrates temporal trends for topics linked to foreign policy. The prominence of research on bilateral and multilateral relations reduced over time, while studies analyzing the public's perceptions on foreign policy and the role of public opinion gained prominence. These shifts suggest that scholars have changed their approach to foreign policy. On the other hand, other foreign policy-related topics demonstrated a consistent presence without exhibiting seasonal fluctuations. The Brazilian foreign policy maintained a prevalence above the average throughout the studied period.

Figure 07. Trends in the average prevalence of topics related to foreign policy

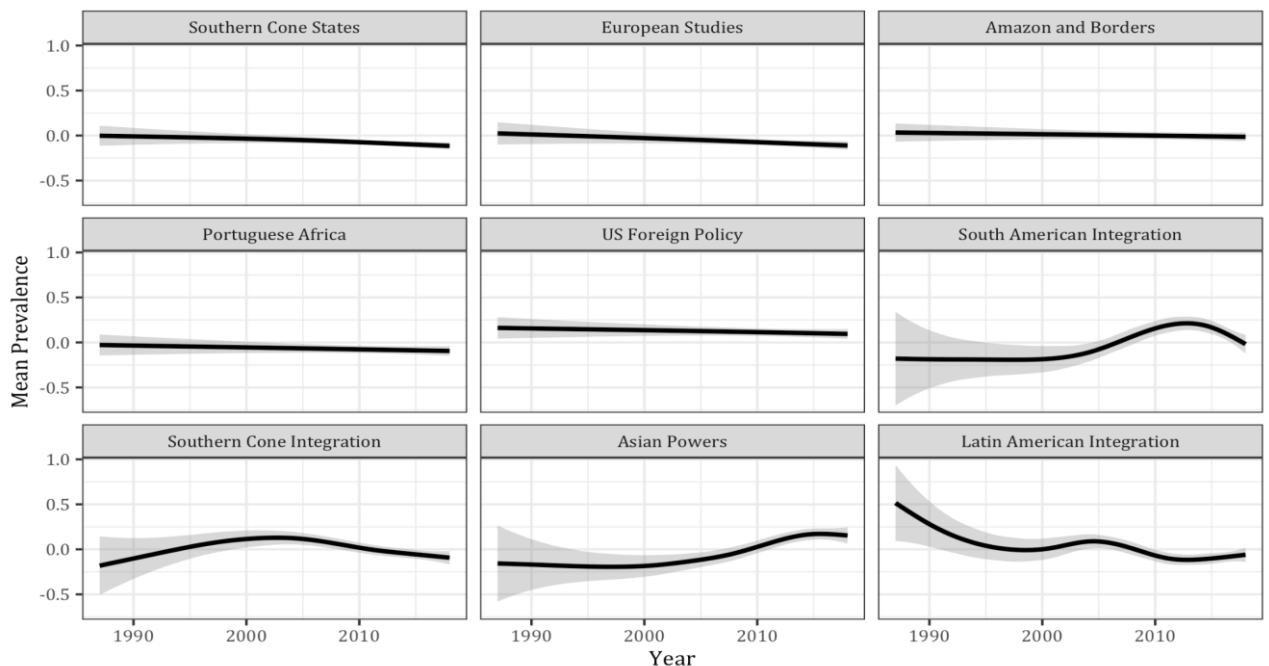


Source: Elaborated by the authors, based on CAPES (2021).

Figure 08 shows a different pattern for topics linked to research on regional and great powers. The Southern Cone received relatively stable priority in the Brazilian IR scholarship through the last decade. Latin American integration was more emphasized during the 1980s. However, the rise of 'post-hegemonic' regionalism and the establishment of regional organizations such as the Union of South American Nations (RIGGIROZZI and TUSSIE, 2012) appears to have shifted the focus towards South America. Brazil emerged as a hub for knowledge production about regional integration, hosting a significant number of researchers who contributed articles about this subject (DALL'AGNOL, BATISTA, and CARVALHO, 2021).

As for other regions, there was a slight decline in studies dedicated to Europe and the United States during the 2000s. On the other hand, with the rise of a multipolar order (STUENKEL, 2016), Asian countries have received increasing attention, apparently at the expense of Western nations. Therefore, it is reasonable to assume that both regional and global contexts shape the agenda of Brazilian IR scholarship.

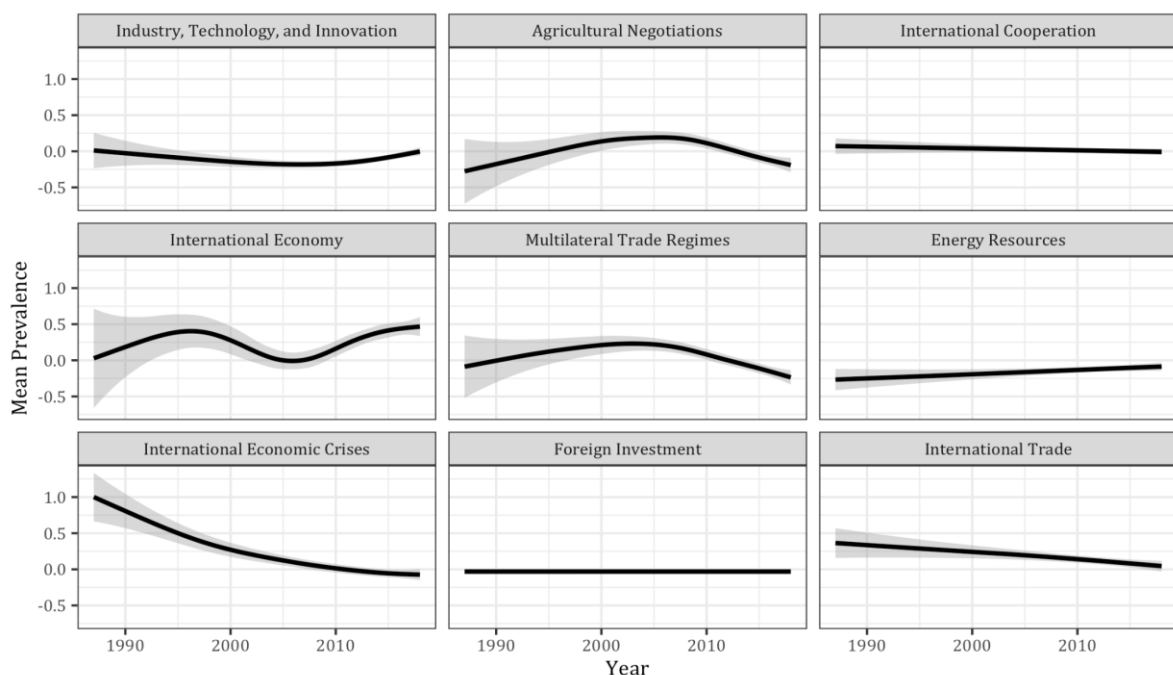
Figure 08. Trends in the average prevalence of topics linked to regional and major power studies



Source: Elaborated by the authors, based on CAPES (2021).

Figure 09 helps us see how regional and global contexts affect this agenda. That is the case with the topics related to the International Political Economy. The creation of Mercosur and the Doha Round (CESAR and SATO, 2012) amplified the prominence of agricultural negotiations and multilateral trade regimes. Similarly, energy resources caught the attention of scholars in the context of Brazil's increased investments in oil extraction and the 'commodities boom' (CAMPELLO, 2014). Concurrently, there were more mentions of international cooperation during the 2000s, aligning with the emergence of South-South cooperation (AYLLÓN PINO, 2014). Conversely, the topic of economic crises waned within the Brazilian IR scholarship as Brazil surmounted the crises of the 1980s and 'took off' (THE ECONOMIST, 2009).

Figure 09. Trends in the average prevalence of topics linked to the international political economy



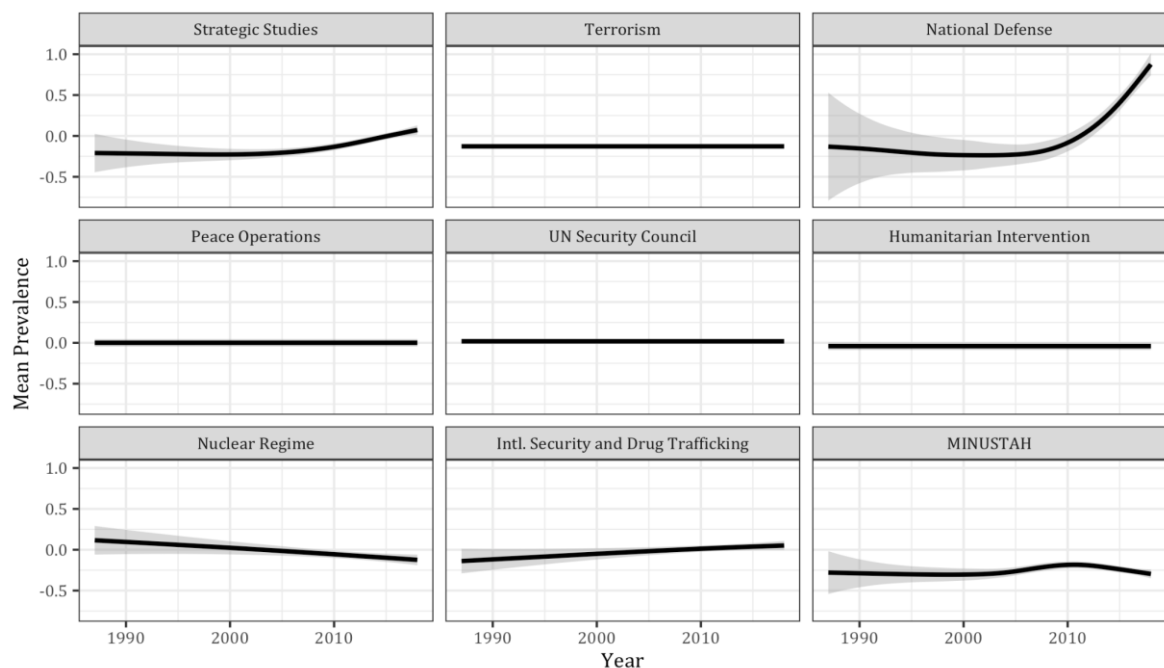
Source: Elaborated by the authors, based on CAPES (2021).

Beyond the influence of international and domestic contexts, what seems to have significantly shaped the agenda of the Brazilian IR scholarship is direct governmental incentives. Although most governmental funding was not attached to specific topics and thereby fostered thematic diversity in this scholarship, part of this funding was directed to security-related research through the Pró-Defesa and Pró-Estratégia programs. These initiatives, especially the one focused on national

defense, led to an increased prominence of security-related topics in the Brazilian IR scholarship, as shown in Figure 10.

Strategic studies and national defense, topics that were not commonly addressed in this scholarship, gained prominence in IR theses and dissertations after the accreditation of graduate programs in military institutions and the establishment of programs such as Pró-Defesa and Pró-Estratégia. National Defense even became the most frequently mentioned topic in the country, as shown in Figure 05. The United Nations Stabilization Mission in Haiti (MINUSTAH) also received attention, as Brazil assumed a leadership role in the operation. On the other hand, research about nuclear regimes declined after the Cold War, while studies related to drug trafficking increased over time. Additionally, the other issues related to international security remained constant vis-a-vis other topics in the Brazilian scholarship.

Figure 10. Trends in the average prevalence of topics related to international security and defense



Source: Elaborated by the authors, based on CAPES (2021).

Lastly, we highlight topics linked to 'new issues' addressed in IR. Mentions of refugees and gender studies have been steadily increasing, as shown in Figure 11. This growing trend aligns with the advances in gender studies in Brazil and the

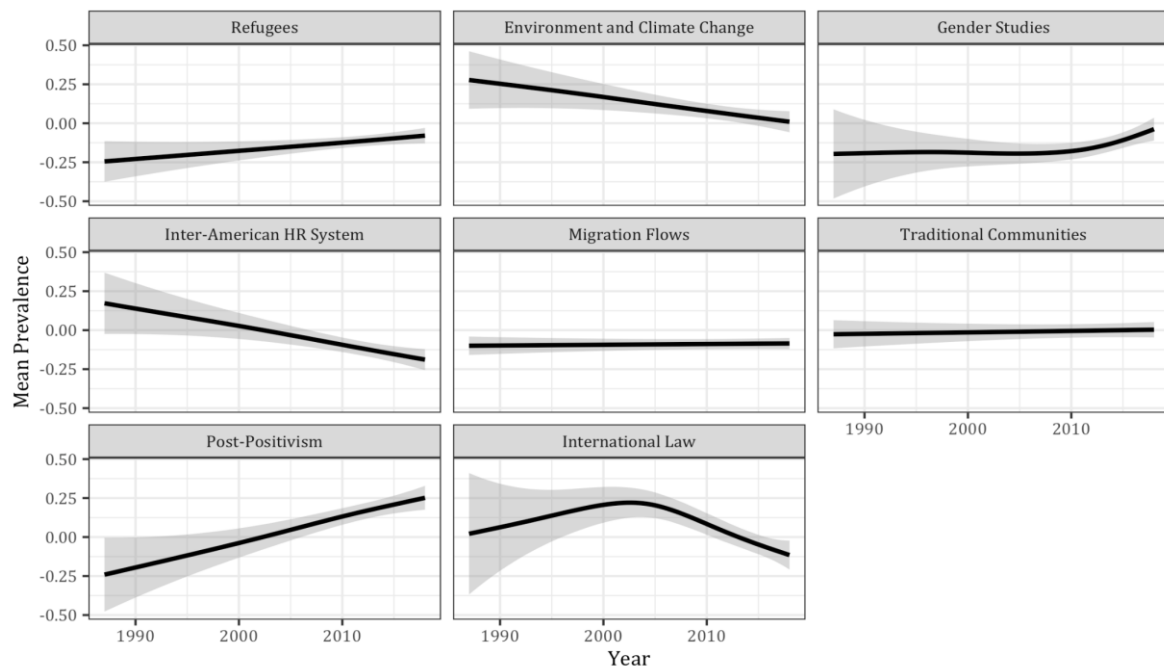
broader international human rights agenda. Therefore, the scope of research on human rights expanded beyond its primary focus on the Inter-American HR System. The Brazilian scholarship appears to have also been theoretically, methodologically, and epistemologically influenced by global academic discussions related to international relations. Figure 11 also shows that post-positivism gained ground in the 2000s with the still ongoing debates on sociological and decolonial approaches to IR (ACHARYA and BUZAN, 2019, 2017; JØRGENSEN et al., 2017).

In contrast, research on environment and climate change lost prominence during the 2000s, despite the growing global discussions on environmental issues and Brazil's international role in these debates (CARVALHO, 2012). We highlight, however, that the reduction in the mean prevalence does not mean that fewer scholars were studying the issue. On the contrary, as shown in Figure 6, more studies have mentioned this subject. This finding indicates that Brazilian IR scholars have been paying less attention to the environment and climate change compared to other topics.

The topic of international law also fluctuated over time. It underwent a period of growth until 2005, followed by a sharp decline. In contrast, topics such as migratory flows and traditional communities remained constant throughout the analyzed period.

The evidence provided in this section shows that the trajectory of the Brazilian IR scholarship, particularly its thematic focus, was influenced by factors such as the Brazilian foreign policy, the country's international engagement, changes in the global and regional political environment, and direct governmental incentives. These findings corroborate what has already been established in the literature (FONSECA JR. and UZIEL, 2019; HERZ, 2002; LESSA, 2005; MILANI, 2021). Our results, however, show that the thematic focus also shifted in response to the international context and global debates, which suggests that this scholarship is, to some extent, connected not only to the immediate Brazilian context but also to global events. It appears to be particularly responsive to recent global debates such as those related to feminism, refugees, and post-positivism.

Figure 11. Trends in the average prevalence of topics related to human rights, migration, environment, and post-positivism



Source: Elaborated by the authors, based on CAPES (2021).

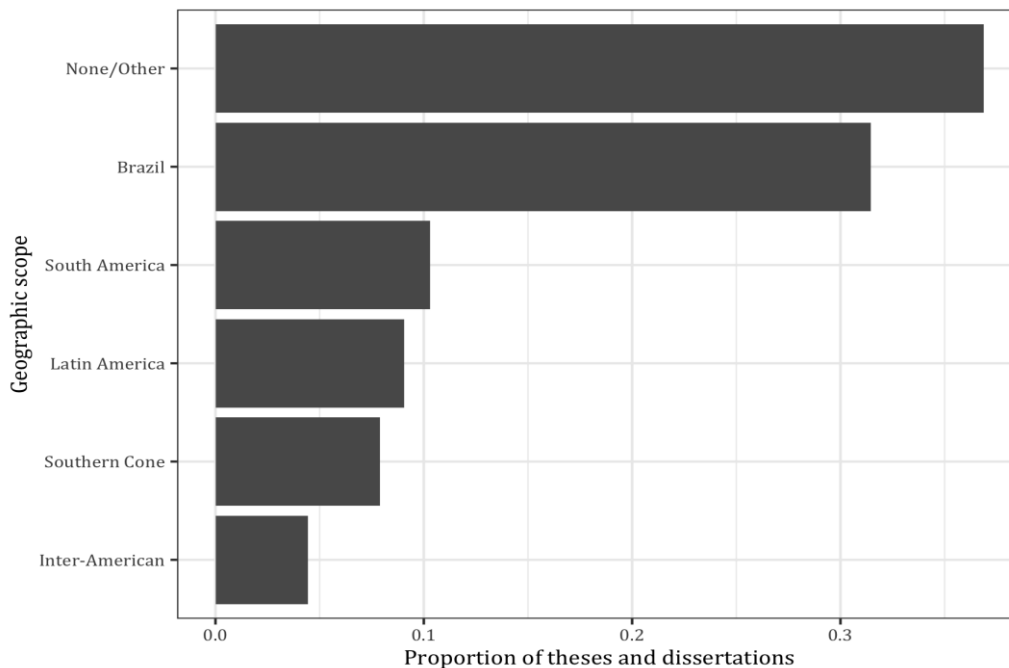
What is the geographic scope of the Brazilian IR scholarship?

To assess the geographic scope of Brazilian IR studies, we first categorized all documents based on their titles, abstracts, and keywords using the following procedure: 01. Documents containing the words 'brasil', 'peb', and 'brasileir' were categorized as focusing exclusively on Brazil; 02. Documents mentioning terms such as 'merco', 'iguacu', 'montevide' and the names of Southern Cone states were categorized as related to the Southern Cone region; 03. Documents containing the words 'sulameric', 'unasul', 'amazon', and the names of the South American countries were classified as focusing on the South American region; 04. Documents mentioning 'celac', 'alalc', 'aladi', 'latin', and the names of other Latin American countries were categorized as related to the entire region; and 05. Documents citing 'oea', 'interam', and 'panamer' were categorized as adopting Inter-American

approaches. Our classification was mutually exclusive¹¹: if a document fell into multiple categories, the broader geographic scope was considered.

Results shown in Figure 12 corroborate the intuitive idea that most research (around 60%) within the Brazilian IR scholarship is focused on Brazil and its region, whether it is approached through the lens of the Southern Cone, South America, Latin America, or an Inter-American approach. Moreover, 36.9% of the analyzed abstracts of theses and dissertations refer to other regions or engage in theoretical discussions that do not focus on a particular region. Among the 1,525 documents related to Brazil and its region, we observed a prevalence of the topics 'European studies', 'Portuguese Africa', 'US foreign policy', and 'Asian powers', with prevalences higher than 0.1 in at least 190 documents. This indicates the existence of comparative analyses in these documents.

Figure 12. Geographic scope of Brazilian IR theses and dissertations



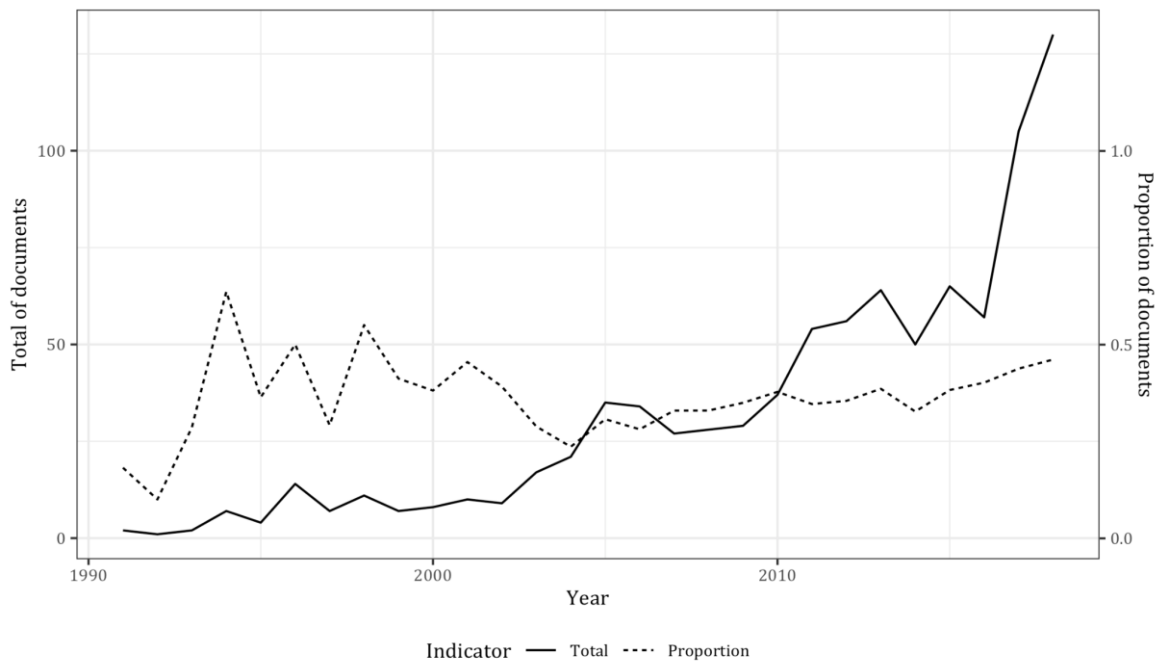
Source: Elaborated by the authors, based on CAPES (2021).

Figure 13 shows that the expansion of the Brazilian IR scholarship is associated with an increasing number of theses and dissertations that do not mention Brazil or its region. Using the criterion of not mentioning Brazil or its

¹¹We found this coding method to be more accurate compared to using the topics obtained after the STM. This approach allowed us to specifically identify the presence or absence of a specific set of words.

region, this scholarship moved from having no documents meeting this criterion in the late 1980s to having 130 (out of 282) concluded works in 2018. By observing the proportions, we reach a similar conclusion. Works meeting this criterion became increasingly prominent during the 2000s. In 2018, 46.1% of the concluded theses and dissertations in the country met the criterion. This finding corroborates Alejandro's (2019) claim that this scholarship's profile has been changing, progressively shifting from a policy-oriented approach to an internationally oriented research profile that incorporates issues, concepts, and approaches adopted elsewhere.

Figure 13. The number of concluded theses and dissertations that do not mention Brazil or its region



Source: Elaborated by the authors, based on CAPES (2021).

In sum, while the Brazilian IR scholarship predominantly investigates Brazil and its region, it also dedicates significant attention to other regions and global politics. Consequently, it is relatively connected to the international context and global debates. Brazilian scholars have shifted their focus beyond their immediate neighborhood, exploring various topics through different lenses and perspectives. This transition represents a move from a primarily policy-oriented approach – focused on topics directly related to Brazilian foreign policy – to a more

internationally oriented research profile. This shift enables Brazilian scholars to contribute to broader international debates in the field.

Conclusion

Structural Topic Model enabled us to visualize the topics addressed within Brazilian IR graduate programs during the consolidation of the discipline in the country (1987 to 2018). This analytical approach allowed us to create a thematic profile of this scholarship, shedding light on longitudinal variations over time. Therefore, this work contributes to understanding the Brazilian IR scholarship.

First, our analysis revealed the consistent presence of ‘traditional’ topics within the Brazilian IR scholarship. These topics, which included History, Latin American integration, relations with great powers, and trade were frequently mentioned during the entire period under study, especially at its beginning. This finding is in line with previous works, such as Herz (2002), Fonseca Jr. and Uziel (2019), and Milani (2021). These topics fluctuated to some extent according to domestic and regional contexts. Therefore, we can say that the topics addressed by the Brazilian IR scholarship are tied to Brazilian foreign policy, aligning with the findings of previous studies in the field.

These topics were also largely shaped by governmental incentives. The establishment of graduate programs linked to military institutions and the funding provided by Pró-Defesa and Pró-Estrategia led to a significant rise in research focused on strategic studies and national defense. Remarkably, by 2018, national defense had become the most frequently mentioned topic in this scholarship.

At the same time, Brazilian scholars have become increasingly connected to the international context and global debates over time. The 9/11 attacks sparked interest in investigating terrorism and the American foreign policy. Additionally, the rise of a multipolar order in the 2000s was followed by a reduction in the proportion of studies dedicated to the United States and Europe. Research on Asia, on the other hand, took off. The number of documents that do not refer to Brazil or its region increased during the 2000s.

Therefore, our findings contribute to the literature on Global IR for two reasons. First, our research shows that although the expansion and consolidation of the Brazilian IR scholarship were influenced by government incentives, they also led to the inclusion of new topics on the agenda. This included subjects such as refugees, gender, national defense, Asian powers, and the integration of post-positivist approaches. As this scholarship consolidated, it provided knowledge for the country to face the challenges brought by international politics. This included grappling with issues such as climate change, navigating evolving debates on human rights (including subjects like refugees and women empowerment), and adapting to the new dynamics of a multipolar order. The current Brazilian IR scholarship holds value not only for domestic stakeholders such as policy-makers, businesspeople, and non-governmental organizations in Brazil but also equips Brazilian scholars to participate in ongoing global discussions. These include conversations about topics like Asian powers and post-positivism. Second, we showed that this scholarship has extended its focus beyond national borders, evidence that its profile has changed. It has moved away from a predominantly policy-oriented approach to a more international academic engagement, as it has incorporated new topics, concepts, and theoretical frameworks adopted in other parts of the world.

Our findings align with prior research and provide a picture of the current landscape of the Brazilian IR scholarship. This scholarship mostly leans towards a non and post-positivist approach, with a focus on qualitative research. It is dedicated to understanding not only Brazil and its region but also the international relations in other parts of the world. Notably, Brazilian authors have been increasingly participating in international debates (ALEJANDRO, 2019; CARVALHO, GABRIEL, and LOPES, 2021; LOPES, GABRIEL, and CARVALHO, 2022; MOURA, SCHWETHER, and MESQUITA, 2019; VIGEVANI, THOMAZ, and LEITE, 2016).

These findings bring valuable implications to scholars dedicated to ir studies in the global south, showing that extending the understanding provided by international studies in these regions is a possibility, although it is not easy. We also expect to encourage scholars to advance our knowledge of how international relations take place in other peripheral countries and regions. The participation of

Global South nations in global IR debates is important and necessary to provide a better understanding of our reality. It also contributes to finding solutions to our future based on particular realities and possibilities.

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ERRATUM

Page 01

Affiliations

Where it reads:

²Universidade Federal de Minas Gerais. Belo Horizonte/MG, Brazil

³Federal Senate. Brasília/DF, Brazil

Read on:

²Federal Senate. Brasília/DF, Brazil

³Universidade Federal de Minas Gerais. Belo Horizonte/MG, Brazil

Appendix

Table S1. Topic labels

Number	Topic Label	Highest Probabilities	FREX
1	N/A	proc, autonom, institut, procur, ide, diverg, term, relat, trad, pont, sent, vist, condicion, conteud, percepç	institut, proc, autonom, diverg, procur, trad, term, conteud, relat, ide, condicion, defend, pont, articul, alemanh
2	N/A	control, investig, inform, agenc, ativ, oportun, servic, camp, sistem, ferrament, envolv, possibil, import, prat, papel	control, agenc, oportun, inform, investig, servic, ativ, ferrament, sober, atribu, camp, tip, possibil, difus, noc
3	Industry, Technology, and Innovation	tecnolog, inov, industr, risc, sistem, nov, desafi, conhec, impact, transform, mold, enfrent, planej, agent, elev	tecnolog, inov, risc, industr, mold, desafi, planej, conhec, elev, enfrent, impact, produ, agent, transform, reduz
4	Foreign Policy Decision-Making	presid, particip, congress, execu, ade, legisl, mandat, decid, trat, deciso, int, acord, republ, tent, consequ	presid, congress, execu, decid, ade, mandat, legisl, particip, deciso, plen, deu, sen, tent, atenc, republ
5	Agricultural Negotiations	negoci, int, domest, comerc, grup, form, coaliz, pos, rod, prefer, agricol, atu, influenc, deci, nivel	negoci, coaliz, domest, rod, prefer, agricol, comerc, int, pos, minist, grup, protocol, reun, influenc, deciso
6	N/A	contribu, real, conhec, influ, cienc, bas, natur, levant, exerc, possibil, alcanc, encontr, dificultad, vis, posi	real, contribu, cienc, conhec, levant, dificultad, posi, exerc, influ, natur, alcanc, cientif, possibil, individ, encontr
7	Southern Cone States	argentin, inserc, urugu, paragu, mudanc, period, occur, moment, seri, desenvolvi, transform, lug, espec, cen, econom	inserc, argentin, urugu, paragu, desenvolvi, seri, perif, lug, men, configur, imper, profund, moment, mudanc, desempenh
8	Bi and Multilateral Relations	relacion, diplom, bilat, dec, period, inic, parc, aproxim, ano, estabelec, multilat, pass, marc, conjunt, long	diplom, bilat, relacion, parc, aproxim, dec, period, caract, inic, multilat, abrang, converg, conjunt, estabelec, long
9	Refugees	cond, refugi, pesso, protec, defin, desloc, migr, vis, franc, limit, consequ, atual, centr, relacion, intern	refugi, cond, pesso, desloc, protec, franc, migr, defin, limit, posteri, fornec, consequ, crite, vis, categor
10	Strategic Studies	estrateg, mar, marit, atual, capac, defe, nacion, cen, domini, form, mod, convenc, import, espec, nov	mar, estrateg, marit, domini, capac, atual, convenc, projec, potenc, aqui, disput, contest, mod, cen, defe
11	Environment and Climate Change	mudanc, ambi, domest, clim, ambient, nivel, regim, implement, alter, deci, ambit, confer, compromiss, impact, envolv	mudanc, ambi, clim, ambient, domest, nivel, alter, implement, compromiss, confer, regim, deci, indic, reduc, impact
12	Health and Education Policies	cooper, tecn, sulsul, camp, acord, coorden, ambit, ano, dimen, forum, conjunt, ult, emerg, estabelec, parc	cooper, sulsul, tecn, coorden, forum, camp, transfer, combin, modal, parc, dimen, benefici, ate, prov, acord
13	International Cooperation	nacion, plan, institu, banc, mund, educ, saud, elabor, human, ref, instituc, administr, cri, form, import	banc, plan, educ, saud, institu, elabor, administr, nacion, basic, promoc, mund, profiss, instituc, human, especi
14	European Studies	europ, uni, institu, trat, comunidad, comum, subsidi, constitu, instituc, sistem, intergoverna, alemanh, nece, bas, cri	europ, uni, subsidi, institu, comum, intergoverna, comunidad, alemanh, trat, equilib, instituc, constitu, reform, condicion, regr
15	History	histor, secul, pen, temp, pass, moment, final, dec, long, xxi, imperi, form, ideolog, period, muit	secul, histor, pen, temp, imperi, xxi, xix, ideolog, moment, long, final, continu, metad, pass, estev
16	Amazon and	fronteir, recur, amazon, reg, sustent, trat,	fronteir, amazon, recur, sustent, bac,

	Borders	territo, ambient, prat, natur, bac, conflit, gest, int, compartilh	territo, reg, ambient, gest, compartilh, natur, rio, prat, territor, reserv
17	International Economy	econom, financ, sistem, capit, glob, cris, emerg, hegemon, mund, estrut, form, reform, ord, nov, centr	financ, capit, hegemon, econom, emerg, monet, cris, glob, sistem, reform, neolib, expan, acumul, liber, ord
18	Multilateral Trade Regimes	acord, comerci, multilat, propriedad, intelect, omc, organiz, soluc, mund, regim, controv, sistem, mecan, med, contenc	propietad, comerci, omc, acord, multilat, intelect, controv, soluc, contenc, regr, mecan, acess, restr, declar, favor
19	Terrorism	terr, grup, combat, contr, setembr, atent, ameac, segu, jog, govern, uso, ataqu, bas, defin, mund	terr, combat, atent, setembr, grup, contr, jog, ataqu, ameac, segu, abrang, administr, uso, lanc, confront
20	Gender Studies	mulh, gener, traf, viol, explor, contr, vid, hom, enfrent, repres, desafi, lid, atu, difer, crim	mulh, gener, traf, viol, hom, vid, explor, enfrent, crim, lut, corp, resist, ocup, lid, contr
21	Portuguese Africa	independ, angol, afric, portugu, mocambiqu, conflit, colon, mov, portug, frent, apo, revoluc, contin, dur, ano	angol, independ, portugu, mocambiqu, colon, portug, afric, revoluc, frent, lingu, mov, ocup, antig, social, contin
22	Inter-American HR System	direitoshumano, interamer, cort, protec, sistem, confer, comiss, direit, cumpr, deci, institu, instrument, med, respeit, evolucion	interamer, direitoshumano, cort, comiss, protec, confer, cumpr, org, direit, deci, justic, respeit, individu, carat, convenc
23	National Defense	defe, milit, forc, arm, aer, nacion, empreg, exercit, oper, capac, aeron, form, operac, civil, nece	milit, aer, defe, forc, exercit, aeron, arm, empreg, operac, capac, oper, civil, cur, prepar, gest
24	Migration Flows	soc, imigr, nacion, migr, desigualdad, form, flux, comunidad, pertenc, indic, nivel, impact, fronteir, mobil, influenc	imigr, soc, desigualdad, migr, pertenc, flux, mobil, indic, pobr, interi, nacion, provoc, comunidad, disminu, logic
25	Peace Operations	paz, oper, onu, conflit, mis, organiz, manutenc, parec, resoluc, naca, atu, unid, reconstruc, particip, estabelec	paz, onu, oper, parec, mis, conflit, manutenc, resoluc, reconstruc, pacif, liber, soluc, organiz, naca, republ
26	UN Security Council	unid, naca, conselh, organiz, membr, comport, org, aprov, reform, vot, resoluc, perman, verif, geral, deci	unid, conselh, naca, vot, membr, aprov, org, comport, perman, resoluc, reform, organiz, lig, lei, verif
27	Traditional Communities	crit, modern, escol, indigen, pov, ingl, contemporan, religi, mov, sab, viv, corr, sociedad, moral, ano	indigen, escol, modern, crit, ingl, religi, pov, sab, viv, moral, corr, contemporan, express, contrad, logic
28	Energy Resources	energ, petrol, venezuel, chav, recur, natur, econom, boliv, reg, set, font, import, nacion, ano, reserv	energ, petrol, venezuel, chav, boliv, recur, natur, reserv, matriz, font, disput, renov, set, geopol, produt
29	US Foreign Policy	guerr, eua, norreamer, unid, mund, conflit, medi, apo, iraqu, estadunid, orient, guerrafria, milit, doutrin, influ	eua, norreamer, guerr, iraqu, medi, estadunid, bush, conflit, guerrafria, doutrin, apo, unid, orient, mund, georg
30	South American Integration	region, sul, amer, sulamer, defe, reg, integr, infraestrut, unasul, integracaoregion, inic, agend, complex, form, mecan	region, sulamer, sul, unasul, infraestrut, amer, integracaoregion, defe, reg, lideranc, agend, fisic, complex, integr, mecan
31	Humanitarian Intervention	intervenc, human, humanitar, respon, prat, viol, norm, uso, forc, proteg, legitim, ocorr, organiz, soberan, nov	intervenc, humanitar, respon, human, proteg, viol, legitim, uso, norm, prat, posguerrafria, assist, soberan, forc, legit
32	Nuclear Regime	regim, nucl, arm, trat, convenc, assinat, acord, form, pos, papel, deci, lev, inic, rev, verif	nucl, regim, arm, assinat, convenc, complet, avanc, rev, trat, pos, pacif, comport, perm, continu, examin
33	Intl. Security and Drug	seguranc, ameac, colomb, securi, guerrafria, drog, med, agend, defe, nov,	seguranc, securi, colomb, ameac, drog, guerrafria, traf, agend, med, assunt,

34	Trafficking Diplomacy	nacion, reg, traf, intern, conflit cult, val, instrument, form, diver, art, lingu, import, diplomac, examin, popul, ferrament, ident, fundament, dimen	preocup, respost, defe, hemisf, implic cult, val, art, lingu, instrument, ferrament, manifest, popul, ident, examin,
35	International Economic Crises	extern, intern, cris, econom, ano, ajud, inic, period, condicion, pobr, div, diret, lad, int, receb	diver, pov, intercambi, diplomac, dimen extern, cris, intern, ajud, div, pobr, condicion, receb, met, macroeconom,
36	Post-Positivism	discur, construc, ident, form, prat, repres, estat, narr, constitu, ide, constru, torn, sent, camp, fal	perfil, diret, ano, lad, econom discur, ident, construc, narr, fal, estat, constru, leit, repres, imagin, diferenc,
37	Subnational Actors	espac, local, nov, cidad, rio, torn, urban, govern, jan, vez, form, atu, centr, dinam, ond	categor, prat, concepc, ide espac, cidad, local, urban, rio, jan, torn, habit, nov, traz, ond, pouc, unidad, dinam, vez
38	Southern Cone Integration	integr, mercosul, bloc, integracaoregion, cri, comum, econom, membr, region, livr, merc, assimetr, direcion, avanc, instrument	mercosul, integr, bloc, integracaoregion, comum, direcion, membr, livr, assimetr, avanc, cri, protocol, eix, merc, sup
39	Asian Powers	chin, russ, pot, geopol, grand, jap, asi, ocid, reg, sovi, asia, ascen, nov, centr, sistem	chin, russ, pot, asi, jap, geopol, asia, ocid, sovi, ascen, grand, lest, rival, compet, republ
40	Foreign Investment	empr, invest, set, regul, priv, merc, estrang, nacion, internacion, grand, estat, atr, contrat, cri, mecan	empr, invest, priv, regul, set, estrang, contrat, internacion, merc, atr, estat, efici, regula, efet, diret
41	Natl. Perception and Public Opinion	public, comun, diplomac, grand, jorn, nov, inter, opin, exteri, man, camp, percepc, mid, veicul, empreend	comun, public, jorn, opin, diplomac, mid, inter, veicul, man, exteri, empreend, mape, grand, inclusiv, event
42	Political Regime	democr, democrac, ord, pass, tran, nov, ide, institucion, cri, instituc, consolid, verdad, repres, construtiv, papel	democrac, democr, tran, ord, verdad, institucion, construtiv, pass, ide, cole, consolid, epoc, inspir, instituc, interpret
43	International Law	direit, norm, jurid, principi, tribun, sistem, nacion, fundament, crim, jurisd, human, orden, intern, espec, legal	jurid, direit, tribun, principi, norm, jurisd, orden, crim, legal, justic, obrig, constituc, fundament, regr, lei
44	International Trade	econom, comerc, cresc, comerci, export, produ, merc, set, mund, import, industr, aument, indic, med, alt	comerc, export, cresc, produ, econom, comerci, balanc, merc, produ, set, alt, aument, industr, cust, indic
45	Non-state Actors	organiz, sociedad, glob, civil, red, mov, transnac, global, governanc, atu, particip, nov, mund, transform, papel	sociedad, red, civil, glob, transnac, governanc, organiz, global, mov, ong, aliment, transform, governa, particip, atu
46	Geopolitics in the Atlantic	sul, afric, nort, ind, contin, atlan, document, rev, delimit, limit, organiz, import, reg, alianc, ambit	nort, afric, ind, atlan, sul, contin, delimit, document, rev, alianc, projec, enquadr, dia, naquel, mant
47	Brazilian Foreign Policy	govern, politicaexterna, peb, period, lul, exteri, atu, nacion, dur, formul, diplomac, papel, ano, pos, minist	politicaexterna, govern, peb, lul, exteri, formul, itamarati, fhc, atu, dur, minist, period, diplomac, conduc, abert
48	Latin American Integration	amer, latin, latinoamer, reg, nov, sul, mexic, econom, con, vis, ano, grand, form, hegemon, dec	latin, latinoamer, amer, con, mexic, reg, hegemon, neolib, rio, livr, vis, frent, sul, entret, alc
49	MINUSTAH	hait, naca, unid, estabil, oper, mis, organiz, manutenc, cont, engaj, empreg, lest, paz, estabec, envolv	hait, estabil, mis, manutenc, engaj, naca, lest, oper, cont, empreg, eficac, unid, obstacul, conselh, obt

Source: Elaborated by the authors.

Table 02. Summary statistics

	N	Mean	SD	Min	Q1	Media n	Q3	Max
Topic 1	2417	0.016	0.037	0.000	0.003	0.006	0.013	0.653
Topic 2	2417	0.012	0.026	0.000	0.003	0.005	0.010	0.452
Topic 3	2417	0.014	0.042	0.000	0.003	0.005	0.009	0.750
Topic 4	2417	0.011	0.038	0.000	0.001	0.003	0.007	0.935
Topic 5	2417	0.021	0.072	0.000	0.002	0.004	0.010	0.944
Topic 6	2417	0.025	0.041	0.001	0.009	0.014	0.024	0.782
Topic 7	2417	0.016	0.038	0.000	0.003	0.005	0.011	0.650
Topic 8	2417	0.024	0.054	0.000	0.003	0.008	0.019	0.667
Topic 9	2417	0.014	0.049	0.000	0.002	0.003	0.007	0.704
Topic 10	2417	0.016	0.043	0.000	0.004	0.006	0.012	0.740
Topic 11	2417	0.025	0.065	0.000	0.005	0.008	0.017	0.855
Topic 12	2417	0.018	0.053	0.000	0.003	0.005	0.010	0.816
Topic 13	2417	0.021	0.050	0.000	0.005	0.008	0.016	0.824
Topic 14	2417	0.016	0.049	0.000	0.003	0.005	0.009	0.946
Topic 15	2417	0.037	0.055	0.001	0.010	0.017	0.037	0.565
Topic 16	2417	0.020	0.058	0.000	0.003	0.006	0.011	0.817
Topic 17	2417	0.037	0.086	0.000	0.005	0.010	0.024	0.906
Topic 18	2417	0.021	0.072	0.000	0.002	0.003	0.008	0.842
Topic 19	2417	0.013	0.042	0.000	0.003	0.004	0.008	0.887
Topic 20	2417	0.012	0.058	0.000	0.001	0.002	0.004	0.854
Topic 21	2417	0.016	0.061	0.000	0.002	0.003	0.006	0.833
Topic 22	2417	0.015	0.064	0.000	0.001	0.003	0.005	0.895
Topic 23	2417	0.032	0.095	0.000	0.003	0.005	0.010	0.912
Topic 24	2417	0.015	0.048	0.000	0.002	0.004	0.009	0.632
Topic 25	2417	0.021	0.068	0.000	0.002	0.004	0.010	0.830
Topic 26	2417	0.022	0.049	0.000	0.005	0.008	0.016	0.679
Topic 27	2417	0.020	0.064	0.000	0.002	0.005	0.012	0.884
Topic 28	2417	0.013	0.056	0.000	0.001	0.002	0.004	0.731
Topic 29	2417	0.027	0.061	0.000	0.004	0.008	0.018	0.786
Topic 30	2417	0.024	0.068	0.000	0.002	0.005	0.011	0.750
Topic 31	2417	0.018	0.069	0.000	0.001	0.003	0.008	0.863
Topic 32	2417	0.017	0.063	0.000	0.002	0.004	0.008	0.868
Topic 33	2417	0.021	0.054	0.000	0.003	0.006	0.012	0.638
Topic 34	2417	0.017	0.059	0.000	0.002	0.005	0.009	0.884
Topic 35	2417	0.023	0.058	0.000	0.004	0.008	0.017	0.941
Topic 36	2417	0.029	0.070	0.000	0.004	0.008	0.018	0.837
Topic 37	2417	0.022	0.058	0.000	0.004	0.007	0.015	0.849
Topic 38	2417	0.020	0.054	0.000	0.003	0.005	0.011	0.830
Topic 39	2417	0.023	0.064	0.000	0.002	0.005	0.011	0.682
Topic 40	2417	0.019	0.051	0.000	0.003	0.005	0.010	0.629
Topic 41	2417	0.018	0.047	0.000	0.004	0.007	0.013	0.673
Topic 42	2417	0.019	0.047	0.000	0.003	0.007	0.014	0.772
Topic 43	2417	0.023	0.070	0.000	0.003	0.005	0.011	0.910
Topic 44	2417	0.028	0.069	0.000	0.004	0.008	0.019	0.750
Topic 45	2417	0.029	0.058	0.000	0.006	0.011	0.023	0.690
Topic 46	2417	0.014	0.045	0.000	0.002	0.004	0.008	0.821
Topic 47	2417	0.041	0.068	0.000	0.007	0.014	0.043	0.640
Topic 48	2417	0.018	0.051	0.000	0.002	0.005	0.010	0.764
Topic 49	2417	0.006	0.038	0.000	0.002	0.003	0.004	0.908
Year	2417	2010.763	6.287	1987.000	2007.000	2012.000	2016.000	2018.000

Source: Elaborated by the authors.

Table 03. Polynomial models (1)

	Dependent variable								
	Topic3 (1)	Topic4 (2)	Topic5 (3)	Topic7 (4)	Topic8 (5)	Topic9 (6)	Topic10 (7)	Topic11 (8)	Topic12 (9)
poly(year, 5)1	0.104** (0.042)	-0.007 (0.038)	-0.263*** (0.072)	-0.088** (0.038)	-0.364*** (0.054)	0.121** (0.049)	0.279*** (0.043)	-0.185*** (0.065)	0.204*** (0.053)
poly(year, 5)2	0.172*** (0.042)	-0.070* (0.038)	-0.326*** (0.072)	-0.071* (0.038)	0.049 (0.054)	0.002 (0.049)	0.143*** (0.043)	0.019 (0.065)	-0.009 (0.053)
poly(year, 5)3	0.061 (0.042)	0.020 (0.038)	0.026 (0.072)	0.058 (0.038)	-0.162*** (0.054)	0.056 (0.049)	0.005 (0.043)	0.124* (0.065)	-0.118** (0.053)
poly(year, 5)4	0.013 (0.042)	0.020 (0.038)	0.116 (0.072)	0.054 (0.038)	-0.114** (0.054)	0.054 (0.049)	-0.078* (0.043)	-0.080 (0.065)	-0.107** (0.053)
poly(year, 5)5	0.004 (0.042)	-0.038 (0.038)	0.052 (0.072)	0.036 (0.038)	0.140*** (0.054)	0.006 (0.049)	-0.079* (0.043)	0.057 (0.065)	-0.017 (0.053)
Constant	0.014*** (0.001)	0.011*** (0.001)	0.021*** (0.001)	0.016*** (0.001)	0.024*** (0.001)	0.014*** (0.001)	0.016*** (0.001)	0.025*** (0.001)	0.018*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01

Table 04. Polynomial models (2)

	Dependent variable							
	Topic13 (1)	Topic14 (2)	Topic15 (3)	Topic16 (4)	Topic17 (5)	Topic18 (6)	Topic19 (7)	Topic20 (8)
poly(year, 5)1	-0.080 (0.050)	-0.105** (0.049)	0.032 (0.055)	-0.074 (0.058)	0.314*** (0.086)	-0.388*** (0.072)	0.024 (0.042)	0.133** (0.058)
poly(year, 5)2	0.008 (0.050)	-0.006 (0.049)	-0.056 (0.055)	-0.032 (0.058)	0.297*** (0.086)	-0.297*** (0.072)	-0.027 (0.042)	0.121** (0.058)
poly(year, 5)3	0.062 (0.050)	0.103** (0.049)	-0.065 (0.055)	-0.017 (0.058)	0.065 (0.086)	0.051 (0.072)	0.077* (0.042)	0.140** (0.058)
poly(year, 5)4	-0.039 (0.050)	0.100** (0.049)	-0.014 (0.055)	0.026 (0.058)	-0.303*** (0.086)	0.047 (0.072)	0.094** (0.042)	0.040 (0.058)
poly(year, 5)5	-0.065 (0.050)	0.081* (0.049)	-0.052 (0.055)	0.154*** (0.058)	-0.092 (0.086)	-0.026 (0.072)	0.084** (0.042)	0.014 (0.058)
Constant	0.021*** (0.001)	0.016*** (0.001)	0.037*** (0.001)	0.020*** (0.001)	0.037*** (0.002)	0.021*** (0.001)	0.013*** (0.001)	0.012*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01.

Table 05. Polynomial models (3)

	Dependent variable							
	Topic21	Topic22	Topic23	Topic24	Topic25	Topic26	Topic27	Topic28
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
poly(year, 5)1	-0.085 (0.061)	-0.238*** (0.063)	0.968*** (0.092)	0.053 (0.048)	0.028 (0.068)	-0.038 (0.049)	0.073 (0.064)	0.133** (0.056)
poly(year, 5)2	0.007 (0.061)	0.013 (0.063)	0.623*** (0.092)	-0.068 (0.048)	0.012 (0.068)	-0.095* (0.049)	0.016 (0.064)	-0.031 (0.056)
poly(year, 5)3	0.087 (0.061)	0.029 (0.063)	0.257*** (0.092)	-0.010 (0.048)	0.098 (0.068)	-0.043 (0.049)	-0.008 (0.064)	-0.095* (0.056)
poly(year, 5)4	-0.130** (0.061)	0.139** (0.063)	0.070 (0.092)	-0.021 (0.048)	0.016 (0.068)	-0.101** (0.049)	0.040 (0.064)	-0.061 (0.056)
poly(year, 5)5	-0.099 (0.061)	-0.181*** (0.063)	0.040 (0.092)	-0.086* (0.048)	0.028 (0.068)	-0.057 (0.049)	0.00000 (0.064)	0.002 (0.056)
Constant	0.016*** (0.001)	0.015*** (0.001)	0.032*** (0.002)	0.015*** (0.001)	0.021*** (0.001)	0.022*** (0.001)	0.020*** (0.001)	0.013*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01.

Table 06. Polynomial Models (4)

	Dependent variable							
	Topic29	Topic30	Topic31	Topic32	Topic33	Topic34	Topic35	Topic36
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
poly(year, 5)1	-0.084 (0.061)	0.228*** (0.067)	0.001 (0.069)	-0.173*** (0.063)	0.125** (0.054)	-0.150** (0.058)	-0.422*** (0.057)	0.311*** (0.070)
poly(year, 5)2	-0.059 (0.061)	-0.144** (0.067)	-0.134* (0.069)	-0.036 (0.063)	-0.099* (0.054)	0.106* (0.058)	0.194*** (0.057)	-0.034 (0.070)
poly(year, 5)3	-0.005 (0.061)	-0.284*** (0.067)	-0.046 (0.069)	0.025 (0.063)	-0.074 (0.054)	-0.142** (0.058)	-0.060 (0.057)	-0.113 (0.070)
poly(year, 5)4	0.181*** (0.061)	-0.174*** (0.067)	-0.021 (0.069)	-0.062 (0.063)	-0.064 (0.054)	0.159*** (0.058)	0.100* (0.057)	-0.035 (0.070)
poly(year, 5)5	-0.003 (0.061)	-0.035 (0.067)	0.051 (0.069)	-0.069 (0.063)	-0.030 (0.054)	-0.066 (0.058)	0.063 (0.057)	0.075 (0.070)
Constant	0.027*** (0.001)	0.024*** (0.001)	0.018*** (0.001)	0.017*** (0.001)	0.021*** (0.001)	0.017*** (0.001)	0.023*** (0.001)	0.029*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01.

Table 07. Polynomial models (5)

	Dependent variable							
	Topic37 (1)	Topic38 (2)	Topic39 (3)	Topic40 (4)	Topic41 (5)	Topic42 (6)	Topic43 (7)	Topic44 (8)
poly(year, 5)1	0.249*** (0.058)	-0.163*** (0.054)	0.350*** (0.064)	-0.004 (0.051)	0.162*** (0.047)	-0.102** (0.047)	-0.286*** (0.069)	-0.219*** (0.069)
poly(year, 5)2	0.042 (0.058)	-0.152*** (0.054)	0.056 (0.064)	0.025 (0.051)	-0.032 (0.047)	-0.138*** (0.047)	-0.192*** (0.069)	-0.049 (0.069)
poly(year, 5)3	-0.088 (0.058)	0.105* (0.054)	-0.141** (0.064)	0.140*** (0.051)	-0.077 (0.047)	0.053 (0.047)	0.073 (0.069)	-0.120* (0.069)
poly(year, 5)4	-0.119** (0.058)	0.045 (0.054)	-0.145** (0.064)	0.049 (0.051)	-0.019 (0.047)	0.036 (0.047)	0.155** (0.069)	0.123* (0.069)
poly(year, 5)5	0.019 (0.058)	-0.100* (0.054)	-0.070 (0.064)	0.009 (0.051)	0.061 (0.047)	-0.045 (0.047)	-0.069 (0.069)	-0.046 (0.069)
Constant	0.022*** (0.001)	0.020*** (0.001)	0.023*** (0.001)	0.019*** (0.001)	0.018*** (0.001)	0.019*** (0.001)	0.023*** (0.001)	0.028*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01.

Table 08. Polynomial models (6)

	Dependent variable:				
	Topic45 (1)	Topic46 (2)	Topic47 (3)	Topic48 (4)	Topic49 (5)
poly(year, 5)1	-0.082 (0.058)	0.245*** (0.045)	0.006 (0.067)	-0.181*** (0.051)	0.014 (0.037)
poly(year, 5)2	-0.060 (0.058)	0.137*** (0.045)	-0.155** (0.067)	0.041 (0.051)	-0.078** (0.037)
poly(year, 5)3	0.022 (0.058)	-0.043 (0.045)	-0.063 (0.067)	0.013 (0.051)	-0.105*** (0.037)
poly(year, 5)4	-0.018 (0.058)	-0.029 (0.045)	-0.120* (0.067)	0.198*** (0.051)	-0.028 (0.037)
poly(year, 5)5	0.117** (0.058)	0.078* (0.045)	-0.091 (0.067)	-0.045 (0.051)	0.063* (0.037)
Constant	0.029*** (0.001)	0.014*** (0.001)	0.041*** (0.001)	0.018*** (0.001)	0.006*** (0.001)
Observations	2,417	2,417	2,417	2,417	2,417

Source: Elaborated by the authors.

Note: *p<0.1; **p<0.05; ***p<0.01.