

# A Tale of Two Groups of Japanese Political Scientists: Japan as an example of internationalization of political science, 1971-2023

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## Abstract

This study meticulously examines the “science of science” and bibliometrics, illuminating new discoveries pertaining to scientific practices, such as scientific patterns, impacts, and citations. However, a significant portion of these studies predominantly concentrates on Western countries, thereby limiting the universality and applicability of their findings. There is a noticeable dearth of comprehensive research focused on non-Western countries, like Japan, resulting in a Western-centric bias in the existing literature. The authors propose an intricate case study focusing on Japanese political scientists, integrating both English and Japanese publications into their professional repertoire as a distinctive avenue to explore the internationalization trajectories of political science. Subsequent to a comprehensive literature review and the formulation of cogent research questions aimed at elucidating the internationalization dimensions of political science, a multifaceted research methodology is employed. Utilizing descriptive statistics, text analysis, and network analysis, the study endeavors to provide substantive answers to the research queries. The findings reveal a consistent augmentation in the number of Japanese political scientists disseminating their research in international journals since 1971. Conversely, the prevalence of international co-authorship has witnessed only a marginal increase. Additionally, a distinct bifurcation is evident among Japanese scholars, delineated by their publication preferences between international and domestic journals.

**“we do science for the sake of science, not to revel in the glory of recognition.”**

*Barabasi and Wang (2021)*

## 1 Introduction

Scientists have contributed to their discipline, community, and society for several decades, yielding scholastic publications. Owing to the recent advancement of both the data infrastructure and datasets of scientific publication or other related information, the research on bibliometrics and “science of science” have made new findings on scientific practices [1, 2, 3]: scientists began to discover scientific patterns such as the success and peak of a scientist’s career (“hot streaks”) [3], the correlation between scientific productivity and age [4], patterns of co-authorship and teamwork, the scientific impact, and citation.

There are studies of science of science in political science. For example, there has been a significant growth in the literature examining “the gendered nature of political science.” Those studies show that female political scientists are still underrepresented compared to

their male counterparts [5, 6]. The studies deal with topics such as the leaking pipeline, the citation gap, invisibility and inclusion of women of color, and publication bias across various regional contexts [7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22]. However, scant attention has been paid to non-Western countries.

Moreover, there is a growing body of research on co-authorship in political science [23, 24, 25, 26, 9, 27, 28]. Co-authorship has been increased in many fields of science, including political science [29]. The studies on co-authorship patterns aim to elucidate the characteristics of scientific networks, such as mutual trust, cooperation, exchange of ideas, and creativity. It also inquires about the amount of co-authorship across disciplines, nations, and languages. Language, geographical conditions, and sub-disciplines play a significant role in the co-authorship among political scientists. The studies suggest that different countries have different publishing strategies and publishing cultures. Also, authors' ages seem to be related to productivity [30]. They are essential findings. However, the studies mentioned above exclusively focus on the cases of Western countries [31, 23, 25]. There is room for discussion on whether the findings of these studies can be applied to non-Western countries. Metz and Jäckle [24] wrote:

“since focusing on leading journals means focusing on English speaking journals, the role of scientists predominantly publishing in other languages or of specific national communities is certainly undervalued. . .”

Additionally, there are other themes in political science, such as the peer-review process [32], citation pattern [33], determinants of research productivity [34], publication bias [35, 36], the relationship between research productivity and reputation rankings [37], and international editorial board composition [38]. Again, the author would like to emphasize that the existing researches are biased toward Western countries. Even if significant patterns and facts about the scientific work made by political scientists are discovered, it is still unclear whether they are also observed in non-Western countries.

Thus, it is the internationalization of political science that should be studied. In countries where English is not the primary language, scholars conduct academic activities not only in English but also in their primary language [39]. In addition, non-native English speaker often finds it challenging to write and publish in English [40, 41]. Given this fact, if we research the career trajectory of scientists only in English, we would underestimate the performance of non-English scholars. Therefore, it is something of a pitfall in collecting bibliometric data. Major citation databases such as PubMed, Web of Science, and SCOPUS cover academic journals exclusively published in English. Therefore, if we want to comprehensively investigate scientific practice in a social science discipline (e.g., political science), we must look into international non-English databases.

To fill in this gap caused by the data limitation, we have to collect data and construct the datasets of the publications of political scientists in non-English-speaking countries that cover both publications in English and indigenous languages. Studying political scientists' activities in non-English-speaking countries offers a unique opportunity to see how schol-

ars from non-Western countries incorporate English publications and indigenous publications into their careers.<sup>1</sup> Since Japanese political scientists put weight on Japanese and international publications in pursuing their scientific careers, the scientific career trajectory of Japanese political scientists is a crucial case study of the internationalization of political science.

By focusing on the case study of Japanese political scientists, this research will illuminate how these scholars balance their output between English and indigenous publications. We will employ a mixed-methods approach, examining both quantitative data from international and non-English databases and qualitative interviews, to gain a holistic understanding of their scientific career trajectories.

Such a study holds the potential to reshape our understanding of what constitutes scientific success, challenging the dominant paradigms informed mostly by Western practices. Furthermore, this could contribute to creating more equitable measures of scientific achievement and impact, fostering inclusivity and diversity within the field of political science and the broader academic community.

## 2 Literature Review and Research Question

How can we define “internationalization of political science?” Carammia simplifies internationalization as an increase in the publication in international journals and an increase in international co-authorship [43]. Breuning et al. inquired whether the institutions political scientists obtained his/her PhDs from, countries of current residence, and world ranking of institutional affiliations affect submissions and publications in *American Political Science Review* or not [44]. Just as Caramia, Breuning et al. also considered submissions and publications in international journals as an important indicator of internationalization. It is widely accepted that publishing articles from top-ranked international political science journals is a distinctive indicator of internationalization. However, as Norris defines internationalization of political science as an accelerated movement of people, communications, and labor, there should be other features that are related to internationalization [45]: transnational mobility of scholars and students, adjustment of curriculum to international standards, research and teaching outside of a country of residence, the establishment of school branches and campuses outside the original country, obtaining supranational academic funds, and organizing international conferences [46, 47, 48, 49, 50].<sup>2</sup>

While we are fully aware that the definition of internationalization is multifaceted, we adopt changes in journal publication patterns as an indicator of internationalization in this article. Hence, we will not deal with other indicators like student and faculty mobility, education, international strategies of colleges, and funding. Many studies on internationalization of scientific activities in Japan have been conducted from diverse aspects: expansion

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<sup>1</sup>Is there a discipline of political science which has unique features localized by domestic context? For more on this point, see: [42].

<sup>2</sup>What are the causes for internationalization of political science? Scholars pointed out development of dense international network, resources for international activity, and existence of incentives for career path [43, 46].

of co-authorship networks, diversification of faculty members, acceptance of international students, changes in international rankings, and governmental policies [?, 51, 52]. However, those studies are not specific to the social sciences, and political science is out of the scope of consideration

**Research Question:** Carammia's research shows that international production and collaborative political science research are moving away from Anglo-American countries to peripheral European countries [43]. Numerous studies on internationalization in Western Europe [43] and Central/Eastern Europe [53, 54, 48]. However, only a tiny amount of research using reliable data has been done on non-Western countries, such as Japan.<sup>3</sup> Is the internationalization of political science in non-Western regions, e.g., Japan, progressing? It is our fundamental research question.

According to a review of the history of political science in Japan, there were two turning points in Japanese political science [57, 58]. The first occurred in 1945. It is said that a significant disconnect exists in terms of themes and methodologies between Japanese political science before and after World War II. While influenced by Western political science, postwar political science was founded upon critical reflection on the prewar period. The central research theme was the study of totalitarianism in prewar Japan [59, 60]. Furthermore, the second turning point happened in the 1980s, with the influx of American political science into Japan. After the second turning point, tension and conflict emerged between the Japan-specific postwar political scientists and the more scientific, positivist political scientists.<sup>4</sup>

Some believe that Japanese political scientists have not changed since the prewar or postwar period. In the 1980s, scholarly attention was increased on the causes of Japan's economic growth, and many Japanese academics wrote research articles and books on Japanese politics in English. However, some say Japanese political scientists have not been educated abroad, have never taught at foreign institutions, and have not written in English. It is also said that Japanese political scientists tend to prioritize writing books in Japanese over articles written in English [61, 62]. A Japanese governmental institution points out the following:

"Japanese political scientists are domestically oriented. The percentage of participation in international political science conferences is low, as can be seen by comparing the number of political scientists by country. The incentive for internationalization (e.g., writing papers in English) is extremely low. This low incentive was underscored by the remark of the prominent political scientist at this meeting. It is noteworthy that there are limited numbers of contributions to international journals from scholars who have returned to Japan even after they taught in the U.S. or in other foreign countries [63]."

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<sup>3</sup>There are some studies on non-Western countries like southern American countries or Turkey. However, they remain to be exceptional[55, 56].

<sup>4</sup>Sakai [57] examined from a bibliometric perspective whether these two historical turning points in Japanese political science existed. As a result, he clarified that there was indeed a break with the prewar period in postwar Japanese political science. However, in contrast, Sakai found that even after the 1980s, there was no disconnection with earlier generations.

However, some scholars argue that within the social sciences and humanities in Japan, pressure to publish articles in international journals has loomed large [64]. According to them, articles and books written in Japanese have been disregarded as academic achievements: a Japanese political scientist asserted that “Japanese political science is becoming more like economics [65].”

After all, has the internationalization of Japanese political science advanced or stagnated? If internationalization has advanced, this should be “the third turning point” of Japanese political science. However, there has been little empirical research on Japanese political scientists’ publication patterns in the context of internationalization. This article examines this issue using the original data collected by the authors. More detailed research questions are as follows:

**RQ1:** if the internationalization of Japanese political science has fallen behind, the number of publications in international journals will not be increased. Additionally, there will be no generational gap in the number of publications in international journals and domestic journals.

**RQ2:** if the internationalization of Japanese political science has fallen behind, international co-authorship will not be increased and will not differ from preceding generations.

**RQ3:** if the internationalization of Japanese political science has fallen behind, there will be a systematic difference between the topics of articles published in international journals and domestic journals.

### 3 Data and Methods

#### 3.1 Data

We collected data from international and domestic political science publications. The authors identified the political scientists who published articles in international/domestic academic journals (book reviews were excluded from the data). So, the unit of observation was individual Japanese political scientist: if a scholar published a single-authored article, he/she was counted as a sample ( $n=1$ ). In the case of co-authorship among Japanese scholars, for instance if the co-authors are Sato, Suzuki, Takahashi, and Tanaka, each of them is given a count as a sample ( $n=4$ ).

The authors referred to the 2018 journal ranking by Journal Citation Reports (JCR) and listed the top 50 political science journals from January 1971 until June 2023 (see Appendix 1 for the complete list). In addition, the authors collected data from six primary Japanese political science journals (see Appendix 1 for the complete list). The total sample size of our data is 3264, of which 357 are published in international journals, and 3006 are published in Japanese journals.

In the list of international journals, we identified Japanese political scientists. “Japanese political scientists” here are defined as those born in Japan and with Japanese nationality. Scholars who initially had Japanese nationality and renounced it later are also included in the data. However, foreign nationals who reside and work in Japan are not included,

nor are those who were born in Japan but chose the nationality of their parent's country of origin (e.g., Michael D. Ward or Frances M. Rosenbluth).

After collecting all the data on publications, we assigned the authors' gender information, birth years, affiliations, citation counts, abstracts, the names of the co-authors, information on the book publications, positions, where did they obtain their jobs (overseas/Japan). The information was gathered from their names, personal, academic, and institutional web pages. In some cases, the authors directly asked the scholars to provide their information.

### 3.2 Methods

This study examines the degree of internationalization of Japanese political scientists using quantitative methods, computational social science methods, and case study. To answer RQ1, descriptive statistical analysis is used: the authors used Python with the packages such as "json," "math," "pandas," "numpy," and "matplotlib."

**Network Analysis:** to answer RQ2, the authors conducted a network analysis, using R (R.4.2.2) and RStudio (2023.06.0). The author utilized the packages "igraph," "statnet," "signnet," and "rio." In articles authored by multiple individuals, we meticulously analyzed the co-authorship relationships. Initially, every co-authorship relation was extracted from the comprehensive dataset. Subsequently, the authors categorized this refined data into sub-datasets, each spanning distinct periods, and formatted them as edgelist. The periods demarcated were 1971-1980, 1981-1990, 1991-2000, 2001-2010, and 2011-2023 [66].

Three critical indices were calculated within the framework of undirected graphs: network density, connectedness and components, and betweenness centrality. Network density was analyzed to ascertain the connectivity within a network, providing insight into whether the network is indeed interconnected. An observation was made regarding the trend of nodes' increment over time, where it was noted that a predominant number of Japanese political scientists have predominantly authored articles individually [67].

Connectedness and components were evaluated to identify the existence of any author subnetworks, fostering an understanding of these subnetworks' evolution over various periods. An additional calculation, betweenness centrality, was employed to pinpoint any specific "node" or Japanese scholar occupying a pivotal and influential position within the network. Through this, the authors aimed to uncover scholars who held a particularly significant and influential role within the scholarly network [67].

**Topic Modeling:** to examine RQ3, the authors conducted a textual analysis. The authors aimed to investigate the utilization of data extracted from the abstracts of both international and domestic journals. Their objective was to identify subjects within a corpus of texts and words that are intimately associated with those subjects. The abstracts, which formed the unit of analysis, were meticulously collected from a subcategory pertinent to political science journals.

In the methodology, a series of preprocessing steps were undertaken. These included tokenizing, complexity reduction (i.e., removing URLs, separators, symbols, punctuation,

numbers, and stop words. Then the data were lower-cased and also lemmatized), and the creation of the Document Feature Matrix. Following this preprocessing, the texts were categorized using Latent Dirichlet Allocation (LDA). The choice of LDA was strategic; it was selected due to its suitability for analyses that do not require the integration of covariates or structures. Consequently, other models such as Structural Topic Modeling (STM), Guided LDA, and keyATM were deemed unnecessary and, therefore, not utilized in this study [68]. The authors used R (R.4.2.2) and RStudio (2023.03.1+446) to implement the topic modeling. The authors used the R packages such as "tm," "ldatuning," "textstem," and "quanteda."

**Qualitative analysis:** lastly, based on the results of the quantitative analysis, we picked up 40 Japanese political scientists and interviewed them (see Appendix 2 for the questionnaire wordings. The questionnaire response rate was percent). The authors sent a questionnaire to Japanese political scientists who published articles in international journals in English. The survey respondents were broadly divided into three groups: 1: those who received their doctoral degrees overseas and were employed by overseas universities (18 scholars), 2: those who received their doctoral degrees overseas and were employed by Japanese universities (13 scholars), and 3: those who received their doctoral degrees in Japan and were employed by Japanese universities (9 scholars). Those who obtained a doctoral degree in Japan and positioned at overseas universities were almost non-existent, and thus could not be included in the survey.

## 4 Results

**Answering the RQ1:** firstly, upon examining our comprehensive dataset detailing the publications of Japanese political scientists, we discern several fundamental characteristics present within the data. The quantity of articles published in international journals has displayed a sustained upward trajectory. Between 1971 and 1980, a mere 11 articles were published; this figure increased to 24 articles between 1981 and 1990. During the decade spanning 1991 to 2000, Japanese political scientists authored a total of 64 English articles. This figure escalated to 112 from 2001 to 2010, and further to 136 from 2011 to 2023. The decadal output of English publications by Japanese political scientists has witnessed a substantial increase over the past five decades, growing from a modest dozen to a magnitude ten times greater. This proliferation in the total count of English publications substantiates the advancing internationalization among Japanese political scientists.

Secondly, an inquiry into the most prolific authors in both Japanese and English is merited. The 20 preeminent Japanese authors with publications in international journals are shown in a table (see Appendix 3). Conversely, the 20 most distinguished scholars with publications in domestic peer-reviewed journals are also shown in a table (see Appendix 3). Of note is the observation that only four of the top 20 authors with international journal publications are also among the top 20 authors in domestic journals: Ikeda, Inguchi, Masuyama, and Kato. The act of authoring a peer-reviewed article in English compared to

one in Japanese may indeed involve distinct endeavors.

Adding to the intrigue, it is observed that six of the top 20 authors in international journals are females, whereas, with the exception of Junko Kato, the entirety of authors in domestic journals are male. Can it be said that female Japanese political scientists are more likely to write in English? In answering the question, the authors examined whether there was a gender difference in the publication of both in English and Japanese articles for each birth cohort. However, the differences were neither pronounced nor statistically significant (Figure 1 and figure 2).

Were there differences by generation? The number of articles published in English has remained flat, and there has been no significant increase in the total number of articles published by each generation. Publications in Japanese were higher among scholars born in the 1950s and later than among the older generations, however, the average value declined among those born in 1980 and later (Figure 3). Since this generation is still active, the number may change in the future. Hence, it would not be said that female Japanese political scientists publish more in English, and there has been little generational difference with respect to publication in English.

Figure 1: Publications in English by Birth Year and Gender

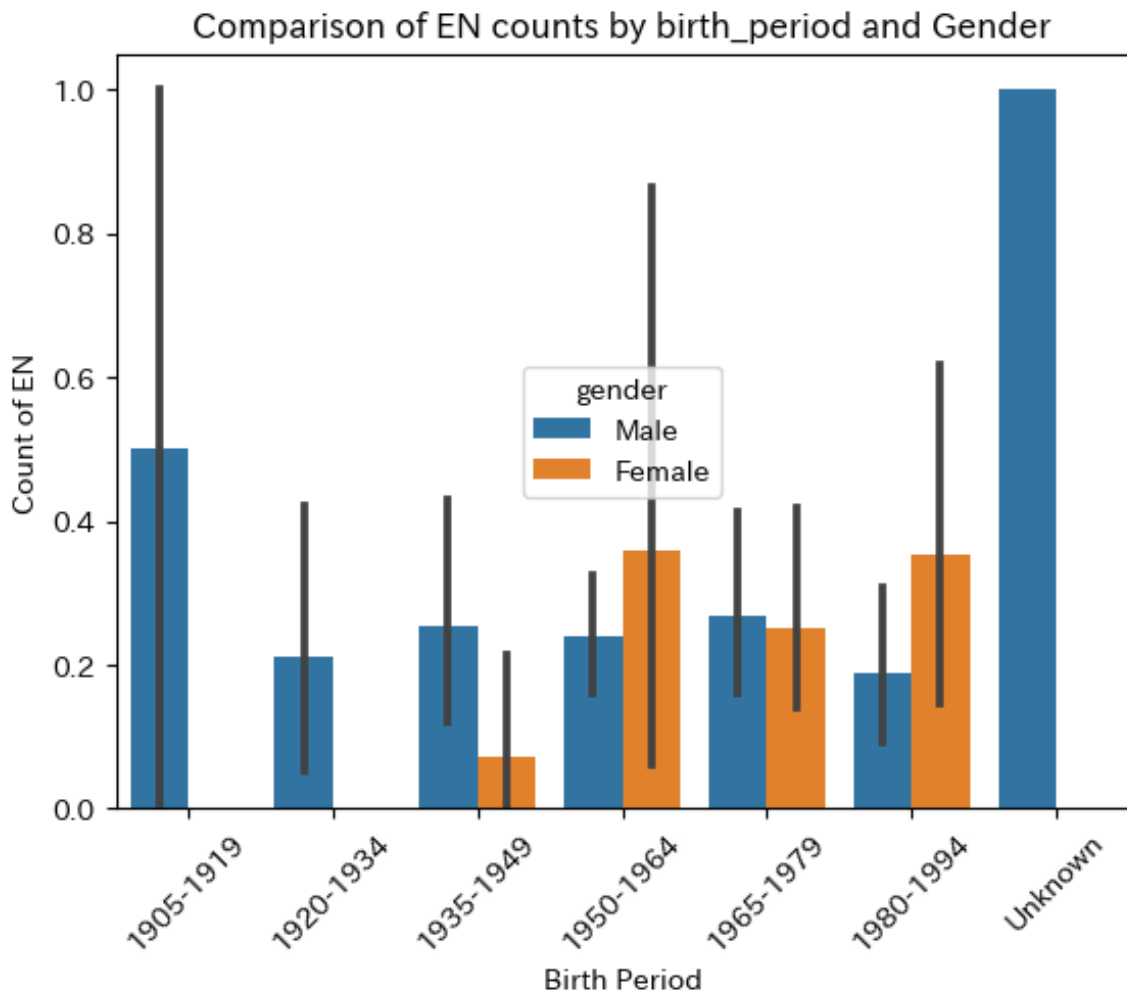




Figure 2: Publications in Japanese by Birth Year and Gender

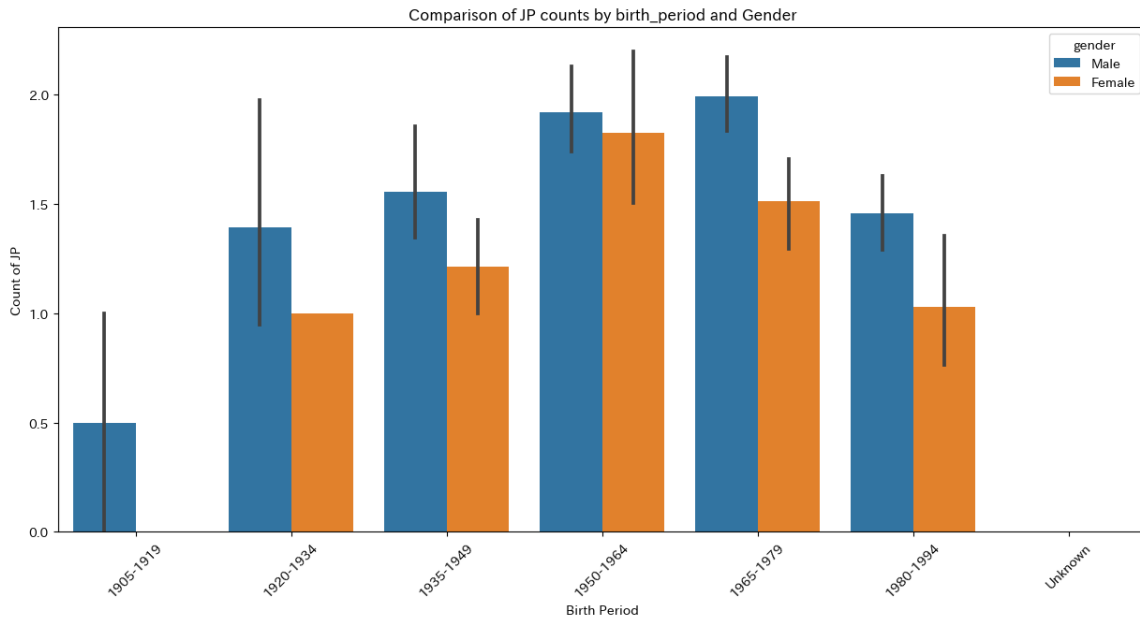
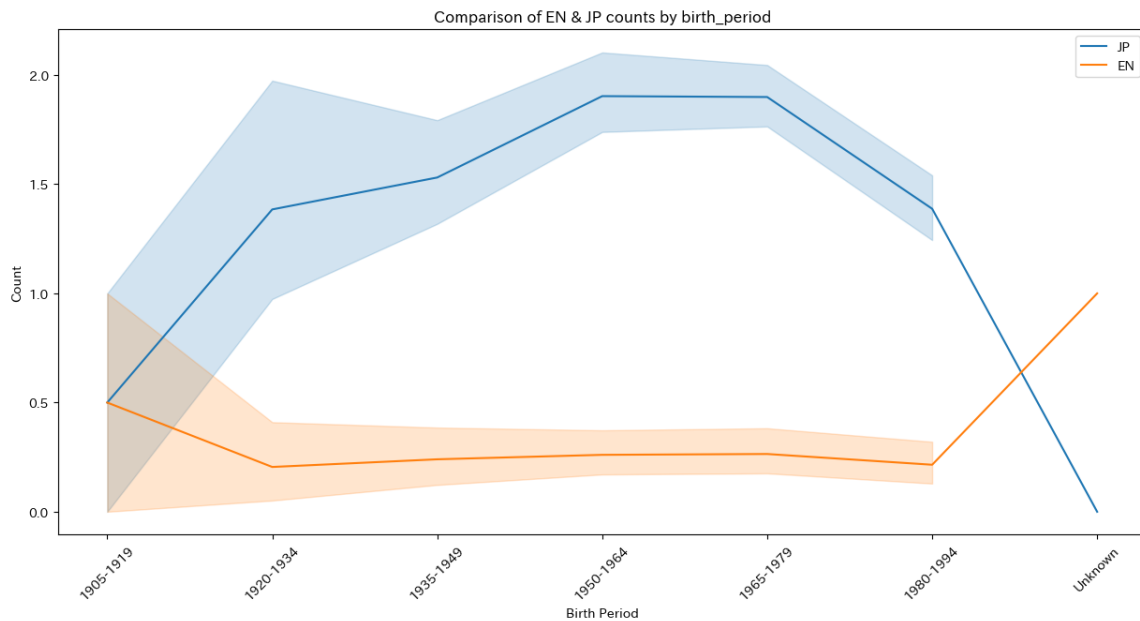


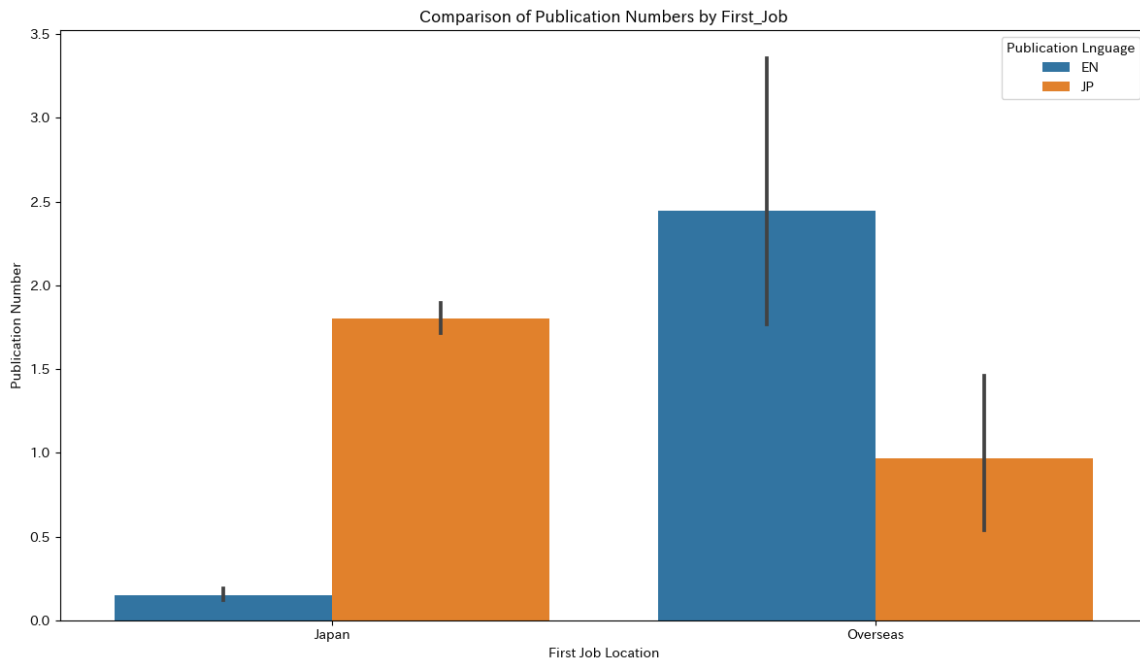
Figure 3: Publications in English and Japanese by Birth Year



Of particular importance is the distinction between Japanese political scientists who obtained positions at research institutions domestically versus those abroad. Japanese political scientists positioned at institutions within Japan authored, on average, approximately 1.75 articles in Japanese, juxtaposed with a publication rate of approximately 0.25 articles in English. Conversely, those affiliated with institutions outside of Japan tend to publish around 2.5 articles in English, but just under 1 article in Japanese. This disparity is statistically significant (Figure 4). Analyzing across generations, the quantity of English publications is notably greater for researchers affiliated with foreign research institutions

compared to their Japanese counterparts (Figure 5). However, the volume of Japanese publications generated by scientists affiliated with Japanese institutions surpasses their English publications in each generational cohort, although this difference lacks statistical significance. Notably, Japanese political scientists born between 1980 and 1994 and based in Japan authored an average of 1.5 articles in Japanese, while their counterparts at foreign institutions produced a mere 0.2 articles in Japanese; this difference is statistically significant (Figure 6). It's worth noting the apparent inclination of Japanese political scientists based abroad to author fewer articles in Japanese.

Figure 4: Publications in Japanese and English by First Jobs



Finally, what about the publication of books instead of articles? The total number of book publication appears to be on a long-term downward trend. By birth cohort, the total number of book publications in Japanese has been declining rightward, while book publications in English has been rising steadily (Figure 7). The total number of books published and the number of books published in English are dominated by those who were employed by overseas research institutions. In the long run, the trend of researchers belong to Japan research institutions publishing books in English is also gradually increasing (Figure 8).

**Answering the RQ2:** the author created co-authorship data of the international publications. The data was divided into five periods: 1971-1980, 1981-1990, 1991-2000, 2001-2010, and 2011-2023. There were only 10 Japanese first authors and 3 co-authors (including 2 international co-authors) in the first period. In the second period, the number of first authors was 24, and the co-authors in total were 10 (including 8 international co-authors). In the third period, the number of first authors and co-authors were 15 and 7, respectively (including no international co-authors. And in the forth period, the total number of Japanese authors jumped to 76, and the total co-authors were 14 (including no interna-

Figure 5: Publications in English by First Jobs

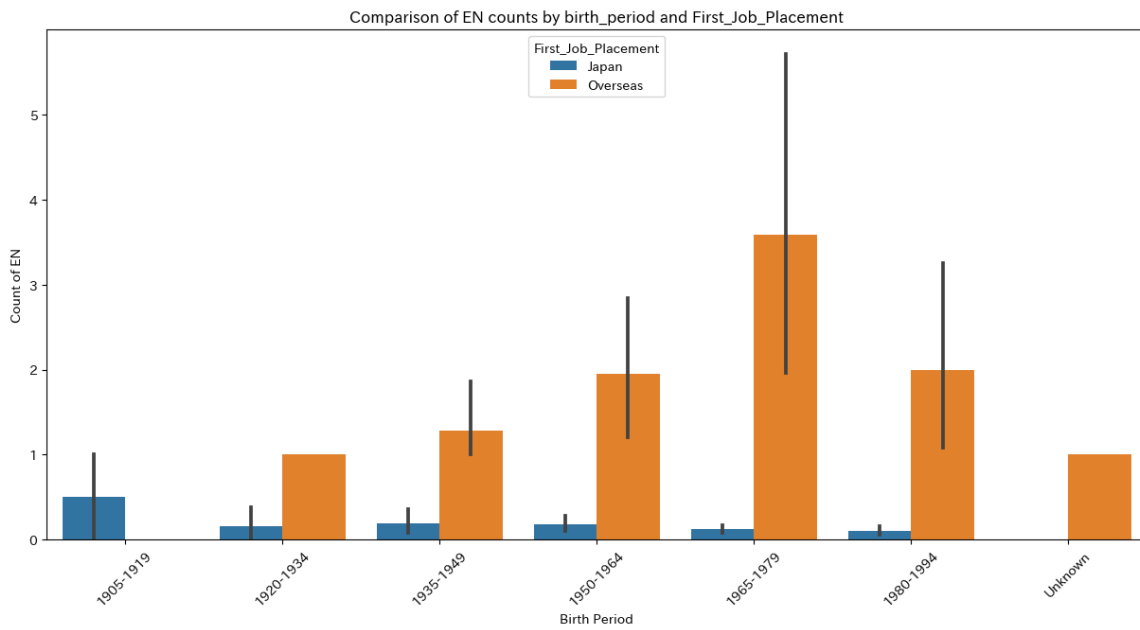
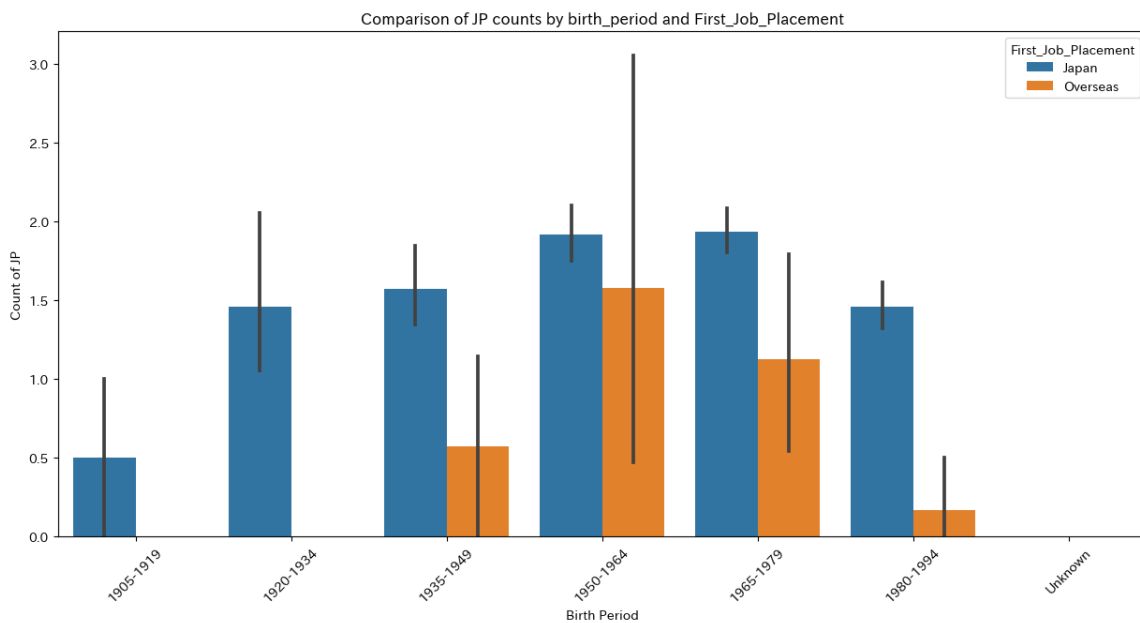


Figure 6: Total Book Publications in English and Japanese



tional co-authors). Finally, in the fifth period, Japanese first authors has increased to 98, with 19 co-authors (including no international co-authors).

Simply put, the increase in the total number of first authors in international journals suggests a strong evidence of internationalization of Japanese political science. At the same time, interestingly, the number of co-authors has not increased dramatically in 50 years. The total number of first authors also drew a very strange pattern: it had declined during the decade from 1991, but increased rapidly during the decade from 2001 to 2010. This raises an interesting question: why is this? Also, it is also intriguing to note that even

Figure 7: Total Book Publications in English and Japanese

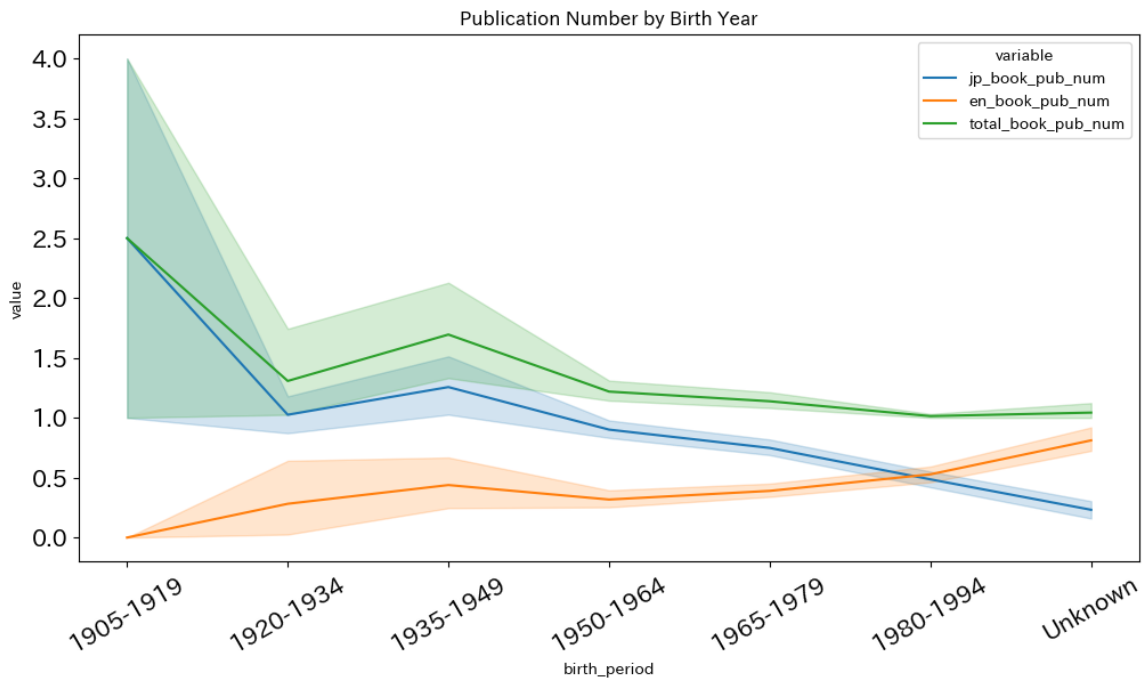
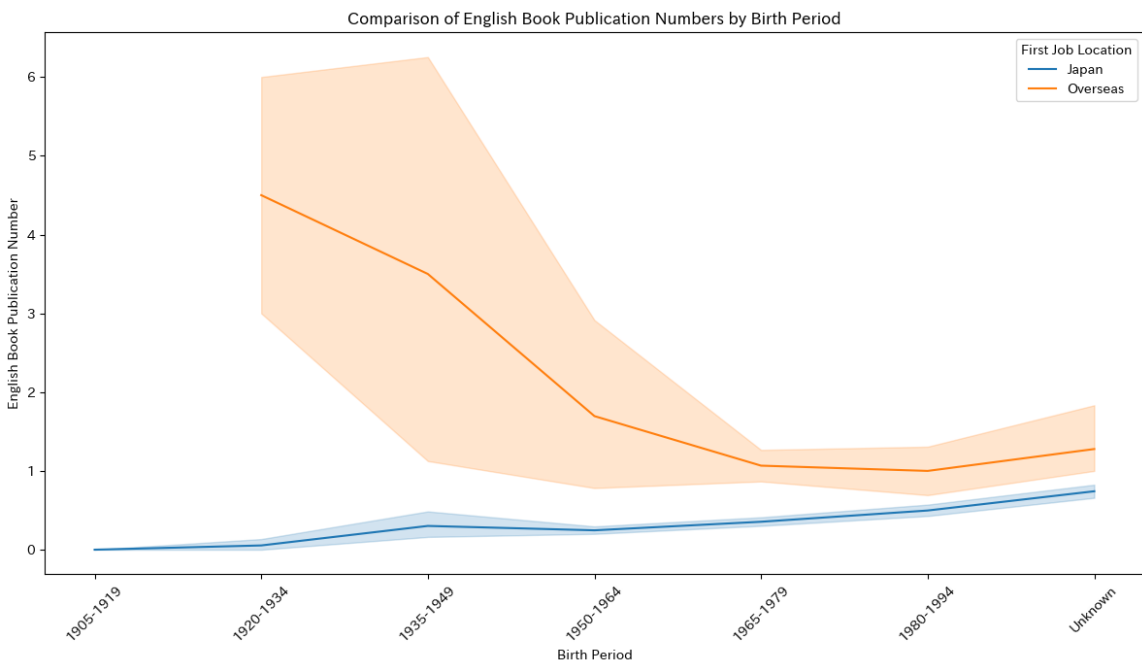


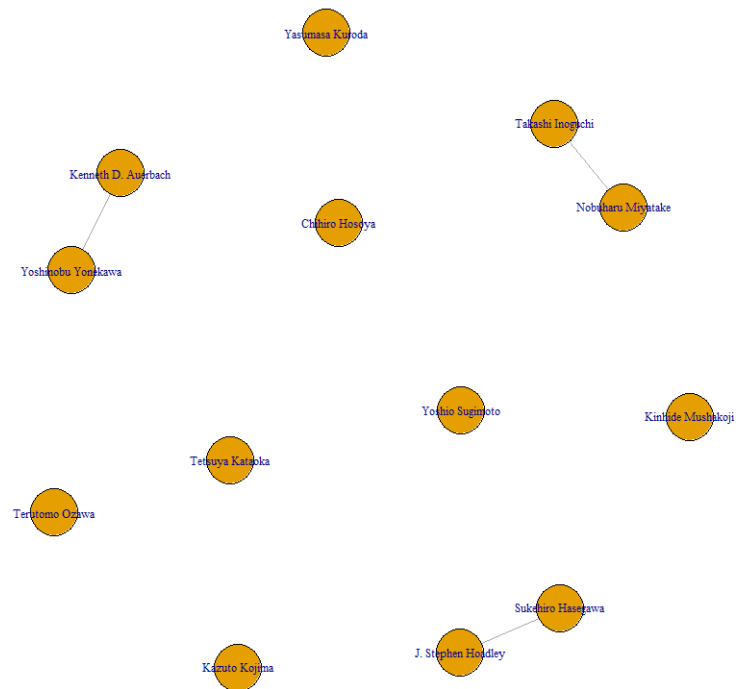
Figure 8: Book Publications in English by First Jobs



when Japanese authors publish articles in international journals, they tended to form co-authorship with other Japanese scholars. Therefore, international co-authorship between Japanese political scientists and political scientists from other countries, has declined (see Figure 9, Figure 10, Figure 11, Figure 12, and Figure 13 ).

Calculating the density of each network shows it has decreased over time; there is a large drop in the density of the co-author network after 2001. This is a byproduct of the

Figure 9: Co-Authorship Network, 1971-1980

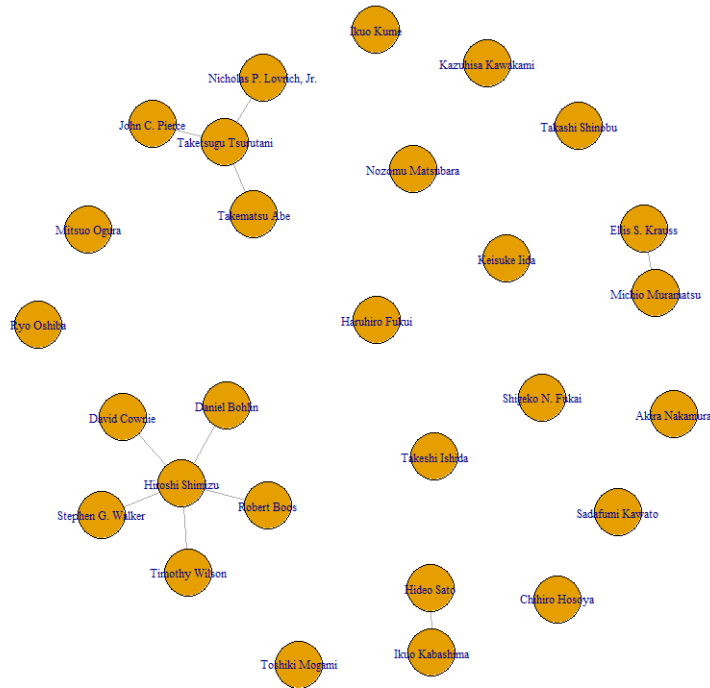


large increase in the number of vertices (authors) since 2001 (Table C.1). In parallel with this, the calculation of standardized degree centrality reveals something captivating. The authors who scored high values in standardized degree centrality are all authors of articles published more than 30 years ago. In networks where the number of researchers were still small and relatively dense, it is plausible that the values were higher for researchers who had successfully built relationships with many co-authors (see Appendix 3 for detail).

We calculated the connected components and subgrouped them, and we found that as of 1971, the connected components had three 2's and all the rest were 1. In 1981, there were 6 and 4 components respectively, two 2's, but mostly 1. In 1991, there were 4 and 3 components respectively, and two 2's with all the other were 1. In 2001, there was one component consisted of 6 nodes, two 3's, five 2's. In 2011, there was one 9, one 5, one 3, five 2's. The earlier networks had many isolated nodes and small components, indicating a lack of broad connectivity or cohesion across the entire network. However, it was suggested that the growth in the size of the largest connected component indicated an increase in connectivity or cohesion within the network over the five decades.

Next, the authors calculated betweenness centrality. Because of the different shapes of the networks, simple comparisons cannot be made. However, it is fair to say that the researchers on the list (Table 1) are critical connectors or bridges in the networks of each age group. Especially in recent years, political scientists such as Imai, Horiuchi, Yamamoto,

Figure 10: Co-Authorship Network, 1981-1990



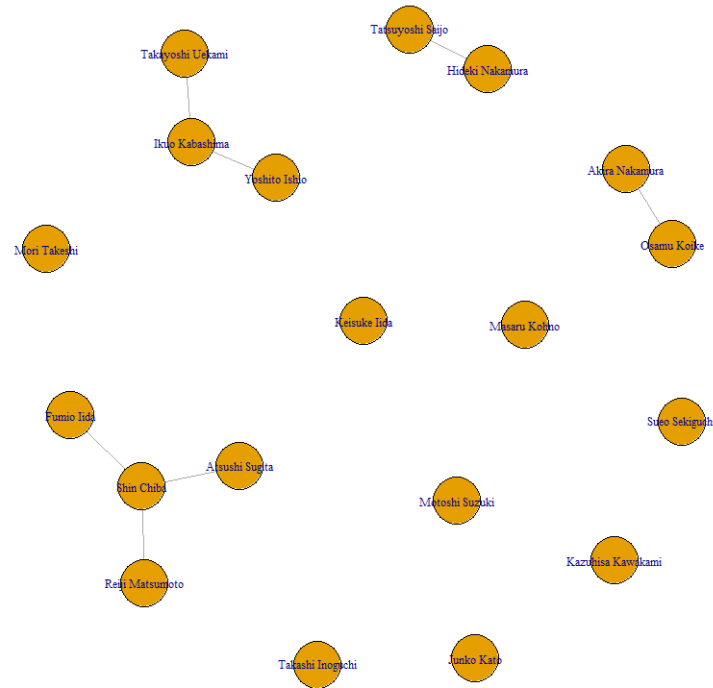
Fukumoto, and Tago have been located at key points of networks and they influence the flow of information, resources, or whatever is being transferred across the network.

Table 1: Betweenness Centrality, 1971-2023

	Name	Score
1981	Hiroshi Shimizu	0.0285
1981	Taketsugu Tsurutani	0.0085
1991	Ikuo Kabashima	0.0065
1991	Shin Chiba	0.0196
2001	Kosuke Imai	0.0013
2001	Takahiro Tsuchiya	0.0003
2001	Yusaku Horiuchi	0.0028
2011	Atsushi Tago	0.001
2011	Kentaro Fukumoto	0.0014
2011	Kosuke Imai	0.0027
2011	Takeshi Hieda	0.0002
2011	Yusaku Horiuchi	0.0043
2011	Tepei Yamamoto	0.003

**Answering the RQ3:** the authors used R to conduct Latent Dirichlet Allocation (LDA). The authors utilized the packages such as "quanteda," "tm," "textstem," and "ldatuning."

Figure 11: Co-Authorship Network, 1991-2000

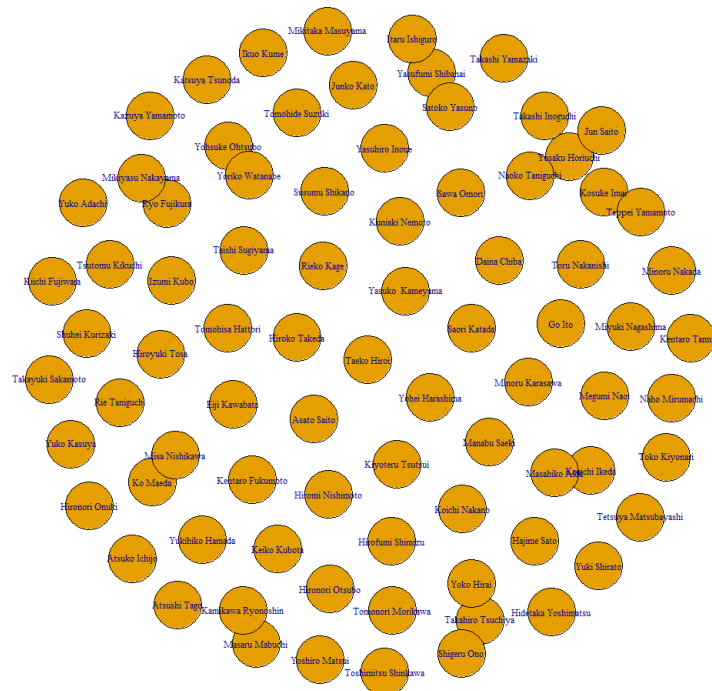


The data for Japanese articles were taken from abstracts of *Nenpo-Seijigaku*, *Leviathan*, and *Senkyo-Kenkyu* (hereby named as "topic A"). On the other hand, the data for English publications were abstracts downloaded from *American Political Science Review*, *American Journal of Political Science*, and *Journal of Politics* (hereby named as "topic B"). For international relations, we extracted data from abstracts of *Kokusai-Seiji* (hereby named as "topic C"). Abstracts of English publications on international relations were extracted from *International Organization*, *International Studies Quarterly*, *Journal of Conflict Resolution*, and *Journal of Peace Research* (hereby named as "topic D").

We removed unimportant information like URLs, separators, symbols, punctuation, numbers, and stop words from the textual data. Then the data were lower-cased and also lemmatized. In order to identify the right number of topics for extraction through LDA, we examined specific model comparison criteria from the R package *ldatuning*. These criteria are: "CaoJuan2009," "Arun2010," and "Deveaud2014." The "FindTopicNumber" command suggested optimal  $k=49$  for the topic A,  $k=14$  for the topic B,  $K=31$  for the topic C, and  $k=14$  for the topic D (see Figure 14, Figure 15, Figure 16, and Figure 17).

First, let us compare topic A and topic B (Figure 18 and Figure 19). Can we observe any difference in topics between articles published by Japanese scholars in domestic and international political science journals? Most of the papers written by Japanese political scientists in Japanese and published in domestic journals have focused upon empirical

Figure 12: Co-Authorship Network, 2001-2010



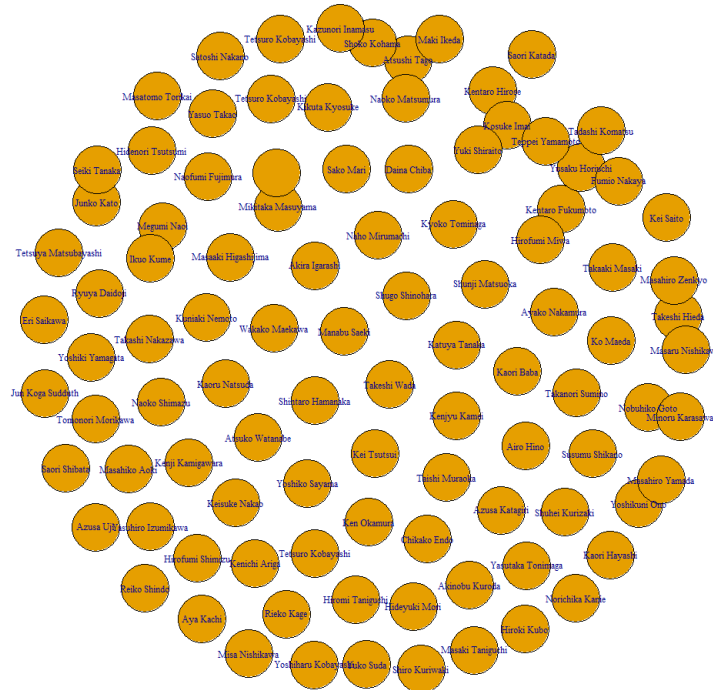
topics related to foreign and Japanese politics. In particular, themes related to Japan's political and electoral systems and voting behavior are prominent. Among all, election in Japan seems to be topic of interest. On the other hand, articles published by Japanese political scientists in international journals seem to be no different in their interest in empirical topics. However, there are some notable differences. Japanese political scientists who publish in international journals seem to be more likely to use statistical data analysis and causal inference through random experiments as their methods. Japanese scholars who publish in international journals are also relatively more interested in methodology of political science. These scholars are not necessarily interested only in Japanese politics, but seem to work on a variety of empirical topics.

Second, what do we find when we compare topic C and topic D? Japanese political scientists who published articles in domestic journals on international relations seem to write more empirical articles that include the names of specific countries or regions, such as China, the UK, Korea, Vietnam, the EU, Japan, and ASEAN. In contrast, Japanese political scientists who published articles in English in international journals tend not to write articles that include the names of specific countries or regions. Empirical topics are also marked by generic nouns such as conflicts, coups, treaties, and peacekeeping, and do not seem to focus on specific regions or countries (see Figure 20 and Figure 21).

**Qualitative analysis:** lastly, the authors executed qualitative interviews engaging the pertinent Japanese political scientists. Refer to Appendix 2 for a comprehensive enu-



Figure 13: Co-Authorship Network, 2011-2023



meration of the respondents. It is essential to note that individual comments have been anonymized to maintain the confidentiality of the participants.

Japanese researchers who have acquired doctoral degrees from foreign universities, ventured into international job markets, secured opportunities at universities abroad, or undergone tenure reviews, universally concur that writing in English was an imperative choice. Institutions abroad appear to predominantly recognize and reward remarkable articles and books that are published in English. For instance, in the United Kingdom, the Research Excellence Framework (REF) serves as a pivotal performance evaluation system for researchers. Responses indicate that continuous contributions in English are essential as they significantly influence the researchers' professional acknowledgment within the REF system.

Why do individuals who have earned their doctoral degrees from Japanese universities and subsequently secured employment in these academic institutions elect to write and publish in English? The rationale extends beyond mere circumstantial necessities; it is fueled by a fervent passion for scientific exploration and a dedication to enriching the body of social science literature. Scholars have articulated that global academic communities generally facilitate broader audiences and foster more profound discussions on research subjects. There is a discernible eagerness to demonstrate that doctoral degrees conferred by Japanese institutions are universally valid and respected. Nevertheless, it is pertinent to note that Japanese research establishments typically do not bestow extensive rewards

Figure 14: Topic Number for Topic A

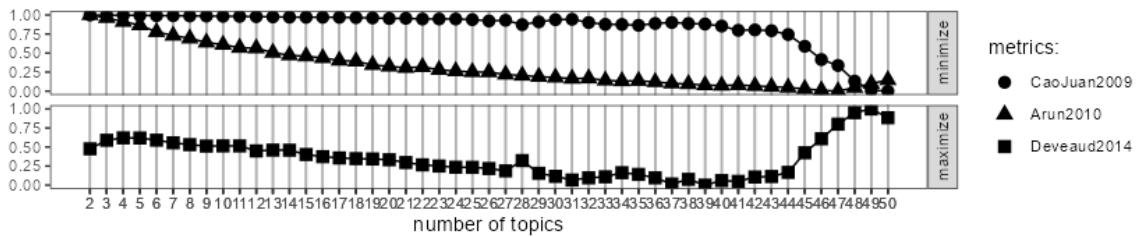


Figure 15: Topic Number for Topic B

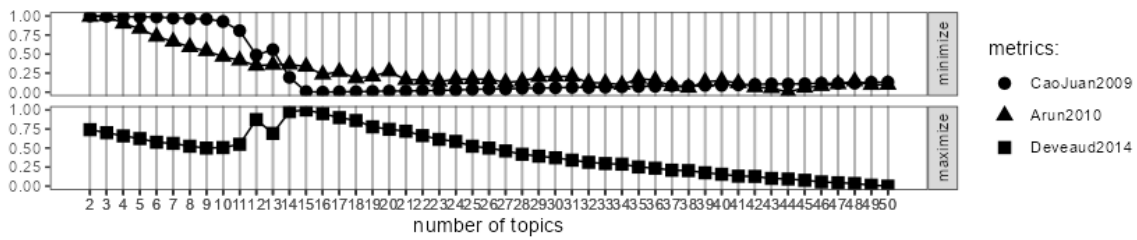


Figure 16: Topic Number for Topic C

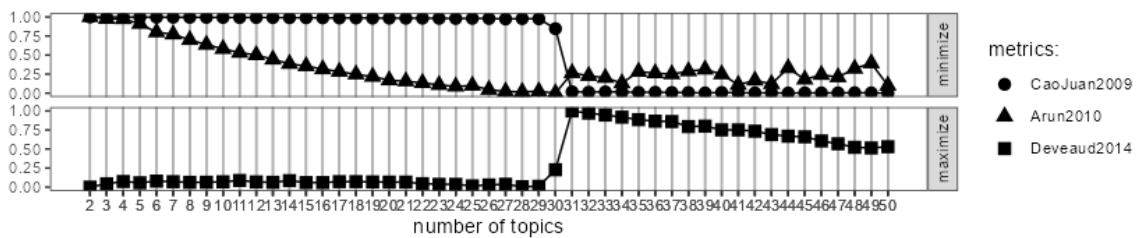
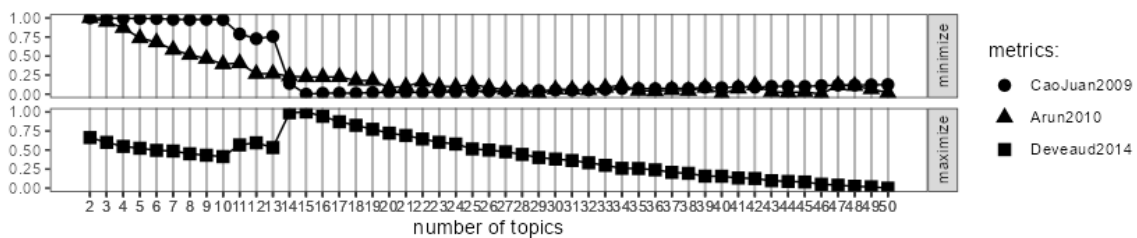


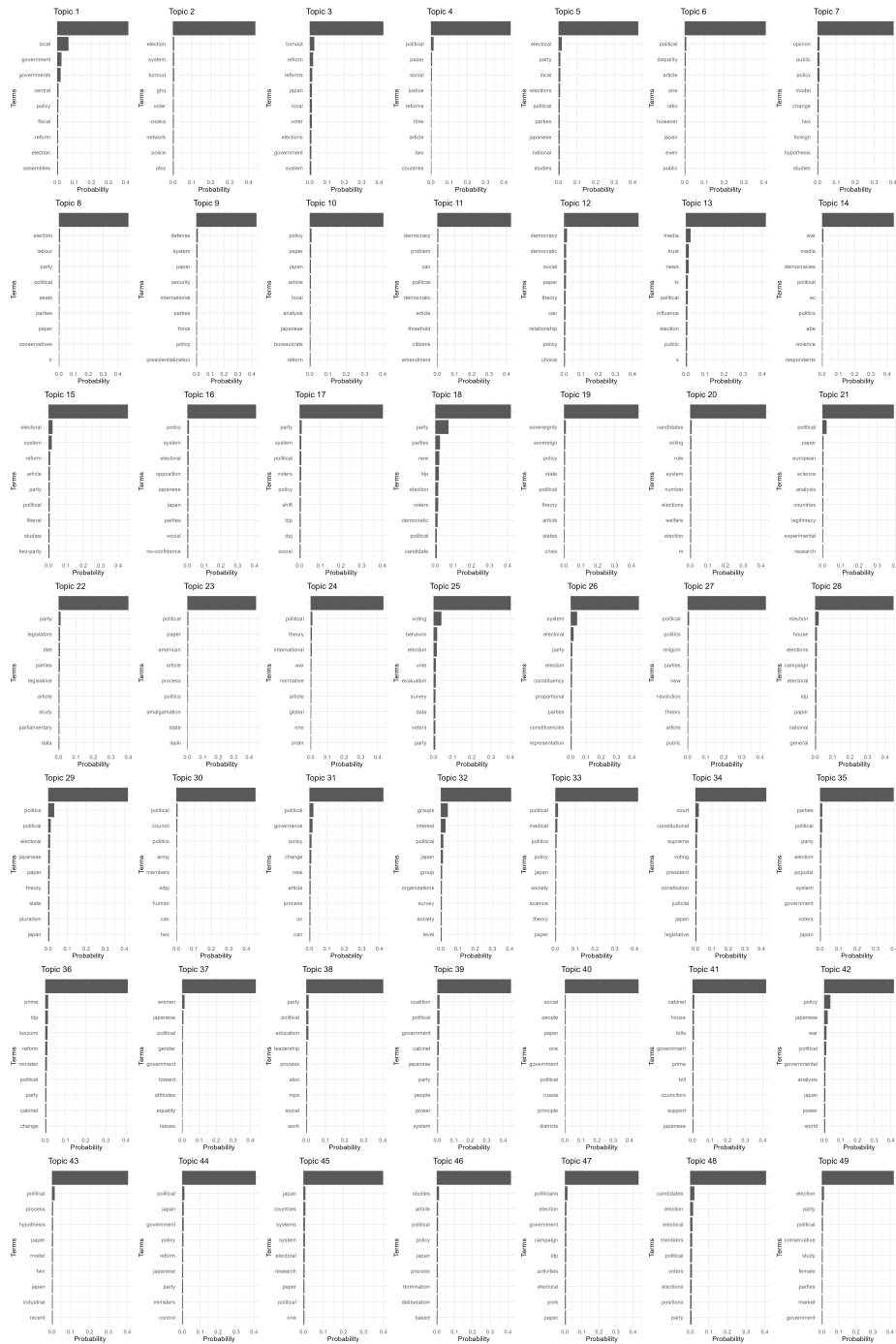
Figure 17: Topic Number for Topic D



for publications articulated in English, and financial incentives do not ostensibly serve as a paramount motivation. The influential impact of academic advisors, senior researchers, and collaborative authors, who encourage the adoption of English for academic writing, also plays a significant role in language preference.

Individuals persistently engaging in English academic writing display a diminished inclination towards opting for Japanese as a medium of written communication. Some scholars emphasize that the pervasive international acclaim of their English publications diminishes the necessity for Japanese written contributions. Certain researchers express apprehensions regarding writing in Japanese, attributing this to their limited experience and proficiency. Japanese is predominantly utilized when the objective is to disseminate information or cultivate knowledge amongst the broader populace within Japan, underscoring a lack of perceived value in composing academic articles or books in the Japanese

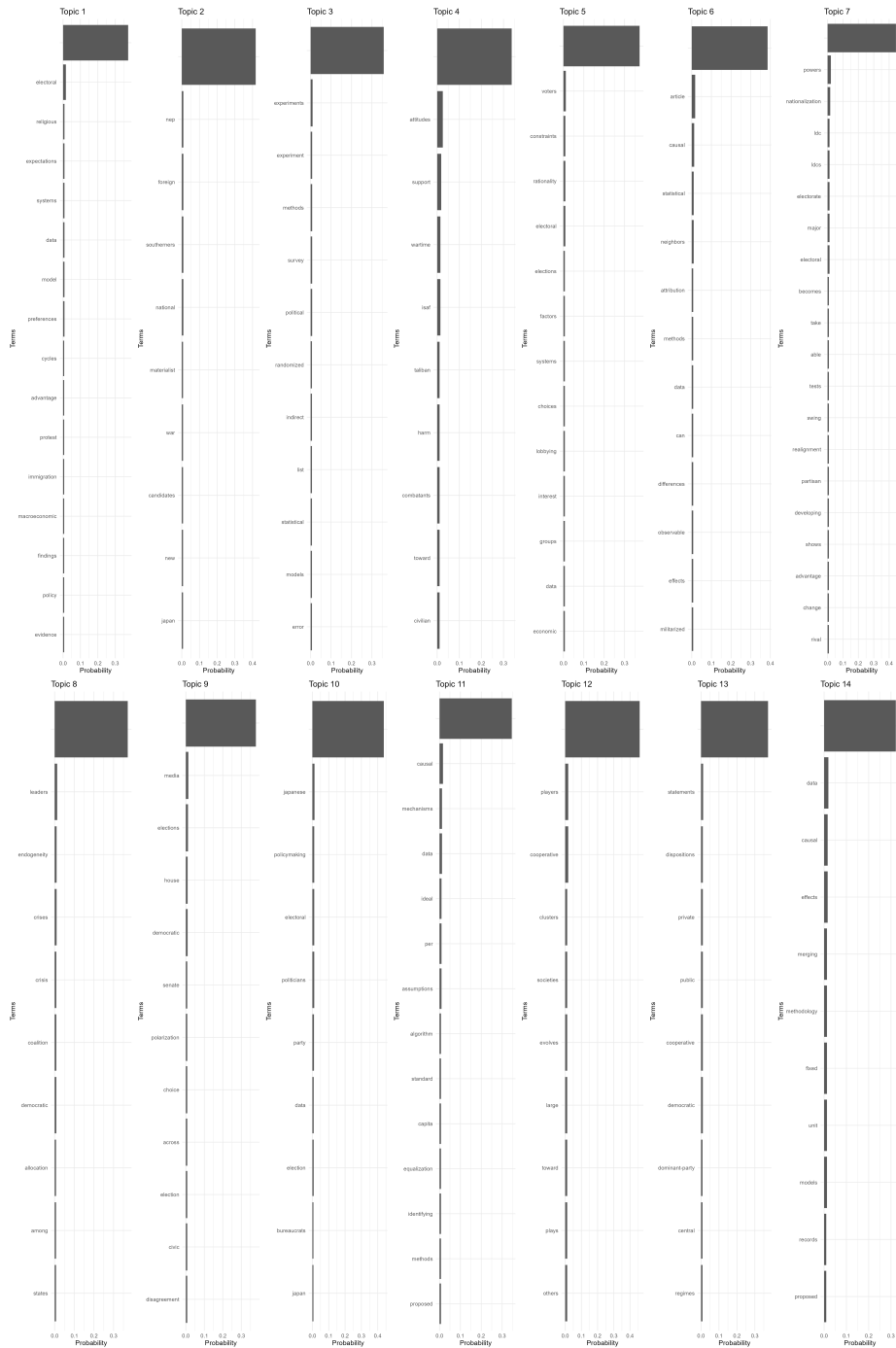
Figure 18: LDA Result of Topic A



language.

Despite these inclinations, numerous respondents continue to encounter challenges in composing or presenting in English. A limited number report an absence of difficulties, predominantly those with notable accomplishments. The majority express encountering obstacles in navigating research endeavors conducted in English, often struggling with crafting engaging sentences and being limited to mundane expressions. They experience diminished writing and reading speeds in comparison to their native English-speaking

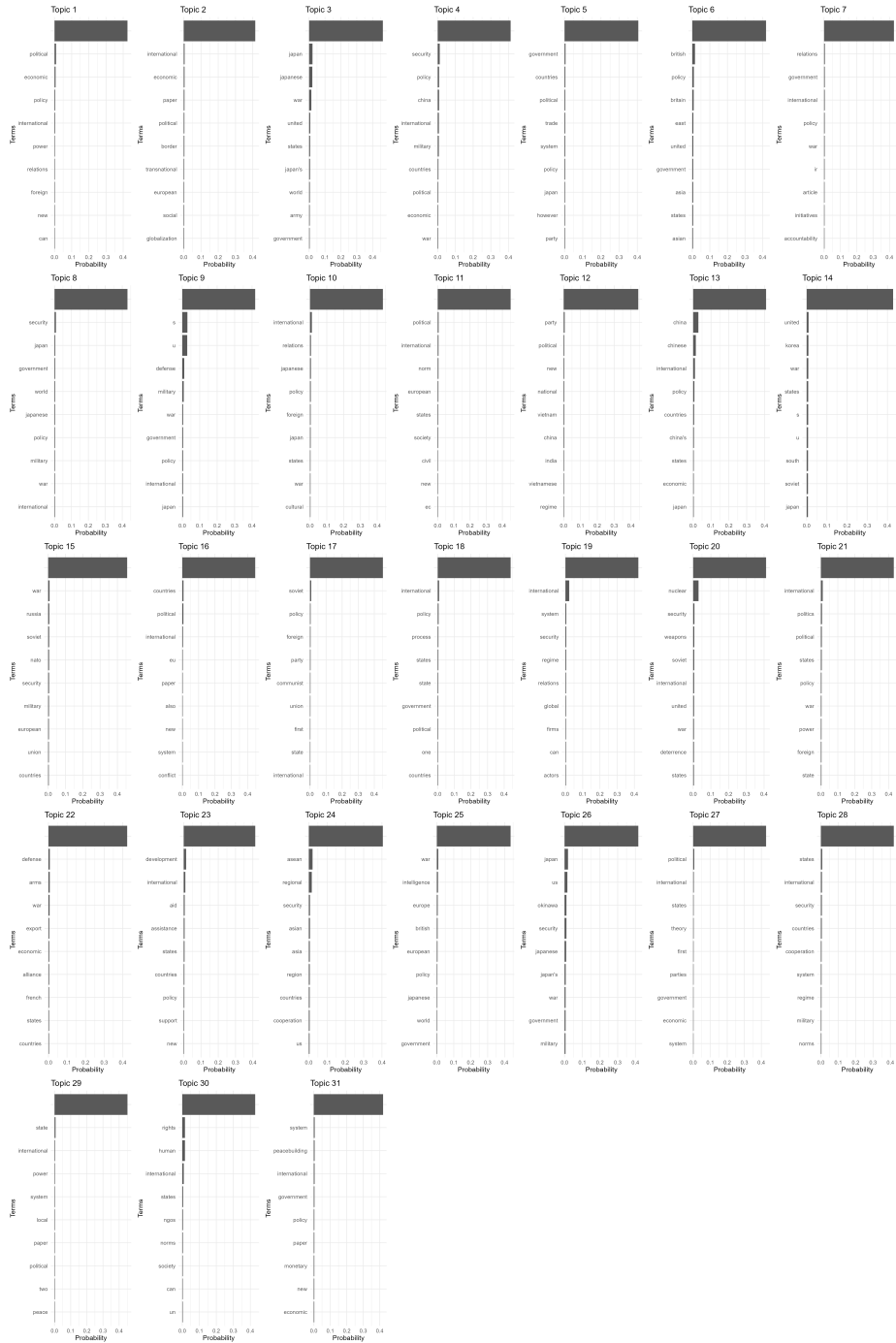
Figure 19: LDA Result of Topic B



counterparts. Additionally, some reveal feeling at a disadvantage due to accent-related comprehensibility issues and challenges in casual English communication. For instance, a respondent articulated a necessity to demonstrate exceptional proficiency in English writing, surpassing native English-speaking colleagues, to attain a commensurate level of professional regard.

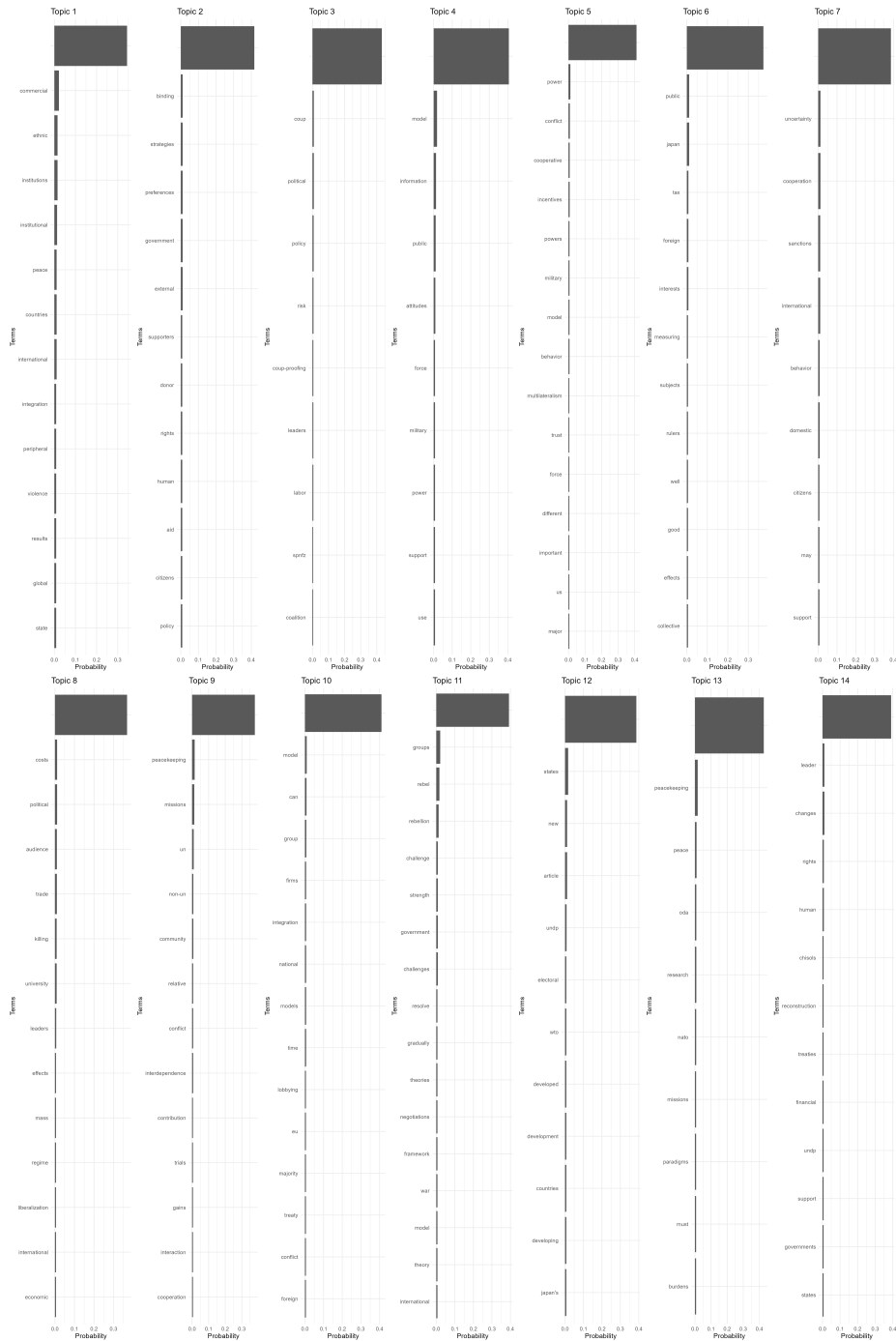
Lastly, a significant proportion of Japanese political scientists diligently strive to align with prevailing international academic trends. A multitude actively engage in various

Figure 20: LDA Result of Topic C



academic pursuits such as regularly reviewing academic journals, participating in international conferences, and utilizing digital platforms for academic advancements, demonstrating a robust commitment to cultivating international academic networks and collaborations.

Figure 21: LDA Result of Topic D



## 5 Conclusion and Discussion

In considering the research questions (RQs), several observations emerge:

For RQ1: There has been a significant uptick in the number of publications by Japanese political scientists in international journals, suggesting an advancement in internationalization. And Japanese scholars who have published in international journals and those who published in domestic journals are different people. Yet, distinctions based on gender or generational lines remain absent. What seems like a change worth noting is that even

researchers affiliated with institutions in Japan now seem to be inclined to write books in English.

Regarding RQ2: there's a pronounced rise in the articles published in international journals. However, the growth in co-authorship has been comparatively modest, with international collaborations showing little increase: this may be the challenge facing Japanese political science. This pattern persists across generations. Intriguingly, there are subtle evolution within the network's internal architecture, exemplified by the expanding size of the largest connected component. Whether this development signifies further internationalization remains ambiguous.

Pertaining to RQ3: A textual analysis of summaries within political science and international relations unveils variances in the interests and methodologies between researchers publishing in international versus domestic Japanese journals. The divergence in topics and methods between Japanese domestic and international journals, even when penned by the same Japanese political scientists, may suggest there is a large divergence between the two populations.

From qualitative analysis: a universal agreement emerged among the participants, particularly those holding doctoral degrees from foreign institutions, accentuating the indispensability of English for academic writing and professional advancement. This consensus is substantially influenced by international recognition, professional evaluation frameworks such as the United Kingdom's Research Excellence Framework (REF), and broader engagement opportunities within global academic communities. Those who obtained doctoral degrees from Japanese universities, motivations transcending mere professional or institutional mandates, such as a profound dedication to scientific exploration and a desire to contribute substantially to social science literature, were instrumental in cultivating a preference for English. Despite the apparent inclination towards English, challenges such as linguistic proficiency, expression versatility, and comprehension due to accents were prevalent. Additionally, the influence of academic mentors and an aspiration to align with prevailing international academic trends were discerned as significant contributors to the preference for English, even as it led to a diminished proclivity for utilizing Japanese in academic writing.

What can be inferred from this research? Recent analyses, including those from *Nihon-Keizai-Shinbun*, have highlighted a discernible decline in scientific activities in Japan over past decades. While Japan held the third position in terms of the number of scientific article publications until the early 1990s, it has since receded to the 10th position [69]. In particular, the *Lancet* recently reported that Japan's research capabilities have been seriously declining in the medical field. According to the report, it is due to a decrease in research hours for medical researchers in Japan and a decrease in research funding, especially at Japan's national research institutes [70]. Contrary to this broader trend, the present study underscores a consistent trajectory towards internationalization within the realm of political science. Despite some challenges, the discipline of political science offers promising avenues.

Concurrently, this research posits that the choices made by Japanese political scientists—whether to affiliate with domestic institutions or seek opportunities abroad—serve as pivotal moments in shaping their academic trajectories, influencing their inclination towards English or Japanese publications. Some scholars pointed out that conducting research activities in English is a burden for researchers whose native language is not English [71]. This language barrier increases costs for Japanese researchers, hinders internationalization, and may be a major factor in the polarization of Japanese political scientists. Hence, the two populations of Japanese political scientists may already well represent distinct academic cultures (i.e. “A Tale of Two Cultures”: [72]), driven by fundamentally divergent career aspirations. Now, more than ever, there’s an imperative for cultivating the capacity for coexistence and dialogue, grounded in mutual respect and understanding of these distinct cultures.

## **A Appendix 1: The list of international and domestic journals**

The complete list of the 50 international journals are as follows: International Organization, American Journal of Political Science, Political Communication, British Journal of Political Science, Policy Studies Journal, Annual Review of Political Science, American Political Science Review, Environmental Politics, Journal of Democracy, Governance, West European Politics, Journal of European Public Policy, Journal of Public Administration Research and Theory, Global Environmental Politics, World Politics, Socio-Economic Review, Public Opinion Quarterly, Comparative Political Studies, Political Psychology, New Political Economy, European Journal of Political Research, Political Geography, International Journal of Press-Politics, Review of International Political Economy, Regulation and Governance, Geopolitics, JCMS-Journal of Common Market Studies, Territory Politics Governance, Party Politics, European Union Politics, Public Administration, Government and Opposition, Political Analysis, Political Behavior, Journal of Peace Research, Journal of Politics, Journal of Conflict Resolution, South European Society and Politics, Perspectives on Politics, International Environmental Agreements-Politics Law and Economics, Politics and Society, British Journal of Politics and International Relations, Post-Soviet Affairs, African Affairs, International Studies Quarterly, Policy and Politics, Social Movement Studies, Policy and Society, New Left Review, International Political Sociology.

The domestic journals are: Nenpo-Seijigaku (Japanese Political Science Association); Kokusai-Seiji (The Japan Association of International Relations); Senkyo-Kenkyu (Japanese Association of Electoral Studies); Leviathan; Nihon-Hikaku-Seijigakkai-Nenpo (Japanese Association of Comparative Politics); Seijisiso-Kenkyu (The Japanese Conference for the Study of Political Thought). Leviathan ceased publication in 2018, so the data on the journal ends in 2018.



## **B Appendix 2: The questionnaire wordings and the list of the respondents**

(The questionnaire wordings were originally in Japanese)

1: When you published your first article in English, what made you to choose to write and publish English?

2: What were your reasons for deciding whether to get work for a Japanese research institute or an overseas research institute?

3: Why do you write and publish in English? Please provide any specific reasons.

4: If your institution has explicitly or implicitly encouraged you to write and publish in English, please tell us about it. (This can be in the form of performance reviews, direct encouragement, etc.)

5: What is your language preference for writing in future?

6: When writing in English, do you feel any difficulty or inconvenience in working in English? If possible, we would appreciate it if you could tell us what specific difficulties or inconveniences you are experiencing.

7: In addition to writing, do you feel any hindrance or inconvenience working in English in any other academic-related activities (e.g., reading, presenting, giving lectures, meeting with co-authors, applying to conferences, chatting with other scholars, posting on social media or blogs, etc.)? If possible, we would appreciate it if you could tell us what specific obstacles or inconveniences you have experienced.

8: Do you consciously adopt different themes and methods when writing papers or books in English than when writing in Japanese?

9: Do you make any conscious effort to keep up with overseas research trends (e.g., to go to overseas academic conferences, attend online seminars, check academic journals regularly, follow overseas academic journals and scholars on social media, etc.)?

## **C Appendix 3: Network Density**

## **D Appendix 4: The tables for total numbers of international and domestic publications**

Table C.1: Network Density, 1971-2023

	Score	Year
Hiroshi Nakajima	0.185	1981.0
Shin Chiba	0.167	1991.0
Taketsugu Tsurutani	0.111	1981.0
Ikuo Kabashima	0.111	1991.0
Yoshinobu Yonekawa	0.083	1971.0
Takashi Inoguchi	0.083	1971.0
Sukehiro Hasegawa	0.083	1971.0
Nobuharu Miyatake	0.083	1971.0

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Table D.1: A Total number of International Publications

	Count
Kosuke Imai	21
Junko Kato	15
Yusaku Horiuchi	9
Takashi Inoguchi	7
Motoshi Suzuki	7
Saori Katada	6
Rei Shiratori	6
Megumi Naoi	5
Mikitaka Masuyama	5
Ko Maeda	5
Kennichi Ikeda	5
Daina Chiba	5
Atsushi Tago	5
Teppey Yamamoto	4
Yoshikuni Ono	4
Tomonori Morikawa	4
Tetsuya Matsubayashi	4
Takayuki Sakamoto	4
Sususmu Shikano	4
Seiki Tanaka	4
Rieko Kage	4
Naho Mirumachi	4
Masaaki Higashijima	4
Kuniaki Nemoto	4
Kentaro Fukumoto	4
Jun Sudduth	4
Hirofumi Shimizu	4



Table D.2: A Total Number of Domestic Publications

	Count
Ikuo Kabashima	13
Yoshiaki Kobayashi	12
Masahiro Yamada	12
Ryosuke Imai	12
Takashi Inoguchi	11
Kengo Soga	11
Kazunori Kawamura	11
Hiroshi Hirano	10
Kennichi Ikeda	10
Hideo Otake	10
Satoshi Machidori	10
Masahiro Zenkyo	10
Ichiro Miyake	10
Junko Kato	10
Kentaro Fukumoto	9
Takeshi Iida	9
Aiji Tanaka	9
Ryo Nakai	9
Mikitaka Masuyama	9
Sadafumi Kawato	9
Masahiko Tatebayashi	9
Shiro Sakaiya	9
Masaru Kono	9