

5G in the News, 2019-2026: Attention, Geography and Tone of Global 5G Coverage, and How It Compares with Research and Invention

Fliar BI · Prism Research Layer · Working paper, October 2026 · Dataset and code: github.com/fliarbi/prism-news-api · Licence CC BY-NC 4.0

Abstract

We measure how 5G mobile networks were covered in a global news index from January 2019 to July 2026, using 175,736 de-duplicated 5G articles, and set that coverage beside 40,925 research papers (2015-2025) and 28,680 patent families (2015-2024) on 5G. Six results stand out:

1. **A launch story that faded.** 5G took 17.28 of every 10,000 news articles in 2019 and 8.02 in 2025, a 53.6% fall in share. The peak month was February 2019, at 25.94 per 10,000.
2. **A trade-fair rhythm.** On average 12.49% of each year's 5G news (2019-2025) appeared in February, the month of the Barcelona mobile trade fair, 1.5 times an even monthly spread. The average is raised by February 2025; in 2020-2022 the February share was close to even.
3. **Geography.** India holds 22.59% of located 5G news, 1.71 times its share of all news. The United States holds a near-equal 22.43% but is under-represented at 0.46. Asia (1.83) and Europe (1.4) are over-represented (January 2023 - July 2026). Within India, Odisha (2.06), Tamil Nadu (1.66) and Karnataka (1.55) lead; within the United States, Nevada (5.3), Hawaii (4.62) and Washington (2.69).
4. **Shifting attention.** In India's own news, 5G peaked in 2022 at 38.47 per 10,000, the year its 5G services launched. In Chinese news it fell from 124.82 in 2019 to 23.64 in 2025. Between 2023 and 2025, Australia's share rose 2.74-fold. The steepest falls were in Nigeria (8.93 to 4.3 per 10,000), Germany (0.52 times its 2023 level), the United Arab Emirates (23.56 to 12.89) and India (0.56 times).
5. **Tone.** Between January 2023 and July 2026, 92.3% of 5G articles were positive in tone (all news: 56.8%), and only 6.5% were negative (all news: 33.6%).
6. **Research and invention.** 5G papers grew from 1.33 to 7.45 per 10,000 papers between 2015 and 2025, peaking in 2022. 5G patent families peaked at 7,610 in 2021 and fell to 3,961 in 2024; China's office held 82.0% of the office filings of such families from 2015 to 2024.

Findings stated for citation

- **F1.** 5G's share of news fell 53.6% between 2019 and 2025 (17.28 vs 8.02 per 10,000 articles).
- **F2.** February 2019 was the peak month for 5G news, at 25.94 articles per 10,000.
- **F3.** Between 2019 and 2025, an average of 12.49% of each year's 5G news appeared in February, raised by February 2025.

- **F4.** From January 2023 to July 2026, 92.3% of 5G articles were positive in tone, against 56.8% of all news.
- **F5.** India's share of located 5G news (22.59%) was 1.71 times its share of all news. The United States' (22.43%) was 0.46 times.
- **F6.** 5G took 38.47 of every 10,000 Indian news articles in 2022, against 10.1 in 2019.
- **F7.** Malaysia (8.43) and Taiwan (7.72) were among the most over-represented countries in 5G news.
- **F8.** Asia (1.83) and Europe (1.4) were over-represented by continent; North America (0.45) was not.
- **F9.** Within the United States, Nevada (5.3), Hawaii (4.62) and Washington (2.69) had over-represented 5G coverage; New Jersey (0.17) and Pennsylvania (0.33) the lowest lifts.
- **F10.** Within India, Odisha (2.06), Tamil Nadu (1.66) and Karnataka (1.55) had the most over-represented 5G coverage; Uttar Pradesh (0.54) was under-represented.
- **F11.** 5G's share of Australia's news rose 2.74-fold from 2023 to 2025.
- **F12.** 5G's share of Chinese news fell from 124.82 to 23.64 per 10,000 between 2019 and 2025.
- **F13.** 23.9% of raw 5G-vocabulary matches were phone model names, listings, boilerplate or gram units.
- **F14.** 5G papers rose 5.6-fold as a share of all papers between 2015 and 2025.
- **F15.** 5G patent families fell to 0.52 times their 2021 peak by 2024; China's office held 82.0% of office filings.

1. Introduction

5G is the fifth generation of cellular network technology. Its first commercial networks opened in 2019, and by the mid-2020s most large markets had national coverage. Few technologies have been announced, marketed and argued over in the news as heavily. Coverage has dealt with spectrum auctions, equipment vendors, national security, health claims and new devices.

Coverage is rarely measured as data in its own right. Deployment statistics count base stations and subscribers. Bibliometric studies count research. Few sources count attention, meaning how much of the news 5G took and when, where and in what tone.

This paper and its dataset do that. They combine three records for one topic: a global news index, research papers and patents. Each comparison uses a denominator, so that growth in the index or in publishing is not mistaken for growth in interest. The companion dataset publishes an article-level sample (44,030 rows) and full coverage tables, so every figure here can be re-derived. The [Prism News API](#) serves the full history.

2. Data and methods

News. The Prism news index holds articles from outlets worldwide; non-English articles are indexed in English translation. Each article carries its opening text (the first few sentences), a primary location, a graded tone label, an editorial priority rating (1–9), themes, keywords and named organisations. We count unique article identifiers; repeated rows for the same article are removed. When this release was built, 92.88% of the index was readable, so all counts are lower bounds.

Matching. An article is about 5G when its opening text contains *5G* as a whole word, or the phrases *5G network(s)*, *5G services*, *5G spectrum*, *5G rollout*, *5G NR*, *fifth-generation mobile* or *fifth-generation wireless*. Several families of matches are excluded:

- phone and tablet model names that end in "5G", and retail listings and specification sheets for devices (battery capacity, camera resolution, price offers);
- market-research boilerplate and stock-screener lists;
- untranslated text in scripts the index does not translate;
- gram quantities ("5g of protein", "1.5g").

Together these removed 55,082 of 230,818 raw matches (23.9%). One reviewer read 40 randomly drawn matched openings. 34 were about 5G networks, spectrum, standards, equipment, services or 5G-specific devices and chips (precision 85%). In 21 (52.5%) 5G was the main subject. Doubtful openings, where 5G did not appear in the visible text or appeared only in passing (an IoT feature, a 6G explainer), were counted as irrelevant.

Measures. Coverage over time is expressed per 10,000 articles in the index that month or year, because the index grew from 11,807,177 articles in 2019 to 26,990,006 in 2025. Seasonality uses each year's within-year month shares, averaged over the complete years 2019–2025. Geography, tone, priority and themes use January 2023 – July 2026. Geography is expressed as lift: a country's share of 5G articles divided by its share of all located articles. State lifts compare a state's share of a country's located 5G articles with its share of all located news from that country. Place tags derived from ordinary words ("Congress", "Earth", "Winter", "Cloud", "Mobile", "Hurricane"; 714 words) were treated as unlocated in every location field, which removed 15.3% of city-tagged articles.

Research and patents. Research papers are de-duplicated articles and reviews (2000–2025) with a 5G term in the title. Repository deposits and dietary or dosage senses ("5 g" of a substance) are excluded. Patent families (2005–2024) use the same title rule and are counted once per filing office.

3. Results

3.1 How much and when

The index holds 175,736 5G articles from January 2019 to July 2026. Raw counts stayed between 18,562 and 28,708 a year, but the share of all news fell by more than half: 17.28 per 10,000 in 2019 and 2020, 15.02 in 2022, 10.7 in 2023 and 8.02 in 2025 (Table 1). The 2019 share was 2.15 times the 2025 share. The highest monthly share was February 2019, at 25.94 per 10,000 (Figure 1). The month with the most articles was February 2025 (5,209), but because the index had grown, its share (19.45 per 10,000) was lower.

Year	5G articles	All articles in index	Per 10,000
2019	20,399	11,807,177	17.28
2020	28,048	16,230,014	17.28
2021	27,867	17,281,220	16.13
2022	28,708	19,115,515	15.02
2023	21,913	20,484,506	10.7
2024	18,562	23,311,896	7.96
2025	21,639	26,990,006	8.02

Table 1. 5G articles per year and as a share of the index. 2026 (January–July) is partial and omitted.

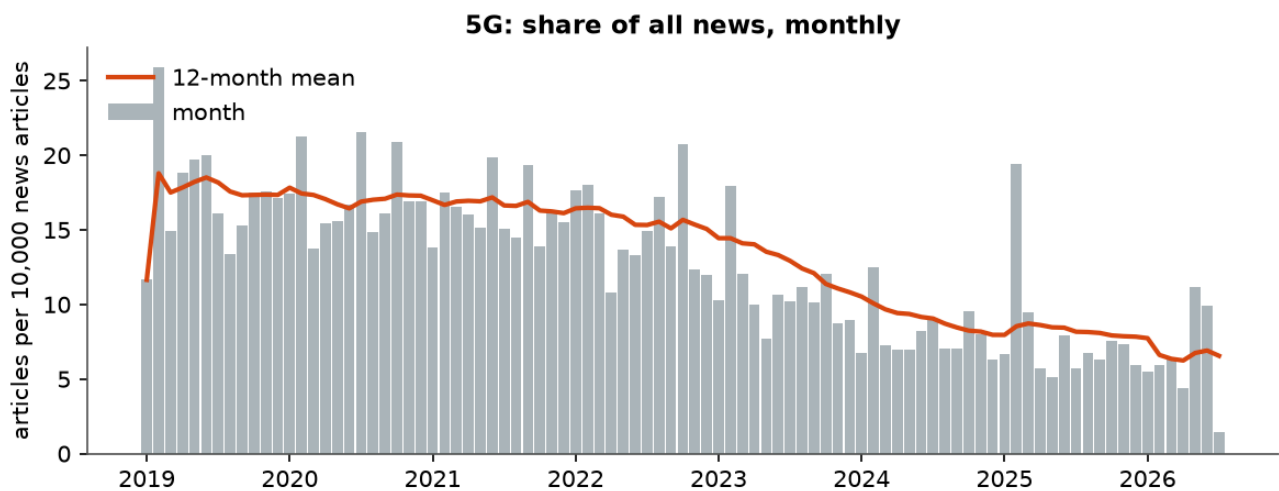


Figure 1. 5G coverage as articles per 10,000 news articles, monthly, January 2019 – July 2026. Bars are months; the line is the 12-month mean.

Coverage has one seasonal feature (Figure 2). Averaged over 2019–2025, February holds 12.49% of each year's 5G articles, 1.5 times the 8.33% of an even spread. The average is raised by February 2025, the month with the most 5G articles (5,209); in 2020–2022 the February share was close to even. February is the month of the annual mobile trade fair in Barcelona, where operators and equipment makers announce products. October (9.25%) is the second month. December is the quietest (6.98%). The other months sit close to an even share.

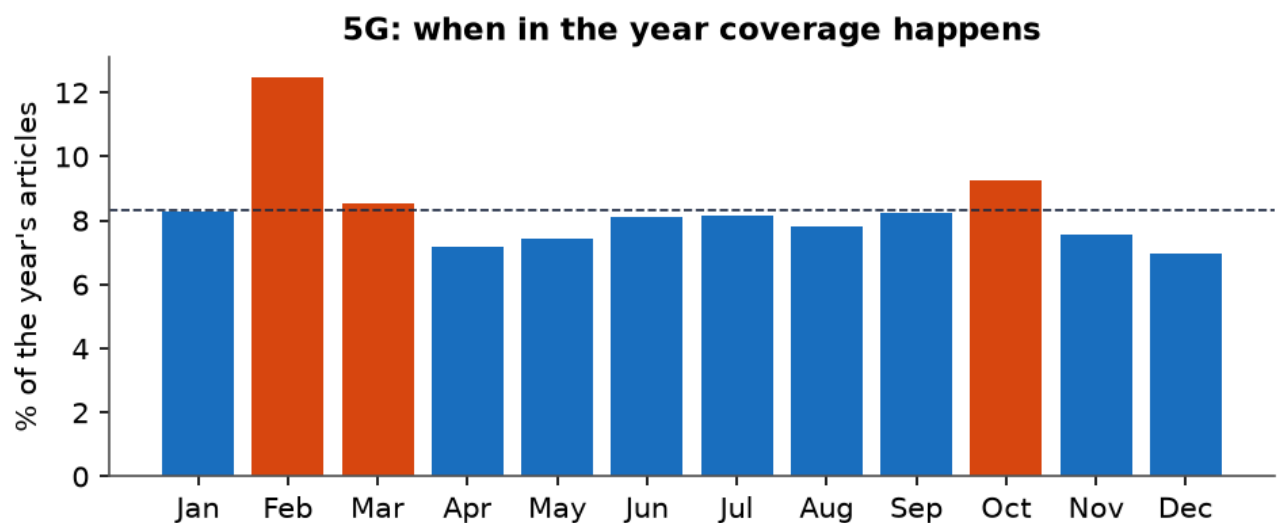


Figure 2. Share of each year's 5G articles published in each month, averaged over 2019–2025. Dashed line = an even spread (8.3% per month).

3.2 Where

Between January 2023 and July 2026, 32,772 5G articles carried a primary location. India holds the largest raw share (22.59%), with a lift of 1.71. The United States holds almost as much (22.43%), but its lift is 0.46: 5G takes a smaller share of American news than of news overall. Among countries with at least 100 located articles, Malaysia (8.43), Taiwan (7.72), Spain (4.8) and Sweden (3.48) are strongly over-represented (Table 2, Figure 3).

Two lifts in Table 2 are not trustworthy. The place tagger reads the company name Nokia as the Finnish town of that name, and Samsung as a place in South Korea. Most located Finnish and Korean 5G rows carry those place names, so Finland's lift (32.73) and South Korea's (5.06) are inflated. They are shown for completeness and are not stated as findings.

Country	Located 5G articles	Share %	Lift vs all news
India	7,402	22.59	1.71
United States	7,351	22.43	0.46
China	2,137	6.52	2.48
United Kingdom	1,946	5.94	1.02
Spain	1,537	4.69	4.8
Finland (tagging artefact)	1,052	3.21	32.73
South Korea (tagging artefact)	996	3.04	5.06
Japan	750	2.29	2.15
Germany	739	2.25	1.92
Singapore	672	2.05	2.3
Australia	618	1.89	0.88
Malaysia	497	1.52	8.43
France	475	1.45	0.73
United Arab Emirates	418	1.28	1.96
Canada	414	1.26	0.59
Taiwan	336	1.03	7.72

Table 2. Leading countries in located 5G news, January 2023 – July 2026, with lift against all located news.

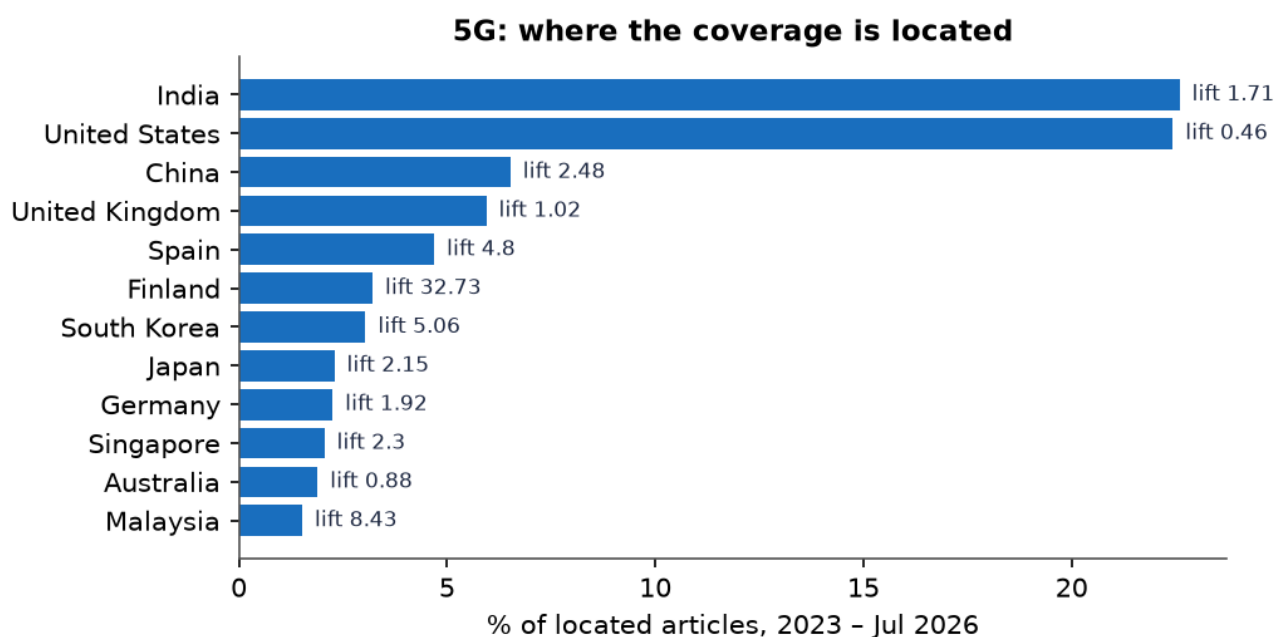


Figure 3. Leading countries by share of located 5G articles, 2023 – Jul 2026, labelled with lift against all located news.

3.3 Geo intelligence: continents, states and shifting attention

The world map (Figure 4) shows the pattern at a glance. 5G is over-represented in the news of East and Southeast Asia, India, Saudi Arabia, Turkey, Spain and Sweden, and under-represented in North America, Brazil, Nigeria, France and Italy. Most of Africa has too few located articles to map. By continent, Asia (1.83) and Europe (1.4) are over-represented, Africa sits at parity (0.99), and Oceania (0.89), South America (0.61) and North America (0.45) are under-represented (Figure 7, left). The Asian and European lifts are raised in part by the Korean and Finnish tagging artefacts described above.

5G: which countries over- and under-cover the topic

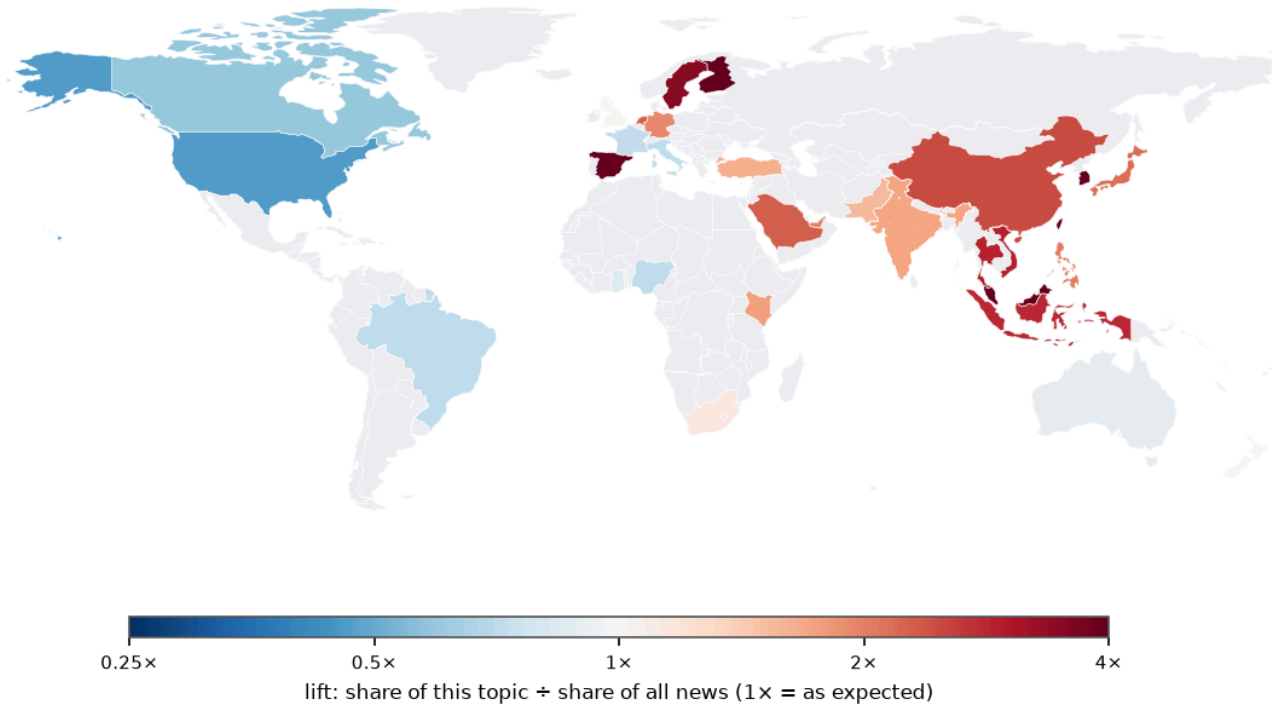


Figure 4. Lift of each country's share of located 5G articles, January 2023 – July 2026 (red = over-represented, blue = under-represented, grey = fewer than 100 articles). India is drawn with its official outline.

Table 3 lists the states with the highest and lowest lift. Measured against each state's share of Indian news, Odisha (2.06), Tamil Nadu (1.66), Karnataka (1.55) and Delhi (1.39) are the most over-represented among states with at least 50 articles. Uttar Pradesh (0.54) is clearly under-represented, and Kerala (0.83) and Gujarat (0.86) sit somewhat below parity (Figure 5). In the United States, Nevada (5.3), Hawaii (4.62), Washington (2.69), California (2.36), Virginia (1.76) and Texas (1.73) lead by lift. Nevada hosts an annual consumer-electronics show, which may account for part of its lift; this is not tested. Hawaii's count is small (60 articles), and some Washington rows carry the company name Nokia read as a place. New Jersey (0.17), Pennsylvania (0.33) and Ohio (0.54) are far below their weight in American news (Figure 6). An earlier build ranked Alabama and Iowa first, because the words "mobile", "enterprise" and "cloud" were read as towns there; with ordinary-word place tags treated as unlocated, both fall below parity.

India: state	Articles	Lift	United States: state	Articles	Lift
Odisha	122	2.06	Nevada	234	5.3
Tamil Nadu	238	1.66	Hawaii	60	4.62
Karnataka	246	1.55	Washington	303	2.69
Delhi	517	1.39	California	1,012	2.36
Assam	60	1.28	Virginia	74	1.76
Andhra Pradesh	77	1.18	Texas	438	1.73
Lowest: Gujarat	81	0.86	Lowest: Ohio	50	0.54
Kerala	58	0.83	Pennsylvania	86	0.33
Uttar Pradesh	198	0.54	New Jersey	134	0.17

Table 3. States with the highest and lowest lift in 5G coverage, January 2023 – July 2026 (states with at least 50 articles). Lift = the state's share of the country's located 5G articles ÷ its share of all located news from that country.

5G: states of India by lift

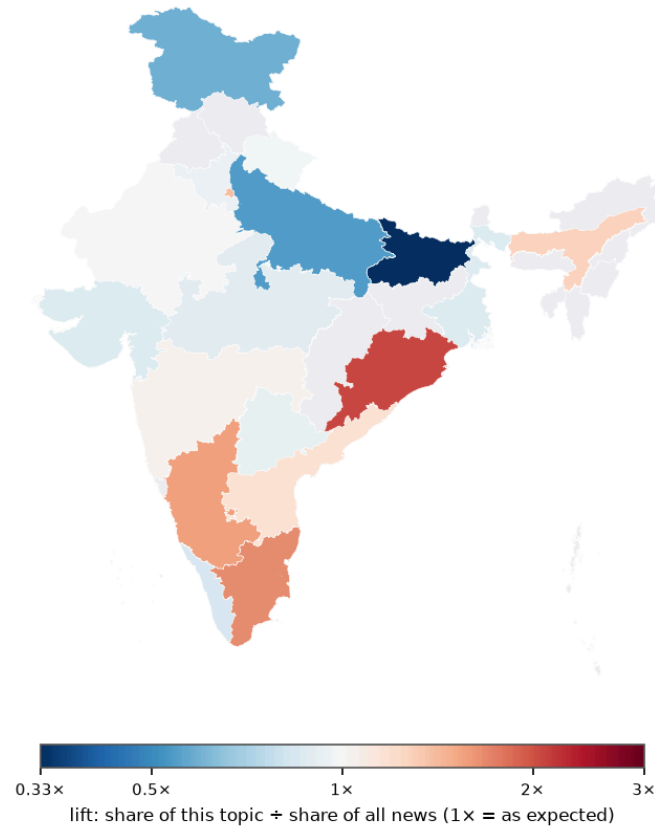


Figure 5. Lift of each Indian state's share of located 5G articles against its share of all located Indian news, January 2023 – July 2026. Official outline; Ladakh is drawn within Jammu and Kashmir in the boundary file used.

5G: states of United States by lift

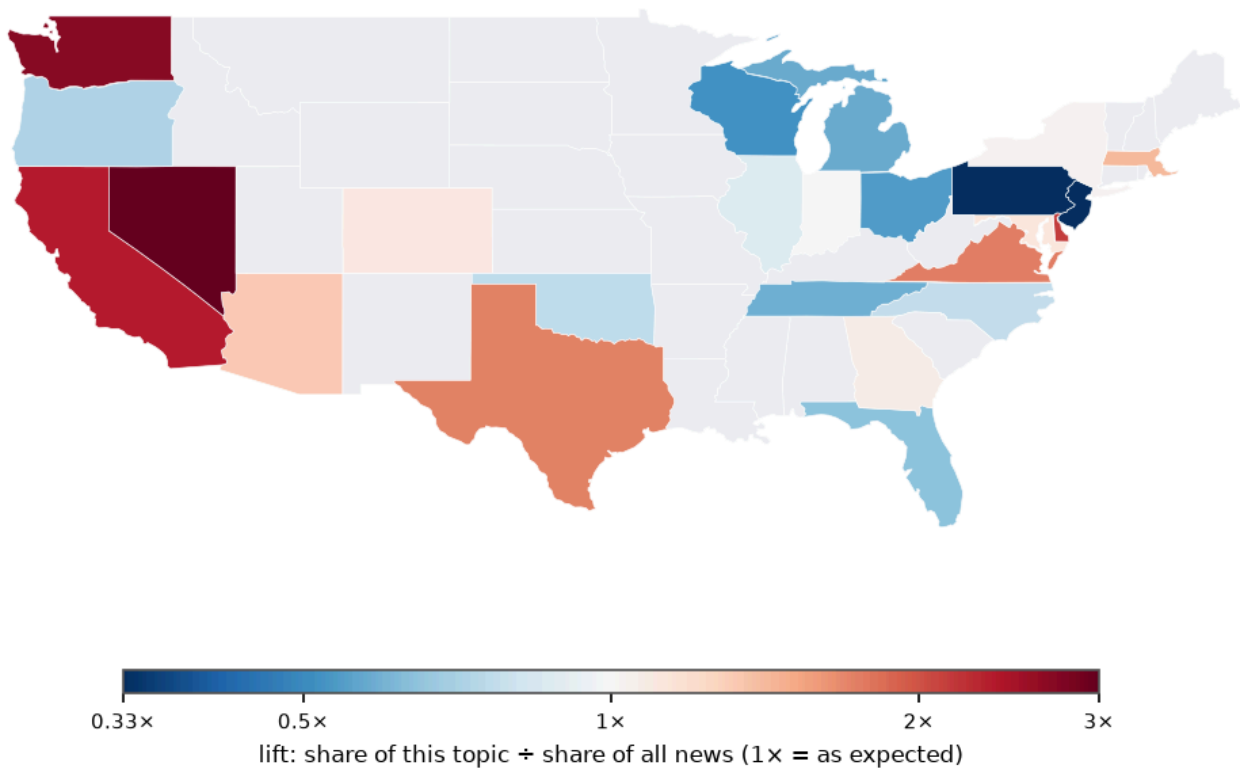


Figure 6. Lift of each US state's share of located 5G articles against its share of all located US news, January 2023 – July 2026.

Attention also moves between countries from year to year (Figure 7, right). Measured as 5G articles per 10,000 of each country's located news, the early launch markets lost interest first. China fell from 124.82 in 2019 to 23.64 in 2025, and the United States from 16.98 to 3.7. India followed a later curve: 10.1 in 2019, a peak of 38.47 in 2022, the year its 5G services launched, and 12.51 in 2025. Between 2023 and 2025, Australia rose from 5.2 to 14.24 (2.74 times) and Singapore 1.45 times. The steepest falls among the 25 countries with the most located 5G articles were in Nigeria (8.93 to 4.3), Germany (0.52 times its 2023 level), the United Arab Emirates (23.56 to 12.89), India (0.56) and Canada (0.57). Japan's apparent rise is set aside: more than half of its sampled 2025 rows carry the abbreviation "OTA" (over-the-air testing or broadcasting), read as the Tokyo ward of that name, or company names read as places.

Tone by country is measured against each country's own news. In each of the 23 countries with enough labelled 5G articles to compare, 5G coverage is less negative than that country's news overall. In percentage points, the gap is widest in Pakistan (6.1% negative against 59.5%), France (3.6% against 47.6%) and the Philippines (1.0% against 39.4%). It is narrowest in Sweden (10.8% against 26.2%), China (11.7% against 27.2%) and Finland (5.8% against 22.6%).

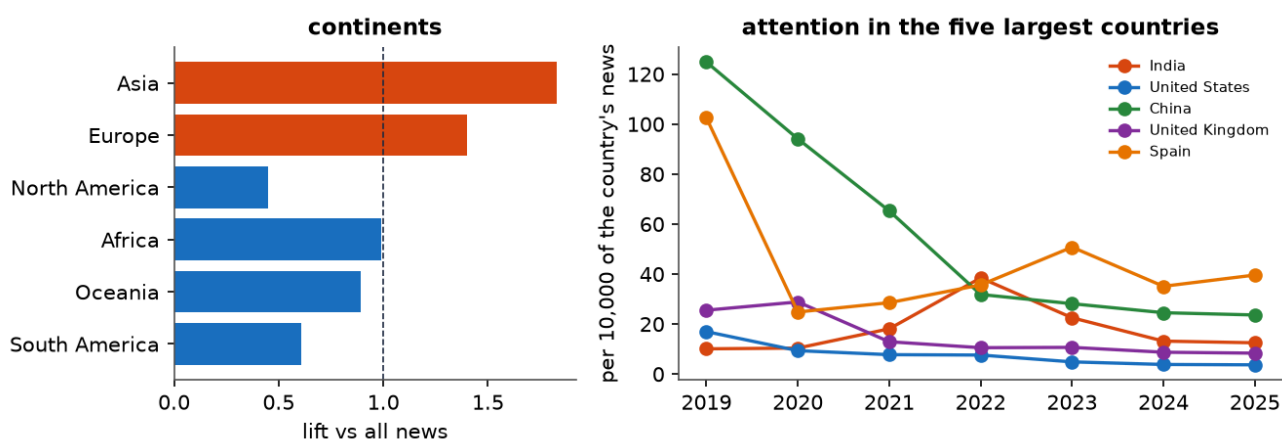


Figure 7. Left: lift by continent, January 2023 – July 2026. Right: 5G articles per 10,000 of each country's located news, 2019–2025, for the five countries with the most articles.

3.4 Tone, urgency and themes

5G coverage is far more positive than news in general (Figure 8). Among articles with a tone label, 92.3% are positive, against 56.8% across the index (1.62 times). Only 6.5% are negative, 0.19 times the 33.6% negative share of all news. Editorial priority puts 63.2% of 5G articles at critical level (7 or higher), against 42.6% of all news (1.48 times).

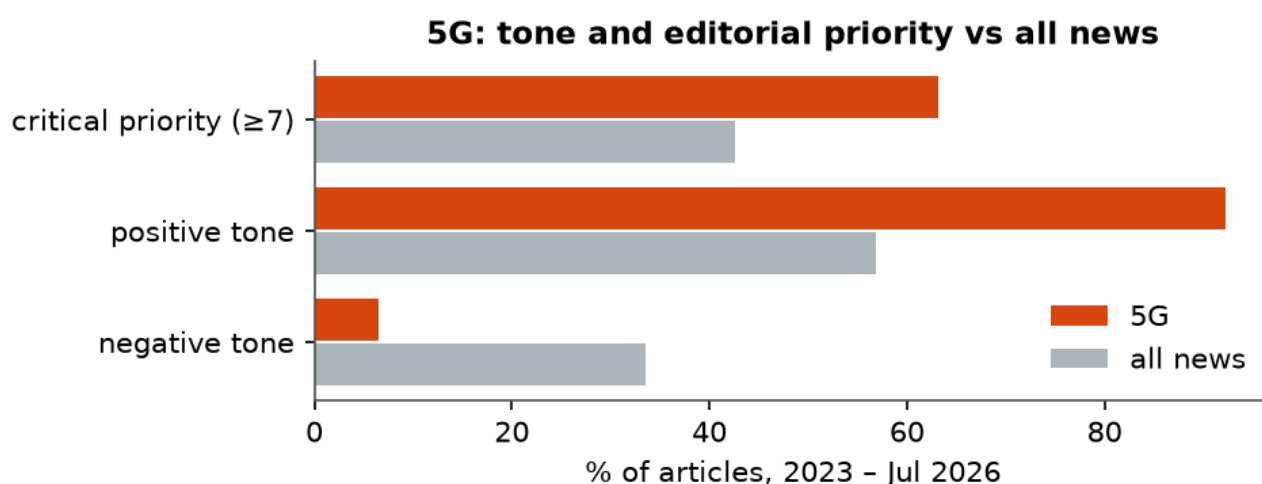


Figure 8. Tone and the share rated critical priority, 5G articles vs all news, 2023 – Jul 2026.

Themes show what 5G stories are about (Table 4). Network infrastructure is the most common theme (29.8% of themed articles). The most specific themes are commercial: home internet over 5G, mobile broadband providers and enterprise mobile solutions each appear about a thousand times more often than in all themed news.

Theme	Articles	Share %	Lift
isp 5g home internet providers	841	2.56	1081.23
mobile broadband providers	1,846	5.63	1010.94
enterprise mobile solutions	522	1.59	998.21
mobile cloud services and storage	263	0.8	922.49
iot integration in mobile networks	252	0.77	896.08
5g network coverage providers	3,446	10.5	848.06
emerging wireless communication standards	3,432	10.46	703.17
5g network infrastructure	9,777	29.8	652.26

Table 4. Themes most specific to 5G coverage (lift against all themed news), January 2023 – July 2026.

The organisations named most often are equipment makers and operators: Ericsson (5,629 articles), Nokia (5,011), Huawei (3,410), Jio (3,295), Samsung (3,046) and Airtel (2,812). The organisation field also contains tagging errors, so the list is descriptive only.

3.5 Research attention and invention

Research on 5G grew much faster than the scientific literature. Papers with a 5G term in the title rose from 1.33 per 10,000 papers in 2015 to 7.45 in 2025, a 5.6-fold increase in share, while the total literature in the corpus grew by a factor of 1.0 over the same years. The share peaked at 8.16 in 2022. Between 2015 and 2025, 40,925 such papers were published. The most-cited set out what 5G would be and which technologies it would use: millimetre-wave radio, massive antenna arrays and non-orthogonal multiple access [1–6].

News attention and research attention ran on different curves (Figure 9). News share fell steadily from 2020, while research share kept rising until 2022 and has eased only slightly since.

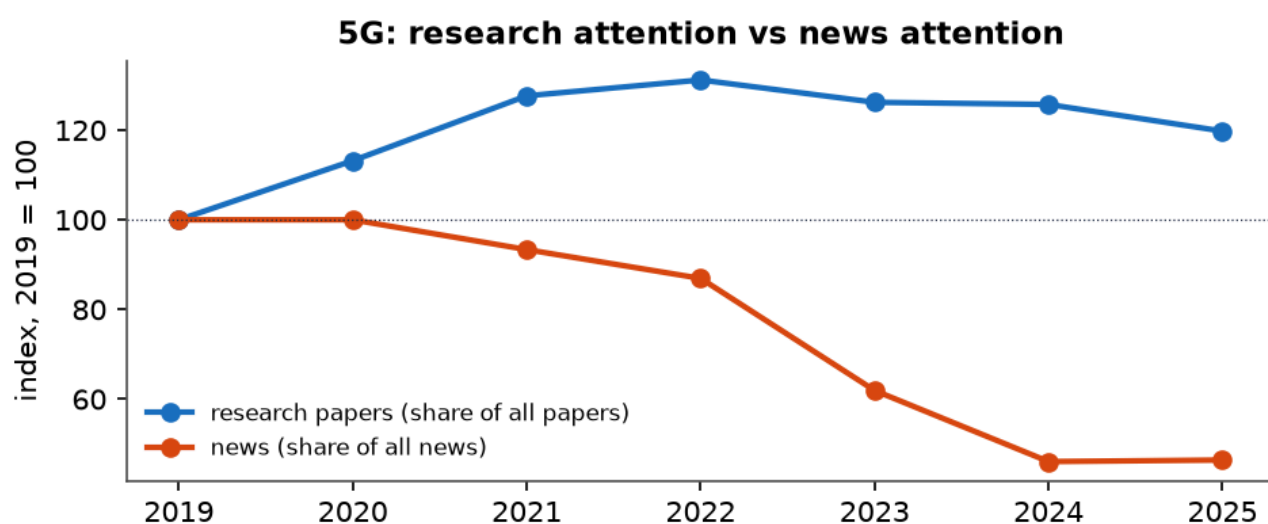


Figure 9. Research papers with 5G in the title (share of all papers) and 5G news (share of all news), each indexed to 2019 = 100.

Patenting rose and fell faster still. 455 5G patent families were published in 2018, 7,610 in 2021 (16.73 times as many) and 3,961 in 2024, 0.52 times the peak and a 47.95% fall. China's office holds 82.0% of the office filings of 5G families from 2015 to 2024, followed by the United States (6.7%) and international applications (4.6%) (Figure 10). The leading technology classes are wireless networks (H04W, 4,240 families), transmission of digital information (H04L, 1,475) and antennas (H01Q, 957).

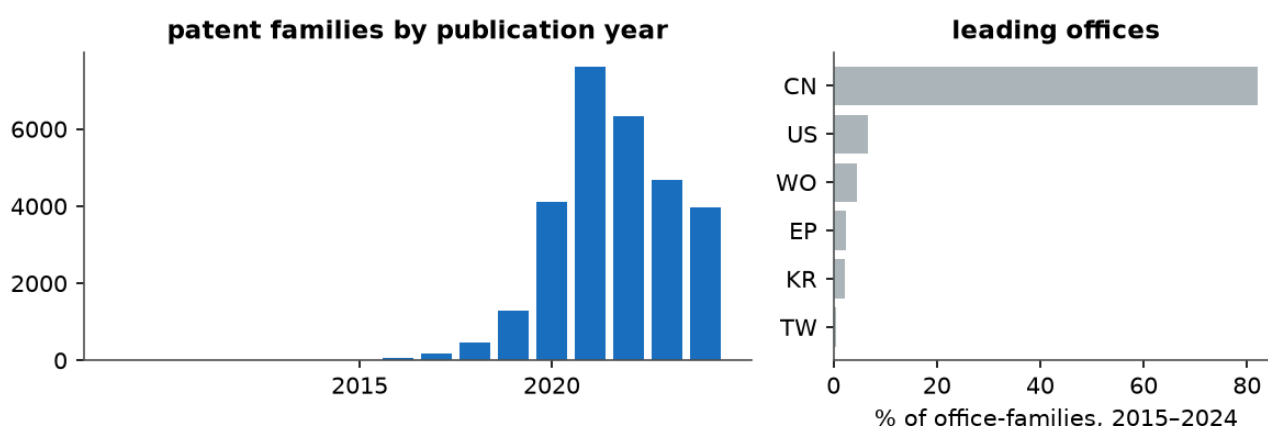


Figure 10. 5G patent families by publication year (left) and the leading filing offices, 2015-2024 (right).

4. Discussion

Three points matter for anyone who uses news as a record of 5G. First, coverage measures attention, not deployment. In China and the United States the share was highest in 2019, the first year of the data, and fell after; in India it peaked in 2022, the year of the Indian launch. These are coincidences of timing, not tested causes, and a falling share does not show that 5G mattered less. Second, raw shares mislead. India and the United States hold near-equal raw shares of located 5G news, but the United States is under-represented relative to its weight in the index, while India and several Asian markets are over-represented. Third, a large share of what keyword searches return as "5G news" is not about networks. Phone model names that end in "5G", retail listings and report boilerplate made up nearly a quarter of raw matches. Geographic tagging adds its own errors, because company names such as Nokia and Samsung, and ordinary words such as "Mobile" and "Cloud", are also place names.

Research, invention and news run on different clocks. News share was highest in 2019, the first year of the data. Patent families peaked in 2021, a time lag consistent with filing and publication delays. Research share peaked in 2022 and has held near that level. The dataset lets researchers link the three, for example to test whether a country's spectrum auction or launch is followed by research or patent activity there.

5. Limitations

- **Index availability.** 92.88% of the index was readable at build time, so counts are lower bounds. Shares and lifts are less affected, because the missing part is spread across topics.
- **Coverage after May 2026.** The index thins after May 2026, so 2026 is partial and is excluded from year comparisons.
- **Matching.** Matching uses the article opening. Articles that mention 5G only later are missed, and about 15% of matches are not about 5G. Phone launches with unusual wording remain in the data.
- **Machine labels.** Location, tone, priority and themes are machine-labelled. The place tagger reads the company names Nokia and Samsung as towns, which inflates Finland and South Korea. The city field is noisy and is not analysed.
- **Place tags from ordinary words.** Place tags derived from ordinary words ("Congress", "Earth", "Winter", "Cloud", "Mobile", "Hurricane") were treated as unlocated (15.3% of city-tagged articles), so located counts are smaller than in an unfiltered count and a few true places with such names are lost.
- **Outlet mix.** The index over-represents English-language outlets. Coverage of Chinese, Korean and Japanese markets depends on the English-language outlets it collects.
- **Research and patent counts.** These match titles only. Office shares reflect filing practice; utility models are numerous in China.

Data availability

The dataset (article sample, monthly and country tables, research and patent tables, all metrics) is released under CC BY-NC 4.0 with this paper. The sample holds 44,030 of 175,731 matched articles to 31 July 2026. Full article text, headlines, publishers, later articles and other topics are served by the Prism News API: <https://github.com/fliarbi/prism-news-api> (base URL <https://radar-api.fliarbi.com/news>). A worked query: `prism-news trends "5G" --since 2019-01-01 --until 2026-07-31 --granularity monthly`.

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