Fifty Years of *Population and Development Review*: Shifting Research Themes, Authorship, and Academic Impact in Comparative Perspective

Ridhi Kashyap and Aasli Abdi Nur

To mark the Population and Development Review's *(PDR) 50th anniversary, we analyze its contributions to the landscape of population research. We examine the trajectory of research published in PDR and compare it with two leading and long-standing English-language demographic journals,* Demography *and* Population Studies. *Through a computational meta-analysis of all articles published across the three journals over the past 50 years, we explore trends in knowledge production focusing on research themes and authorship characteristics. Our automated text analysis highlights the prominence of fertility, family, and mortality themes across all three journals, but with PDR placing greater emphasis on development, policy, and population growth. Interest in migration and health-related topics has also increased over time across all journals, including PDR. Our analysis of authorship characteristics reveals a persistent overrepresentation of scholars located in Global North countries, particularly the United States, across all three journals. While the prominence of the United States has declined in PDR, European representation has grown, alongside a relative decline in Global South authors compared with earlier decades. Over the past 50 years, all three journals have had a male-dominated authorship, but gender balance has improved significantly, reaching near parity in recent years.*

Introduction

Over the past 50 years, the *Population and Development Review* (PDR) has established itself as one of the premier outlets for population research. PDR

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was established by the Population Council in response to broader global concerns around population growth in the 1970s, which culminated in the UN's first International Conference on Population in Bucharest in 1974. At the time of PDR's founding in 1975, demography had already emerged as a field, and PDR was not the first of the English language demography journals (Merli et al. 2023). *Population Studies*, the oldest among English language demographic journals, was founded in 1947 by the Population Investigation Committee (PIC) in Britain. In 1964, the journal *Demography* was established as the official journal of the Population Association of America (PAA). Since its inception, PDR strived to distinguish itself as a journal concerned with the intersection of population and development, encompassing the relationship between population and social, economic, and environmental change, with a focus on policy.

While this was the intended objective, looking back at 50 years of scholarship in the journal, how has PDR contributed to the intellectual development of the landscape of population research? How do the themes that appear in the journal compare with those from the two, long-standing English language journals of the field, *Population Studies* and *Demography*, that preceded it? How have the gender and location characteristics of authors changed over time? Here, on the occasion of this 50th-anniversary milestone, we assess these questions through a computational meta-analysis of all articles published across the three journals from 1975 until the end of 2024. In contrast to narrative reviews of the field, bibliometric analyses such as this use statistical and computational tools to quantify the research landscape.

The growing availability of digitized, scholarly databases such as Scopus and Web of Science together with increasing adoption of computational methods across the social sciences have led to the growth of bibliometric, or more specifically "scientometric" when referring to the scientific literature, approaches to describe the intellectual shape and evolution of fields (Bar-Ilan 2008). Demography has been no exception to this, and some recent, excellent examples to characterize its intellectual landscape using these methods include Merli et al (2023), Mills and Rahal (2021), Merchant (2017) and Krapf, Kreyenfeld and Wolf (2016). While Merli et al (2023) explored the contours of anglophone demography across the three journals and its links with other disciplines over the last 70 years, Merchant (2017) explored how concerns of population control organizations are reflected in the published demographic literature. Focusing on the published literature in the journal *Demography*, Krapf, Kreyenfeld and Wolf (2016) analysed how research sub-fields, as well as the gender of authors, have shifted over time. Mills and Rahal (2021) conducted a scientometric analysis of published literature in the longest running English language journal, *Population Studies*, on its 75th anniversary, analysing both research themes and author characteristics. Our objective is similar to Mills and Rahal, but instead of only

TABLE 1 Number and proportion of articles published by journal and decade

	Population and Development Review	*Demography*	*Population Studies*	**Pooled sample**
1940–1949	-	-	59 (0.009)	59 (0.009)
1950–1959	-	-	181 (0.026)	181 (0.026)
1960–1969	-	293 (0.043)	214 (0.031)	507 (0.074)
1970–1979	110 (0.016)	424 (0.062)	341 (0.050)	875 (0.128)
1980–1989	328 (0.048)	397 (0.058)	263 (0.038)	988 (0.144)
1990–1999	380 (0.055)	386 (0.056)	256 (0.037)	1022 (0.149)
2000–2009	372 (0.054)	407 (0.059)	207 (0.030)	986 (0.144)
2010–2019	338 (0.049)	839 (0.122)	226 (0.033)	1403 (0.204)
2020–2024	231 (0.034)	441 (0.064)	168 (0.024)	840 (0.122)
Overall	1759 (0.256)	3187 (0.465)	1915 (0.279)	6861

surveying research in *Population and Development Review*, we instead use a dataset that combines the three long-running journals of the field. This is similar to Merli et al (2023), who used these three in their analysis, although their interests were less on journal-specific differences and more on how they together characterize the field. Given the PDR 50th anniversary milestone of our review, our focus lies in assessing PDR itself, but also in relation to its peers.

Data and methods

Data

The dataset used in this analysis combined articles published in *Demography*, *Population Studies*, and *Population and Development Review* (PDR) between 1947 and 2024. To construct our database, we queried Scopus and Web of Science by International Standard Serial Numbers (ISSN) and publication titles, respectively, to collect all published articles across the three journals. Scopus and Web of Science are two scholarly research and citation databases that cover peer-reviewed literature across a range of disciplines. We restricted the search to peer-reviewed articles, excluding other types of publications such as book reviews, notes and commentary, and errata. Web of Science limits searches to articles published after 1965, which presented a potential limitation because two of the journals began publishing prior to that year: *Population Studies* (1947–present) and *Demography* (1964–present). We addressed this issue by using Scopus to include articles that preceded those available through Web of Science, but also collected Scopus data for the same period as Web of Science because, as we describe later, it provided better quality data on some indicators. Table 1 provides a summary of the total number and proportion of articles published by journal and decade.

Nearly half of the articles in the database were from *Demography* (46.5 percent), which publishes most frequently with six issues per year. Articles from *Population Studies*, which publishes three issues each year, represented the second largest percentage of articles (27.9 percent), closely followed by PDR (25.6 percent), which publishes quarterly.

Most of the articles included in the database were published later in the observation period. The number gradually increased from less than 200 published in the 1940s and 1950s to around 1000 articles per decade starting in the 1980s. Between 2010 and 2019, the number of articles rose to 1403 publications representing 20.4 percent of the overall database. We largely attribute this increase to *Demography*, which, for most of its history, published four issues per year before moving to six issues annually in 2013.

We found that both Web of Science and Scopus provided rich metadata for conducting this analysis. That being said, the completeness of the data varied, leading us to make strategic decisions about which databases were best suited for different parts of our analysis. For our text analysis, we found Scopus to offer more consistency in the title and abstract text formatting and availability. We also found the citation counts provided by Scopus to be more reliable estimates. Both databases were used to compile the most complete list of authors names, which were needed to explore authorship characteristics with regard to gender. Finally, Web of Science provided more complete information on keywords as well as the geographic location of scholars through the provision of addresses of their affiliated institutions. This approach ultimately leveraged the strengths of both data sources to provide a more comprehensive dataset for our analysis.

Analytic approach

Our analysis takes a scientometric approach to study the thematic content and trends in the demographic literature and the characteristics of authors by analyzing both article text (titles and abstracts) and metadata from publication records. The metadata includes information for each individual article such as the year of publication, journal, keywords, names of authors, addresses of the authors' affiliated institution, number of citations, and the digital object identifier (DOI). The DOI provides a unique ID for each publication in the database, which we use throughout the analysis. For the analysis of themes and content, we used the period from 1975 onward because it is the shared period for all three journals, enabling us to see how PDR compares with the two other demographic journals. For the analysis of authorship characteristics, we examined the period since each journal's inception for gender, or the earliest period possible (1970s) based on the metadata available for geographical location. All data cleaning, analysis, and visualizations were produced using R Studio, Version 2024.04.2+764.

Both Scopus and Web of Science include author-reported keywords as part of the available metadata beginning in the 1990s. We leveraged the available author-reported keywords to construct a dictionary of terms ($n = 662$), which we then used to produce keywords for the entire database. We searched the title and abstract text for terms matching those in the dictionary to construct a list of keywords for each publication. Additional data cleaning was conducted to remove duplicate terms, including terms that shared the same lemma (i.e. birth and births). Author-reported keywords had to be used three or more times to be included in the dictionary. We established this threshold by comparing the average number of terms used in publications with author-reported keywords to those where we assigned keywords. This approach helped ensure that the keywords added to the database were comparable in both size and nature to those found in the existing metadata.

To explore the relationship between terms, we then identified biterms within the title and abstract text using the *BTM* (Wijffels and Yan 2018) and *udpipe* (Wijffels et al. 2017) packages. The text data were first tokenized, resulting in a large dataframe with one row for each word (i.e., token) used. Using the *udpipe* package, we assigned a universal part-of-speech (upos) tag to each token, allowing us to remove stop-words and limit the terms to nouns, proper nouns, and adjectives. We then applied the occurrence function in *udpipe* to analyze how frequently terms co-occurred side-by-side with one another within the same text (bigrams).

Complementing our keyword and biterm analysis of the content of articles, we estimated structural topic models (STMs), a widely used unsupervised machine learning approach of text data, to characterize the most commonly occurring topical clusters with the corpus of available abstracts across the three journals over the past 50 years ($n = 5711$ documents) (Roberts, Stewart, and Tingley 2013). We used the *stm* package in R to fit the models (Roberts et al. 2019, Roberts et al., 2023) and compared and inspected models across different topic numbers using *stminsights* (Schwemmer 2024). The topic models enabled us to characterize broad themes and content across the intellectual landscape of demographic research published across the three journals by looking at clusters of co-occurring words or latent topics within their abstracts. STMs are a class of topic models that allow for the inclusion of metadata to analyze topic prevalence by covariates, which in our case are journal and year. The topic modeling, thus, allowed us to assess (1) what have been the major themes in the demographic literature in the last 50 years and how have they changed? and (2) how are the topics distributed across the three major journals of anglophone demography? Are there specific topics that predominate in PDR, compared with the other two journals?

To complement our analysis of topical trends, we analyzed the citation counts of publications by journal over time as one measure of research im-

pact or influence (Donthu et al. 2021). We looked at the most cited papers across decades within each of the journals to get another perspective on the salience of research topics.

In addition to the research topics, we also explored trends in two authorship characteristics: gender and geographic location. To infer the gender of authors, we separated the full names of authors included in the metadata into forenames and surnames. We then ran the forenames through the Genderize.io application programming interface (API) (https://genderize.io/), which predicts the likelihood that a forename would be classified as male or female. Research on the performance of gender inference methods found Genderize.io to be among the best performing, particularly in returning the fewest unclassified names (Santamaría and Mihaljević 2018; VanHelene et al. 2024). Using the API, we classified authors in 5213 publications as male (62.8 percent), female (36.1 percent), or unknown (1.1 percent). These publications represented 76.0 percent of all articles in the database with the remaining publications (24.0 percent) unable to be processed, largely because author initials rather than forenames were reported. It is important to note that the inference of gender based on statistical probabilities offers a proxy measure that may not necessarily reflect the self-assigned gender identity of all authors within the database.

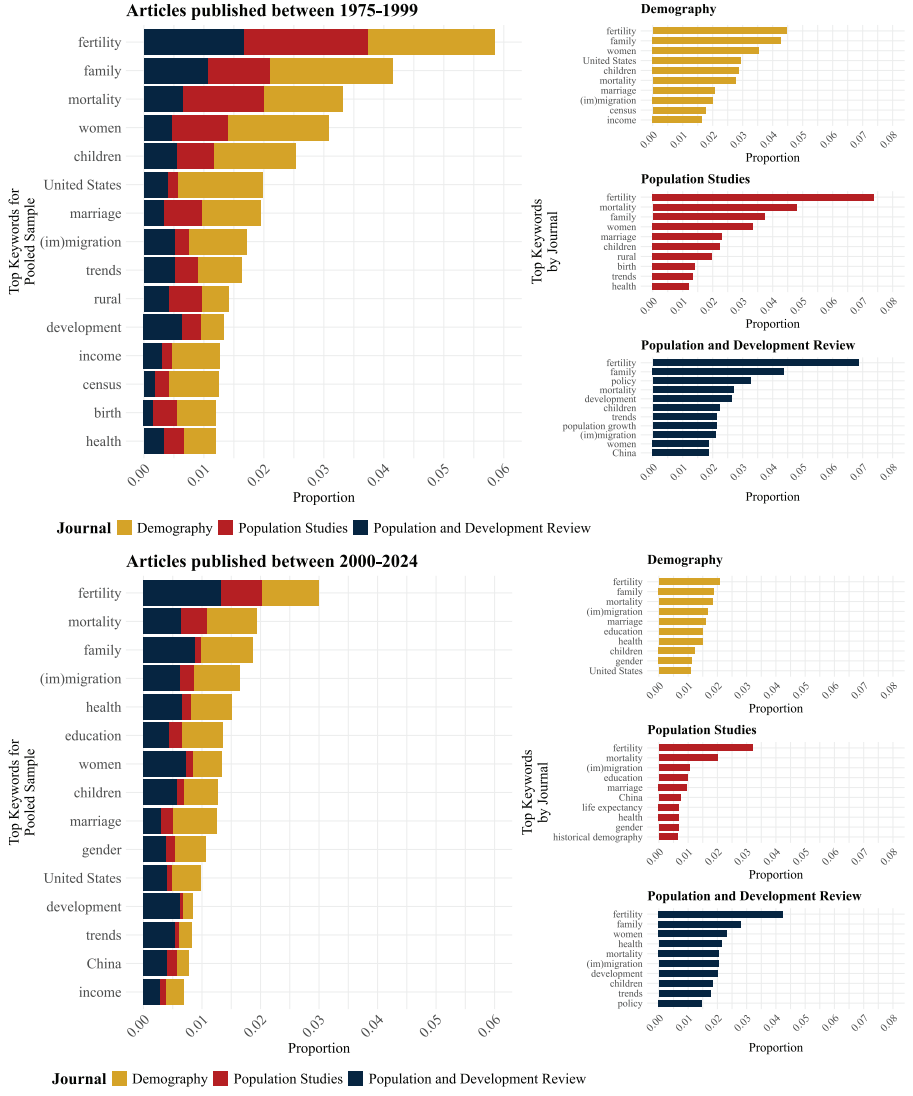
We defined the geographic location of authors based on the country of their affiliated institution, which was more consistently reported in the metadata beginning in the 1970s. Using addresses from the metadata, we identified and standardized the countries names and then added additional regional categories for analysis based on UN SDG classifications (United Nations Statistics Division, n.d.). To account for the distribution of countries represented in our database, we made the decision to separate the Europe and Northern America category into two groups and to merge Australia and New Zealand with Oceania, which the UN classification separates. This approach resulted in eight regional classifications: Central and Southern Asia (1.5 percent), Eastern and South Eastern Asia (3.3 percent), Europe (26.7 percent), Latin America and the Caribbean (1.1 percent), Northern Africa and Western Asia (0.9 percent), Northern America (63.1 percent), Oceania (2.1 percent), and sub-Saharan Africa (1.2 percent). In total, we identified 99 countries based on reported addresses in 4778 (69.6 percent) publications within the database.

Results

Key themes in population research

Top keywords and co-occurring terms. First, we examined the most frequent keywords across all published articles over the period 1975–2024. We disaggregated this analysis of keywords into two 25-year periods (1975–

FIGURE 1 Most frequently used keywords overall and by journal in articles published between (i) 1975–2024 (top panel) and (ii) 2000–2024 (bottom panel)



1999, 2000–2024). The left panel of Figure 1 shows the 15 most frequent keywords across the pooled sample of three journals within that period, whereas the right panels show the 10 most frequent keywords within each journal. Across both 25-year periods since 1975, fertility has remained the most frequent keyword in PDR, *Demography*, and *Population Studies*, although the relative proportion of articles with the standalone keyword fertility in the latter period 2000–2024 declined to just under 3 percent from over 5 percent in 1975–1999. Mortality became the second-most fre-

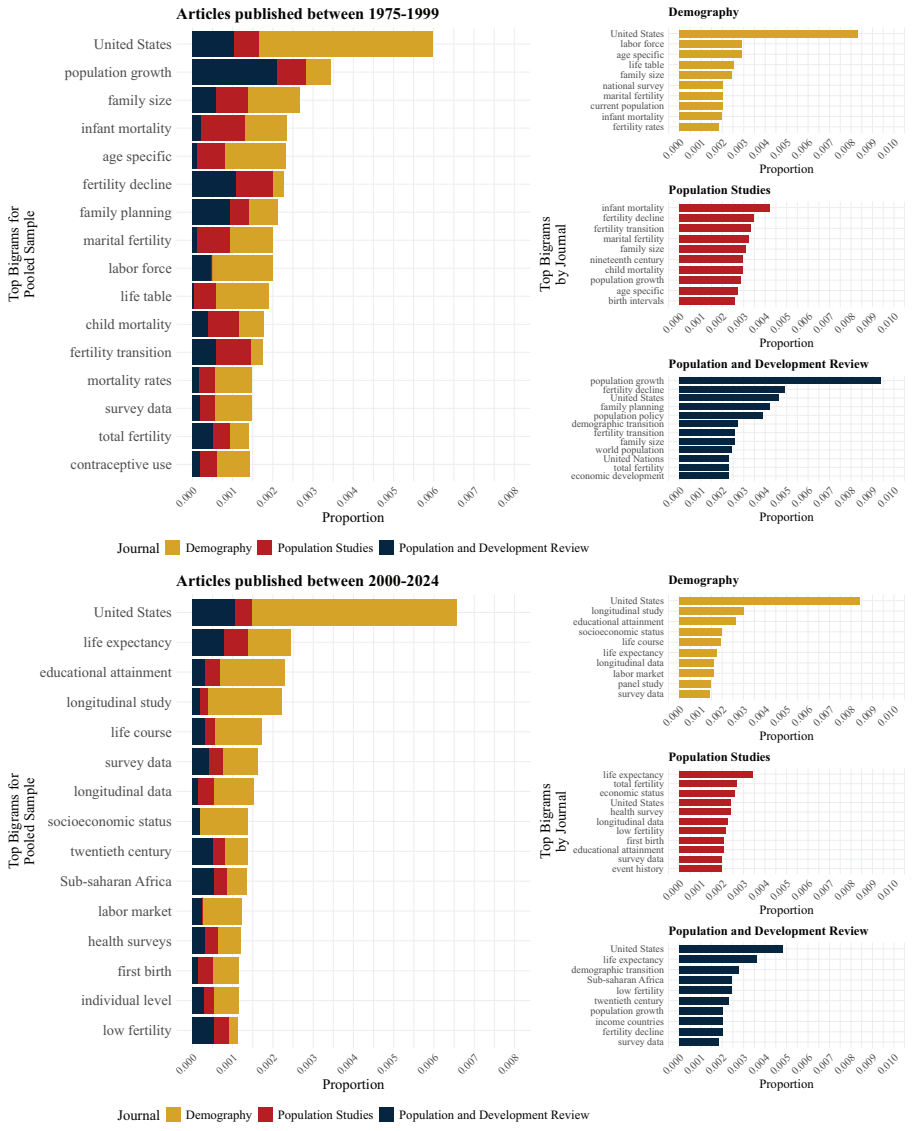
quent keyword in the latter period ahead of family. Keywords such as (im)migration, health, and education increased in frequency between the first and second periods. Other keywords, such as children or marriage, remained middle of the pack across both periods. While women remained a frequent keyword across both periods, gender emerged as a frequent keyword in the second period. In terms of countries, while the United States remained a frequent keyword in both periods, China emerged as a frequent keyword in the second period. Overall, the proportions per keyword generally became smaller in the second period compared with the first, suggesting a diversification of total keywords and content over time across all journals.

Looking at the top keywords by journal, we see similarities but also several interesting differences between the three journals. The most frequent keywords, such as fertility, family, and mortality, were shared across the three journals in both periods, showing common themes and interests across them. While fertility and family remained the top two most frequent keywords in PDR and *Demography*, mortality was relatively more frequent in *Population Studies*, where it remained the second most frequent keyword across both periods. In the second period, health also emerged as a frequent keyword across all three journals. Development, population growth, and policy appeared to be among the top keywords in PDR between 1975 and 1999, but not so in the other two journals. Population growth did not remain a top keyword in the second period in PDR, but development and policy remained. Historical demography was a frequent keyword in *Population Studies* in the second period, highlighting the relative emphasis on this subfield in *Population Studies* compared with the other two.

Next, we assessed the prevalence of the most frequent co-occurring terms, or biterms, within the titles and abstracts of all articles published across the three journals and separately by journal over the same two periods as the keyword analysis (Figure 2). While the United States remained the most frequent biterm across both periods, the top biterms changed across the two periods. In the first period, biterms linked to population growth, fertility decline, family planning, and infant mortality were the most frequent, whereas, in the second period biterms such as life expectancy, educational attainment, life course, and longitudinal data became more frequent. These shifts in co-occurring words reflect both the emergence of broader social demographic topics (e.g., educational attainment, socioeconomic status, life course), as well as methodologies (e.g., individual level, longitudinal data). Biterms linked to fertility appeared in relation to low fertility in the second period.

Biterms linked to population growth, family planning, and fertility transitions occurred more frequently in PDR than in *Population Studies*, and terms such as population policy and economic development were unique to PDR. In the second period, sub-Saharan Africa was among the top 10 most frequently occurring biterms in PDR. While family planning and fer-

FIGURE 2 Most frequently co-occurring words (biterms) overall and by journal in articles published between (i) 1975–2024 (top panel) and (ii) 2000–2024 (bottom panel)



tility transitions appeared as frequently occurring biterms in earlier decades in PDR, by the 1980s low fertility appeared as one of the most frequently occurring biterms in PDR. Even within the second period, when population growth became less prominent across the pooled dataset, it remained one of the top biterms in PDR. Survey data emerged as one of the most frequent biterm in the second period across all three journals, reflecting

broader shifts towards individual-level survey analysis within the field over the period. Longitudinal study or data, in particular, were frequent biterms in *Demography* and *Population Studies*, and event history in *Population Studies*.

Topic models. Building on the previous analysis, we examined broad themes or topics contained within the titles and abstracts of all articles published in the three journals over the last 50 years extracted in an automated way using structural topic models. The primary model that we present features nine topic clusters. Summarizing 5711 abstracts (or documents) into only nine clusters is undoubtedly reductive, but preferring parsimony, this model, in our subjective assessment and based on statistical comparisons with other models with different topic numbers, generated valid categories or topics.

The nine topic clusters, our assigned labels for them, their prevalence, the most common words within each topic, and example papers with a high probability of assignment to that topic are shown in Table 2. Figure 3 reports trends in topical prevalence for each of the nine ($K = 9$) by journal and year. Broadly, the topic clusters indicated two fertility-related topics ("fertility, family planning, and contraception" and "fertility, biosocial aspects") and one "mortality and demographic modeling" topic. Migration emerged across two topics, one on "migration labor markets and economic dynamics" and another on "segregation, racial disparities, and health" but in differing ways, with the latter more focused on ethno-racial differences across immigrant groups, particularly in the United States context, and segregation patterns. Health was also similarly cross-cutting across different topics. It was prominent in the topic "health and stratification", in the topic "mortality and demographic modeling" in relation to macrodemographic trends in health indices and also emerged in the fertility topic in relation to the interactions between fertility and its biosocial aspects.

The largest topic cluster in the corpus was "population growth, development, and policy," which is assigned to 17 percent of the paper abstracts in the corpus. This cluster encompassed literature on themes such as population growth, development, and the links between population and the environment, for example, food supply, or the biosphere. Policy-related pieces, either about demography, population policies, the politics of changing demographic dynamics, or the history of demography and population thought are also featured in this topic. This was overwhelmingly a cluster where PDR predominates across the entire period. Although the prevalence of this cluster declined over time, it remained the largest cluster for PDR compared with the other journals by the end of the period.

Among fertility topics, the "fertility, family planning, and contraception" topic was the considerably larger of the two fertility-related topics, compared with the biosocial aspects of fertility topic, and one that also occurred most frequently in PDR. The gap for the "fertility, family planning,

TABLE 2 Topic clusters ($K = 9$) generated from the corpus of abstracts of all papers across the three demographic journals, including their label, prevalence, high probability words in the topic, and examples of papers assigned to the topic

Topic label	Proportion	High probability words in the topic	Example paper titles
Population growth, development, and policy	0.170	Population, demographic, growth, economic, development, rural, social, policy, urban	Harvesting the biosphere: the human impact Countries with rapid population growth and resource constraints: issues of food, agriculture, and development Demography as social science and policy science
Mortality and demographic modeling	0.158	Mortality, age, life, expectancy, estimates, rates, model, method, death, period, cohort	Steep increase in best-practice cohort life expectancy Rectangularization revisited: variability in the age at death within human populations Optimizing models for degrouping population data
Fertility, family planning and contraception	0.131	Fertility, family, decline, transition, levels, low, contraceptive, use, reproductive, Africa, Europe	Is the lowest-low fertility in Europe explained by the postponement of childbearing? Fertility transition: is sub-Saharan Africa different? Gender equity in theories of fertility transition
Health and stratification	0.114	Health, education, effects, child, children, outcomes, mothers, association, school	Evaluating the role of parental education and adolescent health problems in educational attainment Does schooling reduce hospitalization and delay mortality? New evidence based on Danish twins Compensation of reinforcement? The stratification of parental response to children's early ability
Marriage and unions, timing	0.093	Women, age, first, men, marriage, changes, cohorts, early, higher	Partnership trajectories preceding medically assisted reproduction Education and cohabitation in Britain: a return to traditional patterns? The marriage boom and marriage bust in the United States: an age-period-cohort analysis

/...

TABLE 2 (Continued)

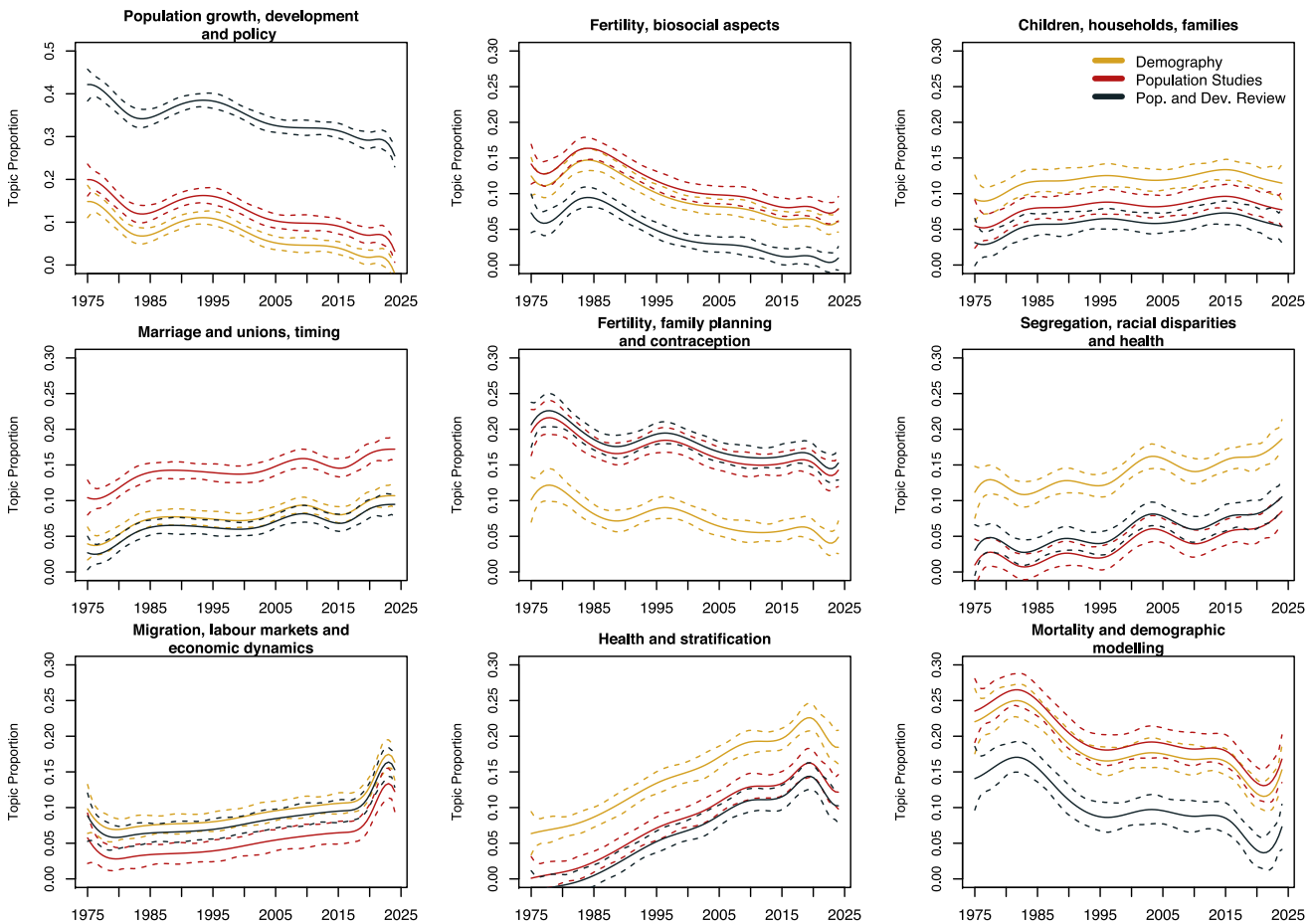
Topic label	Proportion	High probability words in the topic	Example paper titles
Segregation, racial disparities, and health	0.088	Black, white, differences, groups, inequality, united, states, health, racial, income, segregation	Hypersegregation in the twenty-first century Latino, Asian, and Black segregation in US metropolitan areas: are multi-ethnic metros different? Measuring race and ancestry in the age of genetic testing
Children, households, families	0.088	Children, family, household, sex, marriage, parents, income, couples, divorce, marital	The strength of parent-adult-child ties in biological families and stepfamilies: evidence from time diaries of older adults Family structure and dependency: early transitions to female household headship Excess doubling up during COVID: changes in children's shared living arrangements
Migration, labor markets, economic dynamics	0.080	Migration, labor, employment, work, migrants, force, earnings, market, participation	The gravity of high-skilled migration policies Economic opportunity in Mexico and return migration from the United States Leveraging Facebook's advertising platform to monitor stocks of migrants
Fertility, biosocial aspects	0.078	Birth, effects, model, child, infant, factors, pregnancy, parity, risk, variables	The effects of temperature on human fertility Birth interval dynamics in rural Bangladesh and maternal weight Fetal loss and feminine sex ratios at birth in sub-Saharan Africa

Arranged from high to low prevalence.

and contraception" topic between PDR and *Population Studies* though was small, indicating that these two journals together have covered this topic to a larger extent compared with *Demography* where it has a lower prevalence. This topic contained literature on fertility in high as well as low fertility contexts. Over time, even as the family planning and fertility transitions literature has become smaller, this topic has been sustained by the increasing prevalence of low fertility papers. As a consequence, this topic has remained large and showed a less steep decline than the other fertility-related topics on biosocial aspects of fertility. This latter biosocial topic was less prevalent in PDR compared with *Population Studies* and *Demography*.

The "mortality and demographic modeling" topic had a greater prevalence in *Population Studies* and *Demography* and indicated a downward trend

FIGURE 3 Trends in topical prevalence for each topic cluster ($K = 9$) by journal and year



over time. As this cluster combined demographic methods together with mortality, some of this downward trend was due to a decline in formal demographic papers. Indeed, in other models that we evaluated in which the methods and mortality topics split, the downward trend was largely driven by a reduction in demographic methods papers whereas the trend in mortality remained stable over time. While *Population Studies* contained more mortality-related work, PDR was comparable to *Demography* in the prevalence of mortality research. However, given the more technical methods and modeling component of this cluster as well, the lower prevalence of it in PDR is perhaps unsurprising, given the greater emphasis on accessibility and wide readership for an interdisciplinary audience in the journal.

Among migration-related clusters, both the "segregation, racial disparities, and health" and the "migration, labor markets, and economic dynamics" topics increased over time. The latter, in particular, saw an increase in 2020/21, similar also to trends that appeared in the "health and stratification" and "mortality and demographic modeling" clusters—likely a COVID-related jump. While the "migration, labor markets, and economic dynamics" topic was more equally distributed between PDR and *Demography*, the "segregation, racial disparities, and health" cluster, which was much more United States-focused, was most prevalent in *Demography*. Racial disparities as they link to health featured significantly as a growing theme over time in this topic. Another health-linked topic, on "health and stratification" also showed increasing prevalence over time and featured most prominently in *Demography*.

Among social demographic topics, such as "children, households, and families" and "marriage and unions," the trend also suggested an increasing prevalence of these topics over time, albeit with lower levels in PDR. While children, households, and families featured more prominently in *Demography*, marriage and unions featured more prominently in *Population Studies*.

Citations and research impact. The right panels of Figure 4 show median citation counts of articles grouped by decade of publication and by journal. This shows that PDR's median citation counts have been comparable by decade to those in *Demography* and higher than in *Population Studies*. At the beginning of the period, papers in *Population Studies* and *Demography* in particular received a greater number of citations, but by the end of the 1970s PDR publications started to gain greater attention from the scientific community. Median citation counts increased by decade for all journals, with articles published in the first decade of the 2000s having the highest median citation count compared with earlier decades. Articles published after 2010 have had fewer citation counts, but this partially reflects the shorter period of time that they have had to accumulate citations.

Looking at the most cited papers in each decade and by journal, the left panels of Figure 4 show shifting themes in influential research over the

FIGURE 4 Citation counts, by year and journal, with the most cited article by decade (left) and median citation counts by decade (right)

NOTE: Differing scales on the *y*-axis on the left panels.

past 50 years. In 1979 a paper by Cain, Khanam, and Nahar on "Class, patriarchy, and women's work in Bangladesh" received the greatest number of citations for PDR in the 1970s. The thematic interest in women and gender-related topics in South Asia in PDR continued with the article entitled "On kinship structure, female autonomy, and demographic behavior in India" written by Dyson and Moore in 1983 receiving over 1000 citations, and the most of any article in 1980–1989 decade in the three journals. In *Population Studies*, the most cited paper in the 1970s was by Caldwell on "Education as a factor in mortality decline: Examination of Nigerian data," whereas in the 1980s and 1990s papers linked to the fertility and demographic transitions attracted the most citations. *Demography* carried the most cited paper of the 1970s across all three journals—a classic of formal demography and

mortality analysis by Vaupel, Manton, and Stallard (1979), "Impact of heterogeneity in individual frailty on the dynamics of mortality."

The growing research salience of migration and segregation themes appeared in the later 1980s and 1990s. The second most cited publication in our database, "Theories of international migration—A review and Appraisal" by Massey et al. (1993), came from PDR in the 1990s, which was the most cited of that decade across the three journals. The 1989 paper by Massey and Denton on "Hypersegregation in US metropolitan areas" was the most cited in the 1980–1989 decade for *Demography*.

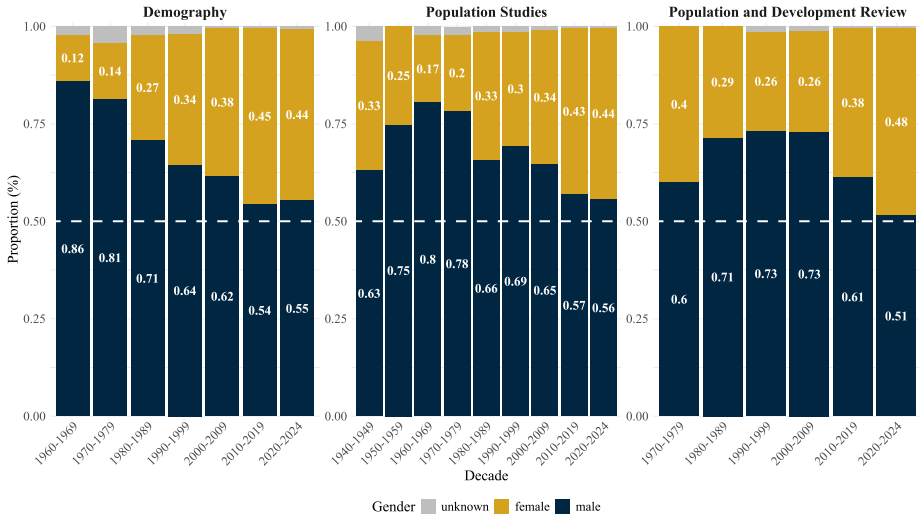
The emergence of topics like low fertility in the Global North appeared in the most cited PDR title of the 2000s, "The emergence of lowest-low fertility in Europe," by Kohler, Billari, and Ortega (2002). Similarly, the most cited paper in PDR and across all journals in the 2010s came from Lesthaeghe's work on, "The unfolding story of the second demographic transition," published in 2010. A similar emphasis on social demographic themes linked to marriage, cohabitation, low fertility, and the second demographic transition (SDT) was also evident in the 2000s and 2010s in *Population Studies* and *Demography*. Interestingly, the most cited publication over the entire period and across all three journals was by Filmer and Pritchett (2001) in *Demography* on "Estimating wealth effects without expenditure data," a paper that developed proxy measures of wealth from asset ownership indicators to study the relationship between household wealth and children's school enrollment. In contrast to other highly cited papers in this and the next decade across the journals, which increasingly focused on Europe or North America in relation to themes such as low fertility and the SDT, this paper focused on India.

Halfway through the current decade (2020–2024), we observed a decline in the number of citations overall, but this is to be expected given that newer papers have had less time so far to accumulate citations. "Rethinking global food demand for 2050" by Falcon, Naylor, and Shankar (2022) represents the most cited PDR paper in the current decade so far. This article suggests the increasing salience being given, within research and policy circles, to issues at the intersection of population and the environment in the context of global climate change. In *Demography* and *Population Studies*, papers related to themes of health and mortality inequalities have received the most citations so far. As time progresses, it is likely that these citation counts will shift as existing papers receive more attention and new publications emerge later this decade.

Authorship characteristics

Authorship by gender. Figure 5 reports the gender of authors by journal and decade of publication. Across the entire period, the majority of authors across all three journals were male. The proportion of female authors has

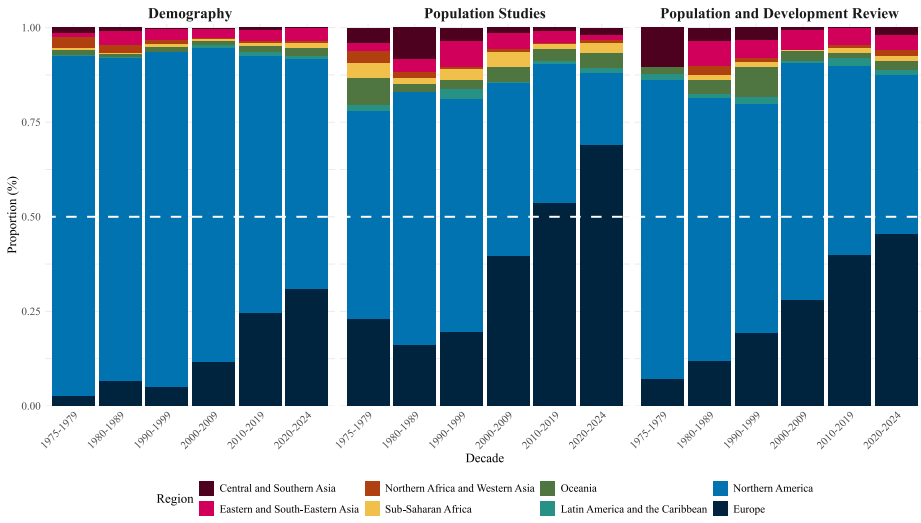
FIGURE 5 Gender of authors by journal and decade of publication



increased over time across all journals, from levels of over 70 percent male authors in PDR in the period between 1980 to 2009 to a near gender balance in the most recent period (2020–2024). Although the share of male authors started from higher levels in *Demography*, both *Population Studies* and PDR interestingly show U-shaped distributions. While in their earliest periods both PDR and *Population Studies* had a greater share of female authors (~30 to 40 percent), by the 1980s fewer than one-third of the authors were female. Between the 1980s to the end of the first decade of the 21st century, PDR had roughly one-quarter female authors and over 70 percent male authors. In contrast, *Demography* saw continued increases in the proportion of female authors over the same period. By the end of the period, all three journals had come closer to gender parity than at the start of the 21st century.

Authorship by geographic location. We used the location of the authors' affiliated institutions to explore where demographic research was conducted over the period from 1975 to 2024. Figure 6 shows the locations of authors at the regional level by decade for each journal. The vast majority of researchers in all three journals were located in the Global North, a trend that persisted over time. In *Demography*, authors located in Northern America—and predominantly the United States—represented the largest group throughout the entire period, although the proportion of European authors increased gradually beginning in the 1990s. Less variation was observed in other regions. *PDR*, already from its inception in 1975, had a greater proportion of non-North American authors than *Demography*, but less than the British journal, *Population Studies*.

FIGURE 6 Location of author affiliations by region and decade of publication, grouped by journal



Over time, PDR has exhibited a more consistent decrease in the representation of authors based in Northern America and a steady increase in the proportion of authors located in Europe. At the beginning of the 1975–2024 period and in the first decade of PDR, authors from Central and Southern Asia represented the second largest group of authors. By the end of the period, the share of authors from the region and other parts of Asia decreased overall. Representation from authors located in the Global South was greater in the first half of the period compared to the second half. The patterns for *Population Studies* were less consistent as compared to the other journals. Despite being a British journal, the majority of publications prior to the 2010s came from authors located in Northern America. By the end of the period, authors located in Europe represented the largest share of any region. The regional trends for authors located in the Global South varied throughout the years; however, towards the end of the period, the overall share appeared to decrease.

We then turned to an analysis at the country level to determine whether certain counties were driving the trends observed resulting in a further geographic concentration of research. Figure 7 shows the geographic location of author affiliations by decade of publication, now with countries identified within the region. The size of the circles corresponds to the proportion of articles from a country, where the color corresponds to the UN region that the country belongs to. Within Northern America, Figure 7 shows the clear dominance of authors at United States-based institutions in the production of population research, although the relative proportion of articles from the United States has shrunk over time across all journals. Over

FIGURE 7 Location of author affiliations by region, country, and decade of publication, grouped by journal

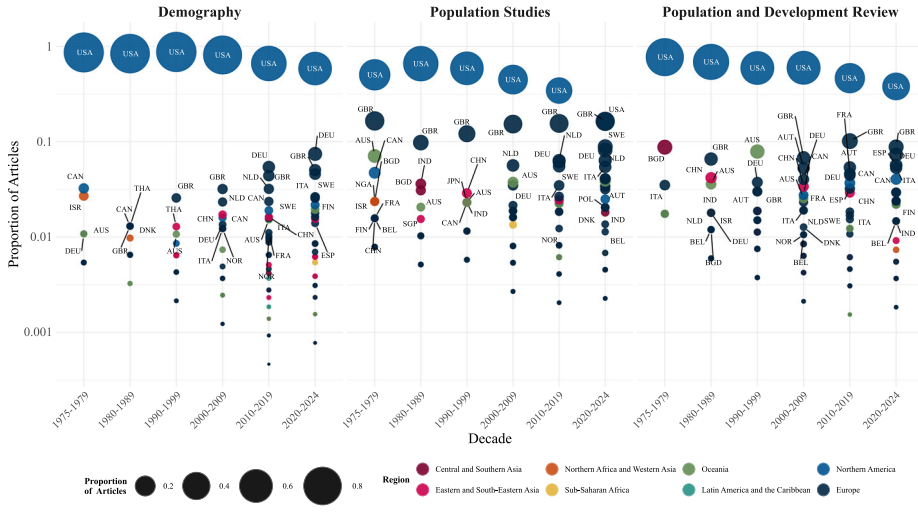
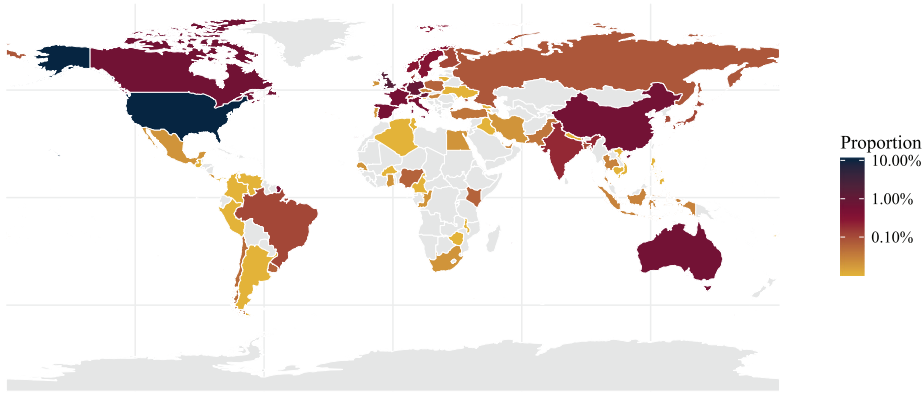


FIGURE 8 Geographic location of author affiliations by country for PDR publications



time, the geographic location of authors has diversified, as indicated by the growing number of dots in the figure, although this diversification has been driven largely by Europe. In PDR, while in earlier decades, authors from institutions located in Bangladesh and China appeared more frequently, since the 2000s, European countries such as Britain, Germany, and Austria have become much more visible.

A closer look at the geographic location of authors for PDR over the past 50 years in Figure 8 shows that after the United States, authors from the United Kingdom and Germany were most represented. Among the 10 countries that were most represented, only two were outside of Europe and Northern America: Australia and China. Among Asian countries, India,

Japan, Bangladesh, South Korea, and Singapore represented a larger share of authors relative to other regions. Publications from authors in Kenya and Nigeria represented the largest group for sub-Saharan Africa, while authors from Brazil were most commonly found among countries in Latin America and the Caribbean. While these patterns help shed light on the institutions where demographic research takes place, it is worth noting that our analysis relied on the availability of addresses, which was limited to the period after the 1970s, and may not fully represent the breadth of published scholarship.

Conclusion

Our scientometric review of PDR highlights key themes and topics as well as characteristics of the authors within the journal over the past 50 years, showing how the journal has contributed to the intellectual landscape and evolution of demographic research. Comparing PDR to the other two long-standing English language demographic journals, *Demography* and *Population Studies*, reveals that while unsurprisingly many central themes, such as fertility, family and mortality, migration, children, and households, are shared across the three journals, there are also journal-specific differences, showing how PDR has developed its own niche within the field.

Aligned with its founding mission to study the interaction between population and development, and the relationships between population and social, economic, and environmental change, and related issues of public policy, our computational content analysis highlights how articles linked to development, policy, and population growth have been published to a much greater extent in PDR than in the other demographic journals. Sub-Saharan Africa also features as an important region of analysis within the papers of the journal. While fertility transitions and family planning were key themes in the first 25 years of the journal, fertility interests have shifted to topics around low fertility and the SDT in the next 25 years. Nonetheless, even though the population, development, environment, and policy themes have remained prominent in PDR, they have also witnessed a decline over time. As climate change becomes one of, if not the most, defining trend of the 21st century, questions at the intersections of population, development, and the environment, as well as policy issues, are ones that are due to become more pressing.

Migration and health-related themes also emerge as growing areas within demographic research more broadly, including in PDR, with an increasing focus on disparities and inequalities. Some of these shifts are being driven by the changing data ecosystem for demographic research (Kashyap 2021), both in terms of increasing variety, volume, and granularity in traditional sources of demographic data like censuses, longitudinal surveys, and population registers but also the availability of new sources of digital data. Some of these new directions with new data sources, for example, linked

to topics such as migration, are reflected in the most recent period in PDR. The greater emphasis on more granular data, and higher standards for data, however, may threaten to exclude research from geographies where such data may not be available.

Furthermore, as our analysis of where authors are located shows, while the content in PDR shows geographical breadth, authors are concentrated in the Global North. Over time, in fact, representation from the Global South has diminished, and most of the geographical diversification has occurred because of the increasing representation from European institutions alongside the shrinking dominance of the United States. Some of these shifts likely reflect changing thematic interests of the field and within the journal, as also revealed by our content analysis. While earlier work, for example, from Matlab in Bangladesh, or in China, in the context of the family planning and fertility transition literature came from these regions, more recent topical shifts to themes such as low fertility and social demographic topics have made Europe more prominent for the intellectual landscape of demography. In contrast, gender balance in authorship is an area where improvements are clearly visible. As we look forward to the next 50 years, we hope this review shows that PDR has made significant, wide-ranging, and lasting contributions to population research, but there is still much more work to be done.

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Conflict of Interest Statement

The authors have no conflicts of interest to declare.

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