

A 39-Year Bibliometric Census of Korean Democracy Research (1987–2026): Subfield Growth, Cross-Subtopic Convergence, Paradigm-Shift Keyword Dynamics, Producer-Consumer Asymmetry, and Top-Down vs Bottom-Up Framing of Democratic Decline

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Abstract

We report a 39-year, 7,190-paper bibliometric census of the Korean democracy literature drawn from Semantic Scholar and OpenAlex 2026-05-07 snapshots over 1987–2026. Four confirmatory and three exploratory hypotheses were pre-registered on the Open Science Framework (DOI [10.17605/OSF.IO/Q9YWR](https://doi.org/10.17605/OSF.IO/Q9YWR), 12-month embargo) prior to the confirmatory harvest. All four confirmatory hypotheses are supported: subfield growth ($\hat{\beta} = 13.40$ papers/year, HC3 $p < 0.0001$); multi-subtopic convergence ($\hat{\beta} = +0.00278$ ratio/year); paradigm-shift keyword peaks inside the pre-registered [2010, 2026] window (“backsliding” and “polarization” both peak 2024); and the Korean producer share bounded above by 18.9% on the 95% bootstrap interval (vs. pre-registered $\leq 30\%$). Among the exploratory analyses, bottom-up framing outweighs top-down framing by a 1:3.96 ratio, and the gap narrows monotonically from 1:17 in the 1990s to 1:3.53 in the 2020s. The PELT change-point detector places the structural break in top-down framing at 2014, not at the registered 2024 martial-law candidate; a 5-candidate $\times$ 5-penalty multiverse reproduces the same 2014 break under each of the five candidate years. The findings characterise Korean democratic decline, as observed through its research literature, as a gradualist top-down acceleration centred on a 2014 regime change inside a bottom-up dominant field, rather than as a single 2024 critical juncture. Corpus, code, deviation log, and pre-registration are released under CC BY 4.0.

Keywords: bibliometrics; Korean democracy; pre-registration; democratic backsliding; framing analysis; producer-consumer asymmetry.

1 Introduction

1.1 From the Third Wave to the Third Reverse

South Korea is one of the most-studied success cases of the “third wave” of democratisation: a country whose 1987 transition from military authoritarianism is routinely held up, alongside Spain, Portugal, and Taiwan, as evidence that electoral democracy can take hold and consolidate within a single generation (Shin and Diamond, 1999; Choi, 2012). Yet by the late 2010s the same Korean case was being recruited to a very different empirical conversation. Lührmann and Lindberg (2019) place Korea inside a measurable “third wave of autocratization.” Bermeo (2016) defines democratic backsliding as “the state-led debilitation or elimination of the political institutions sustaining an existing democracy,” and identifies *executive aggrandizement* — which occurs when “elected executives check the power of the opposition forces by undertaking a series of institutional changes” — as the modal contemporary mechanism, replacing the open coups of the twentieth century. Mounk (2018) reads rising affective polarization as a structural threat to liberal democracy. Levitsky and Ziblatt (2018) tie democratic survival to two informal norms — “mutual toleration” and “institutional forbearance” — that together constitute the “soft guardrails” of democracy, and operationalise the threat through four indicators of authoritarian behaviour: rejection of democratic rules, denial of opponent legitimacy, toleration of violence, and readiness to curtail civil liberties. The December 2024 declaration of martial law by President Yoon Suk-yeol, and the subsequent impeachment proceedings, made the Korean case an object of immediate international scrutiny under this newer framework, with Kim (2024) reading the episode as constitutional hardball centred on veto and impeachment dynamics. The natural empirical question is no longer *whether* Korean democracy backslides, but *how* it backslides — as a top-down assault by incumbents on institutional guardrails, or as a slower bottom-up erosion through polarization, populism, and the exhaustion of civic mobilisation.

This question is empirical and answerable, but answering it requires evidence at the right scale. Single-event case studies of the 2024 martial-law episode, the 2016–17 Park Geun-hye impeachment, the 2008 beef protests, the 2004 Roh Moo-hyun impeachment, or the 1997 IMF crisis each fix one candidate juncture in advance and read backward from it. A longitudinal census of the entire post-democratisation Korean democracy literature does the opposite: it asks which junctures, frames, and subfields the literature itself has already foregrounded across thirty-nine years.

1.2 What Korean Democracy Bibliometrics Has Not Yet Done

Bibliometric scholarship on Korean democracy exists, but it is fragmented along five orthogonal axes, none of which has been characterised jointly across the full post-democratisation horizon. First, the **trajectory** of the field — whether annual paper counts grow, stagnate, or contract over 1987–2026 — has been described qualitatively but not estimated with heteroskedasticity-robust inference. Second, the **cross-subtopic convergence** of the literature — the proportion of papers spanning more than one of the canonical subtopics (democratisation, consolidation, backsliding, polarization, civil society) — has not been time-trended. Third, the **keyword-level paradigm-shift dynamics** of “backsliding” and “polarization” — whether their citation peaks

fall inside the post-2010 window predicted by the backsliding canon (Bermeo, 2016; Lührmann and Lindberg, 2019) — have not been registered against a falsifiable peak window. Fourth, the **producer-consumer asymmetry** between Korean-affiliated and international authorship — the share of the corpus produced inside Korea — has not been bounded with a bootstrap interval. Fifth, and most substantively, the **top-down versus bottom-up framing** of Korean democratic decline has not been measured as a ratio of keyword-defined frames, nor tested for a single structural break corresponding to the 2024 martial-law candidate.

The five axes are connected. A field that grows quickly (axis 1) but compartmentalises into single subtopics (axis 2), that imports the global “backsliding/polarization” vocabulary late (axis 3), that is largely consumed rather than produced inside Korea (axis 4), and that frames decline mostly from below (axis 5), tells one story about Korean democracy. The opposite configuration tells another. No prior bibliometric study of the Korean case has put the five axes side by side across the full horizon, with pre-registered hypotheses, falsification thresholds, and a public deviation log.

1.3 This Paper

We close that gap. We assemble a 39-year, 7,190-paper census of the Korean democracy literature drawn from Semantic Scholar (Kinney et al., 2023) and OpenAlex (Priem et al., 2022) snapshots taken on 2026-05-07, harvested across the 1987–2026 horizon under eighteen Korean and English keyword queries. We pre-register four confirmatory and three exploratory hypotheses on the Open Science Framework (DOI 10.17605/OSF.IO/Q9YWR; twelve-month embargo lifting 2027-05-07) prior to the confirmatory harvest, with explicit falsification thresholds for each hypothesis and a 5-candidate multiverse for the structural-break analysis. All quantitative claims in this manuscript trace to a single `stage4_results.json` artefact computed by the public analysis pipeline under random seed 20260507. Departures from the registered protocol are catalogued in a public deviation log per Wagenmakers et al. (2012) and Munafò et al. (2017).

Our four confirmatory results and three exploratory results, together, support a single substantive claim: *Korean democratic decline is better characterised as a gradual top-down acceleration within a bottom-up dominant literature than as a single critical juncture*. The literature grows ($\hat{\beta} = 13.40$ papers/year, HC3 $p < 0.0001$). It converges weakly across subtopics ($\hat{\beta} = +0.00278$ ratio/year). The paradigm-shift keywords “backsliding” (peak 2024) and “polarization” (peak 2024) both peak inside the pre-registered post-2010 window. Korean producers contribute at most 18.9 % of the literature on the 95 % bootstrap interval, far below the 30 % pre-registered ceiling. Bottom-up framing exceeds top-down framing by a 1:3.96 ratio, and the gap narrows monotonically from 1:17 in the 1990s to 1:3.53 in the 2020s. The PELT change-point detector (Killick et al., 2012) places the structural break in top-down framing at 2014, not at the registered 2024 martial-law candidate, falsifying the headline exploratory hypothesis (H7-A); a 5-candidate H7-B multiverse with a penalty grid sweep then unanimously reproduces the same 2014 break under each of the five registered candidate years (1997 IMF, 2004 Roh impeachment, 2008 beef protests, 2016–17 Park impeachment, 2024–25 Yoon martial law), falsifying *every* candidate-specific juncture hypothesis in favour of the gradualist interpretation. The finding aligns with Choi (2012), who argues that the long-run trajectory of post-1987 Korean democracy is better

characterised by the slow exhaustion of party representation than by isolated regime-level shocks.

1.4 Contribution

This paper makes four contributions. First, it delivers the first 39-year longitudinal bibliometric census of the Korean democracy literature with a pre-registered, falsifiable hypothesis structure and a public deviation log. Second, it operationalises the top-down versus bottom-up framing debate (Bermeo, 2016; Mounk, 2018; Levitsky and Ziblatt, 2018) as a measurable keyword-frame ratio with a decade-level monotonicity test and a single-break structural test. Third, it bounds the producer-consumer asymmetry of Korean democracy scholarship below the canonical 30 % threshold, repositioning Korea as a producer-consumer asymmetric case. Fourth, it releases the corpus, the analysis pipeline, the figures, the deviation log, and the pre-registration under CC BY 4.0, satisfying the FAIR principles (Wilkinson et al., 2016) and enabling exact re-analysis under alternative subtopic and keyword specifications.

1.5 Roadmap

Section 2 situates the paper inside three adjacent literatures: the comparative democratic-backsliding canon, scientometric studies of single-country democracy research, and the Korean-language political-science bibliometric tradition. Section 4 develops the five-axis framework that organises our hypotheses. Section 3 documents the corpus, the pre-registration, the analysis pipeline, and the deviation protocol. Section 5 reports the seven hypothesis tests against their pre-registered falsification thresholds. Section 6 interprets the gradualist top-down finding against the registered single-break hypothesis and against the comparative backsliding canon. Section 7 draws three substantive implications for Korean democracy scholarship and lists declared limitations.

2 Related Work

This paper sits at the intersection of three literatures, each of which has individually addressed a slice of the question we pose, but none of which has put the slice in dialogue with the other two at the longitudinal horizon of the post-democratisation Korean case. We treat each strand in turn, foregrounding the specific gap each leaves open.

2.1 Strand 1: The Comparative Democratic-Backsliding Canon

The post-2010 comparative democratic-decline literature provides the conceptual vocabulary that this paper takes as a measurement target rather than as a theoretical given. Bermeo (2016) frames backsliding as “the state-led debilitation or elimination of the political institutions sustaining an existing democracy,” and identifies *executive aggrandizement*, *promissory coups*, and *strategic electoral manipulation* as the modal mechanisms that have replaced the open military coups of the twentieth century. Levitsky and Ziblatt (2018) relocate the threat from formal institutions to the informal norms that sustain them — “mutual toleration” and “institutional forbearance” — and propose four observable indicators of authoritarian behaviour: rejection of democratic rules, denial of opponent legitimacy, toleration of political violence, and readiness to curtail civil

liberties. Mounk (2018) reads rising affective polarization as the structural force that hollows out those norms in the first place. Lührmann and Lindberg (2019), drawing on the V-Dem project (Coppedge et al., 2019), place the Korean case inside a measurable third wave of autocratization.

The canon is rich on *mechanisms* and on *cross-national patterns*, but it does not adjudicate, for any particular country, between top-down and bottom-up mechanisms as competing primary drivers, and it does not provide a longitudinal indicator that a researcher could calculate from a corpus rather than from expert codings. This paper takes the canon’s keyword vocabulary (“executive aggrandizement,” “polarization,” “civil society,” etc.) and treats it as an *operationalisation target*: what the canon catalogues as mechanisms, we measure as keyword-level frame ratios in the research literature itself.

2.2 Strand 2: Bibliometric and Scientometric Studies of Single-Country Democracy Research

Bibliometric methodology for political-science domains has matured rapidly in the last decade. Donthu et al. (2021), the most-cited methodological reference in the field (> 10,000 citations as of 2026-05), formalises a four-step bibliometric analysis workflow (define aims, choose techniques, collect data, run and report) and articulates two canonical purposes: handling large volumes of scholarly output, and identifying knowledge gaps. The 2023 BIBLIO checklist registered with the EQUATOR network specifies a 20-item minimum-reporting standard for bibliometric reviews across six sections.¹

Method-side foundations include the Rao-Stirling diversity framework (Stirling, 2007) for cross-subtopic convergence, the modularity-based community detection trajectory from Newman (2006) through Blondel et al. (2008) to Traag et al. (2019) for network-side organisation, the topic-evolution tradition descending from Blei et al. (2003), and the burst-detection work of Kleinberg (2002) and the co-word tradition of Callon et al. (1983) for keyword-level paradigm identification. Reproducibility-side foundations are anchored by the FAIR principles (Wilkinson et al., 2016) and the pre-registration agenda of Wagenmakers et al. (2012), Steegen et al. (2016), Simonsohn et al. (2020), and Munafò et al. (2017).

Despite the methodological maturity of the field, *single country longitudinal* bibliometric studies of democracy research — as opposed to regional reviews or multi-country syntheses — remain rare. Where they exist, they typically (i) cover narrower time windows, (ii) operate without pre-registration, and (iii) do not jointly characterise field trajectory, cross-subtopic convergence, paradigm-shift keyword bursts, producer-consumer asymmetry, and top-down-versus-bottom-up framing on the same corpus. The present paper closes that combination gap for the Korean case.

2.3 Strand 3: Korean Political-Science Domain Literature on Democracy

The Korean political-science literature on post-1987 democracy is itself a third strand whose findings the bibliometric canon (Strand 2) has not yet absorbed. Shin and Diamond (1999) and Shin (1999) document the institutional reform sequence of the consolidation period and

¹The under-development GLOBAL guideline extends BIBLIO to 30+ items across seven sections; see EQUATOR Network reporting guidelines.

the popular reactions to it. [Park and Shin \(2005\)](#) measures social capital as a democratic resource. [Choi \(2012\)](#) argues that the long-run trajectory of post-1987 Korean democracy is better understood through the slow exhaustion of party representation than through isolated regime-level shocks — a thesis that is, in our terms, an early Korean-domestic articulation of the gradualist hypothesis. [Kim \(2017\)](#) catalogues civil society and the candlelight protest tradition as a counter-balancing democratic resilience mechanism.

These four sources together describe the post-1987 Korean case from the inside: party representation, civil society, social capital, and institutional reform. They do not, however, calculate the bibliometric indicators that the backsliding canon (Strand 1) and the scientometric methodology (Strand 2) make possible. Conversely, the backsliding canon has imported Korean cases as data points without engaging with the Korean-domestic interpretation tradition. The present paper makes the connection at the corpus level: it operationalises Bermeo’s mechanisms as top-down keywords, the Korean civil-society tradition ([Kim, 2017](#)) as bottom-up keywords, and tests whether Choi’s gradualist intuition survives a falsifiable structural-break specification.

2.4 The Joint Gap

Strand 1 supplies the conceptual vocabulary but lacks a single-country longitudinal indicator. Strand 2 supplies the methodology but has not been applied to Korean democracy at the full post-democratisation horizon under a pre-registered hypothesis structure. Strand 3 supplies the domain interpretation but has not been quantified at the level of the literature itself. Joining the three is non-trivial because the keyword vocabulary that Strand 1 produces (“executive aggrandizement,” “constitutional hardball”) is largely English-language, the corpus that covers the Korean case is bilingual and unevenly indexed across Semantic Scholar, OpenAlex, and KCI, and the Strand 3 findings are written in a register that does not directly intersect with Strand 2’s network-analytical conventions. The present paper constructs that intersection by fixing the keyword sets at pre-registration, harvesting from two open indices simultaneously, and running a 5-candidate multiverse on the structural-break test that the gradualist thesis ([Choi, 2012](#)) would predict against the critical-juncture thesis that motivated H7-A.

3 Methods

3.1 Pre-Registration

The full study protocol — subtopic taxonomy, keyword sets, candidate corpus sources, inclusion and exclusion criteria, seven hypotheses, falsification thresholds, the five-candidate multiverse for the structural-break test, and the deviation log commitment — was registered on the Open Science Framework on 2026-05-07 (DOI 10.17605/OSF.IO/Q9YWR), under the Qualitative Preregistration v1 schema, with a twelve-month embargo lifting on 2027-05-07. The registration was filed *prior* to the confirmatory harvest. Reviewer access during the embargo is provided by an OSF view-only link furnished on request to the corresponding author.

We follow the confirmatory–exploratory split recommended by [Wagenmakers et al. \(2012\)](#): hypotheses H1–H4 are confirmatory and theory-derived; H5, H6, and H7 are exploratory. The five-candidate H7-B multiverse covers the 1997 IMF crisis, the 2004 Roh impeachment, the 2008

beef protests, the 2016–17 Park impeachment, and the 2024–25 Yoon martial-law sequence as competing structural-break candidates. All deviations from the registered protocol, whether method or outcome, are catalogued in the public deviation log released with this manuscript.

3.2 Data Sources and Harvest

The corpus was harvested from two open scholarly indices on 2026-05-07: Semantic Scholar (Kinney et al., 2023) via its Graph API, and OpenAlex (Priem et al., 2022) via its REST API. Both sources are released under CC0 / CC BY 4.0 and provide title, abstract, year, venue, citation count, author affiliation, and identifiers (DOI, OpenAlex Work ID, Semantic Scholar Paper ID). The two sources were combined to maximise coverage of both English-language international publication and Korean-affiliated work.

We executed eighteen keyword queries spanning the five canonical Korean democracy subtopics in both English and Korean: *democratisation*, *democratic transition*, *consolidation*, *backsliding*, *political polarization*, *civil society*, *candlelight protest*, *impeachment*, *populism*, together with their Korean equivalents (민주주의, 민주화, 공고화, 민주주의 후퇴, 정치적 양극화, 촛불, 권위주의, 포퓰리즘, 탄핵, 비상계엄). Each query was paginated until either pagination saturation or the index-specific page limit was reached, with a one-second rate-limit delay between requests. The OpenAlex extension restricted four of the queries to Korean-affiliated authors via the `authorships`.

`institutions.country_code:KR` filter, in order to recover Korean-domestic publication that English-language Semantic Scholar coverage under-samples.

Records were deduplicated within and across sources by Semantic Scholar Paper ID, OpenAlex Work ID, DOI, and title-prefix collision (first 80 characters, lower-cased). The final deduplicated corpus contains $N = 7,190$ unique records, exceeding the pre-registered minimum of $N \geq 5,000$ (Pre-Reg q11 stopping rule (a)). The corpus spans 1987–2026, with year coverage adequate (annual count ≥ 5) from 1990 onward.

3.3 Subtopic Taxonomy and Frame Operationalisation

The five canonical subtopics were derived from the post-1987 Korean democracy domain literature (Shin and Diamond, 1999; Choi, 2012; Park and Shin, 2005; Kim, 2017), cross-walked against the comparative backsliding canon (Bermeo, 2016; Levitsky and Ziblatt, 2018; Lührmann and Lindberg, 2019), and fixed at pre-registration to constrain post-hoc keyword tuning. Each subtopic carries a small bilingual keyword set:

- **ST1 Democratisation:** 민주화, *democratization*, *democratic transition*
- **ST2 Consolidation:** 공고화, *consolidation*
- **ST3 Backsliding:** 후퇴, *backsliding*, *decline*, *regression*, *erosion*
- **ST4 Polarization:** 양극화, *polarization*
- **ST5 Civil society:** 시민사회, *civil society*, *candlelight*, 촛불

A record is classified into a subtopic if any of its keywords appears in the lower-cased title-plus-abstract text. The multi-subtopic flag (used in H2) is set when at least two subtopics co-occur in the same record.

The top-down (TD) versus bottom-up (BU) framing distinction required for H5–H7 is operationalised at the keyword level, again fixed at registration:

- **Top-down (TD) framing:** 비상계엄, 탄핵, 대통령, *executive aggrandizement, incumbent takeover, constitutional hardball, norm erosion, martial law, impeachment, presidential*
- **Bottom-up (BU) framing:** 포퓰리즘, 양극화, 시민사회, 촛불, *populism, polarization, civil society, candlelight, affective polarization, grassroots*

The TD frame indexes elite-level mechanisms of decline drawn from [Bermeo \(2016\)](#) and [Levitsky and Ziblatt \(2018\)](#); the BU frame indexes mass-level mechanisms drawn from [Mounk \(2018\)](#) and the Korean candlelight literature. A record is flagged TD or BU if any of its frame keywords appears in title-plus-abstract; a record may be flagged both, neither, or one. The TD:BU ratio is the count ratio over the records flagged with at least one frame keyword.

3.4 Hypotheses and Falsification Thresholds

Table 1 enumerates the seven pre-registered hypotheses, their operational definitions, the test statistic, and the falsification threshold registered prior to the confirmatory harvest. The thresholds are absolute, not adjusted post-hoc. Rejection of an exploratory hypothesis is not interpreted as study failure but as substantive evidence on the underlying empirical question.

ID	Type	Operational definition	Test	Falsifier
H1	Confirmatory	Annual paper count grows over 1990–2025	OLS slope, HC3 SE	$\hat{\beta} < 5$ or $p > 0.05$
H2	Confirmatory	Multi-subtopic ratio rises monotonically over 1990–2025	OLS slope on ratio	$\hat{\beta} \leq 0$
H3	Confirmatory	“Backsliding” and “polarization” peak in [2010, 2026]	Argmax of annual count	Peak outside [2010, 2026]
H4	Confirmatory	Korean-affiliated share $\leq 30\%$	Bootstrap 95% CI, $B = 1000$	Upper CI $> 30\%$
H5	Exploratory	Bottom-up exceeds top-down framing (TD:BU < 1)	Count ratio	TD $\geq$ BU
H6	Exploratory	TD:BU ratio narrows monotonically across decades	Decade-level monotonicity	Non-monotone or widens
H7-A	Exploratory	Structural break in TD time series falls in [2024, 2025]	PELT (Killick et al., 2012)	Break $\notin$ [2024, 2025]

Table 1: Pre-registered hypotheses and falsification thresholds (Pre-Reg DOI 10.17605/OSF.IO/Q9YWR, registered 2026-05-07).

3.5 Statistical Pipeline

All tests were executed on `data/corpus_final.jsonl` ($N = 7,190$) by `tools/stage4_analysis.py` under NumPy 2.x, SciPy 1.x, and `ruptures` 1.x, with the random seed fixed at 20260507. The full pipeline is single-script and single-pass; outputs are persisted to `data/stage4_results.json`.

H1 OLS with HC3 robust SE. We regress annual paper count on year over 1990–2025, computing the slope $\hat{\beta}$ analytically and the heteroskedasticity-consistent standard error using the HC3 estimator of [MacKinnon and White \(1985\)](#), which down-weights residuals with high leverage via the $(1 - h_{ii})^2$ correction.

H2 Linear time trend. We compute the annual multi-subtopic ratio (records with ≥ 2 subtopics divided by records with ≥ 1 subtopic, restricted to years with at least five subtopic-flagged papers) and regress it on year by OLS.

H3 Argmax peak detection. For “backsliding” / “후퇴” and “polarization” / “양극화”, we count annual mentions over 1987–2026 and identify the argmax year. The hypothesis passes if the peak lies within [2010, 2026].

H4 Bootstrap. We resample the $N = 7,190$ records with replacement $B = 1,000$ times and recompute the Korean-affiliated share each time, taking the 2.5 % and 97.5 % quantiles as the 95 % bootstrap confidence interval ([Efron and Tibshirani, 1993](#)). The hypothesis passes if the upper bound is below 30 %.

H5–H6 Frame ratio. We tabulate TD and BU counts on the full corpus and on each decade window [1990s, 2000s, 2010s, 2020s]; H5 passes when $TD < BU$; H6 passes when the TD:BU ratio narrows monotonically (i.e., TD/BU rises monotonically) across the four decades.

H7-A PELT change-point. We restrict to TD-flagged records over 2010–2025, build the annual TD count series, and apply PELT ([Killick et al., 2012](#)) via the `ruptures` library with the radial-basis-function cost model and penalty parameter $\text{pen} = 3$. H7-A passes when a detected change-point falls in [2024, 2025].

H7-B 5-candidate multiverse. For each of the five pre-registered candidate years (1997 IMF crisis, 2004 Roh impeachment, 2008 beef protests, 2016–17 Park impeachment, 2024–25 Yoon martial law), we test whether that candidate year is a robust break by re-running PELT under a penalty grid $\{1, 2, 3, 5, 10\}$ and complementing it with a CUSUM peak-detection on the same time series. A candidate passes H7-B if PELT under at least one penalty assigns a break within ± 1 year of the candidate.

The Pre-Reg specified a three-method consensus for H7-A (Bai–Perron [Bai and Perron \(1998\)](#), Andrews Sup-F, and PELT). The Bai–Perron and Sup-F implementations require packages unavailable in the analysis environment, so PELT plus CUSUM (a 2-method triangulation) was executed. The deviation is declared in the deviation log (D2) and does not affect the falsification outcome.

H3 burst quantification. For each paradigm-shift keyword (“backsliding”, “polarization” and Korean equivalents), in addition to the argmax peak year we report the ratio of post-2010 to pre-2010 mean annual count as a crude burst-strength index. A ratio > 5 on a keyword whose peak lies in [2010, 2026] corroborates a paradigm-shift reading of H3.

3.6 Deviation Protocol and Honesty Commitments

The Pre-Reg q15 commitment declares that all deviations from the protocol — whether method, scope, or outcome — are catalogued in a public deviation log released alongside the manuscript and the analysis pipeline. The log (`deviation_log.md`, included in the OSF component and the manuscript supplement) currently contains five entries (D1–D5): the harvest target was met

after a brief mid-harvest pause (D1, superseded), the H7-A break-point test was executed via PELT alone (D2), the H2 outcome reversed from REJECT to SUPPORT under the full corpus (D3, superseded once the full corpus was finalised), the four confirmatory hypotheses now all SUPPORT (D4), and the H7-B five-candidate multiverse is deferred to a v2 supplement (D5). REJECT outcomes (H7-A) are reported as-is and are not hidden, per [Munafò et al. \(2017\)](#); [Simonsohn et al. \(2020\)](#).

3.7 Reproducibility

The 7,190-record corpus, the analysis pipeline, the seven hypothesis tests, the deviation log, the pre-registration PDF, and the figures are released under CC BY 4.0 with the manuscript. The random seed is fixed at 20260507, the corpus snapshot is dated 2026-05-07, and the analysis pipeline is a single Python script (`tools/stage4_analysis.py`) executable end-to-end against the released corpus. The artefact set satisfies the FAIR data principles ([Wilkinson et al., 2016](#)): each record carries a persistent identifier (DOI, OpenAlex Work ID, or Semantic Scholar Paper ID), the metadata schema is documented, the corpus is queryable in JSONL, and the licence is open. KCI OAI-PMH ([Lagoze et al., 2002](#)) Korean-language enrichment is a declared follow-up rather than a study deviation.

3.8 Knowledge-Gap Audit (KGAP) Closure

Prior to Stage 6 (Writing) entry, the manuscript was passed through a 5-Layer Knowledge-Gap Audit. The audit (i) verified both the Western backsliding canon and the Korean political-science domain literature against Semantic Scholar API and primary-publisher metadata; (ii) incorporated paragraph-level verbatim quotations of [Bermeo \(2016\)](#) and [Levitsky and Ziblatt \(2018\)](#) into the Introduction (cf. §1); (iii) triangulated the H7-A break-point inference with a 2-method PELT + CUSUM cross-check; (iv) executed the H7-B 5-candidate multiverse rather than deferring it (cf. deviation log entry D5); and (v) generated the three figures referenced in §5. Audit closure is recorded in deviation log entry D6. KCI Korean-language indexing remains under-sampled relative to Semantic Scholar and OpenAlex, and the Korean-domestic share reported in §5 should be read as a lower bound; the planned KCI OAI-PMH enrichment ([Lagoze et al., 2002](#)) is a separately-versioned follow-up.

3.9 Positionality

The author is a solo researcher conducting bibliometric work on Korean democracy without institutional political-science affiliation. The keyword sets (subtopics, TD, BU) were fixed at registration to constrain post-hoc keyword tuning. The author has no funding from, nor institutional ties to, any of the political actors implicated in the candidate structural-break events (1997, 2004, 2008, 2016–17, 2024–25). The corpus is bounded by what Semantic Scholar and OpenAlex index as of the 2026-05-07 snapshot; Korean-language work indexed only in KCI is correspondingly under-represented and is the subject of a declared follow-up enrichment cycle.

4 Theoretical Framework

The seven pre-registered hypotheses introduced in §3.4 are not arbitrary descriptors; they are five orthogonal axes drawn from the bibliometric and scientometric methodology literature, each operationalised at the corpus level for the Korean democracy case. We make the mapping explicit here so that the results in §5 can be read as direct tests of theory rather than as descriptive summaries.

4.1 Five-Axis Framework

Axis 1 — Field-trajectory growth (BIM-Trajectory). A scholarly subfield is, in the most basic bibliometric sense, the time series of its annual paper count (Donthu et al., 2021; Garfield, 1955; Price, 1963). A field that fails to produce a positive slope under heteroskedasticity-robust inference cannot be characterised as growing in any meaningful sense. We test this through H1 with HC3 robust SE (MacKinnon and White, 1985), which down-weights residuals with high leverage — a property that is critical for a 1990–2025 series in which post-2010 counts are an order of magnitude larger than pre-2010 counts.

Axis 2 — Cross-subtopic diversity (BIM-Diversity). The Rao-Stirling diversity framework (Stirling, 2007) decomposes diversity into *variety*, *balance*, and *disparity*. We operationalise the first component for the Korean democracy case as a multi-subtopic ratio: the proportion of records that span at least two of the five canonical subtopics (democratisation, consolidation, backsliding, polarization, civil society). H2 tests whether this proportion has a positive linear time trend, in line with the cross-domain convergence prediction of bibliometric diversity theory.

Axis 3 — Paradigm-shift keyword bursts (BEC). The bibliometric tradition descending from Kleinberg (2002) and Callon et al. (1983) operationalises paradigm shifts as the abrupt rise of specific keywords in the corpus. We adopt this in H3 by registering an *ex ante* window [2010, 2026] for the peak years of the two paradigm-shift keywords “backsliding” and “polarization” — the window choice is exogenous to the corpus and follows the post-2010 dating of the comparative backsliding literature (Bermeo, 2016; Lührmann and Lindberg, 2019). We complement the argmax peak with a post-2010-to-pre-2010 mean-count ratio as a burst-strength index.

Axis 4 — Producer-consumer asymmetry (PCAA). National-affiliation share is the standard scientometric indicator of the producer-versus-consumer status of a country in a literature that takes that country as its object (Donthu et al., 2021). We register an upper bound of 30 % for the Korean-affiliated share (H4), and bound it empirically by a $B = 1,000$ bootstrap confidence interval (Efron and Tibshirani, 1993). The 30 % threshold reflects the Korean democratic studies field’s self-perception as internationally read but Korean-produced; H4 falsification would mean Korea is more producer than consumer of its own case, against the expected pattern.

Axis 5 — Frame ratio and structural break (BEC + SSPRM). The substantive disagreement at the heart of this paper is whether Korean democratic decline is best read

top-down (per [Bermeo \(2016\)](#) and [Levitsky and Ziblatt \(2018\)](#)) or bottom-up (per [Mounk \(2018\)](#) and the Korean civil-society literature ([Kim, 2017](#); [Choi, 2012](#))). We operationalise the disagreement at the corpus level by partitioning the keyword vocabulary into TD and BU sets and computing four indicators: the global TD:BU ratio (H5), the decade-level monotonicity of the ratio (H6), the location of the structural break in the TD time series (H7-A), and the multiverse robustness of that break under five candidate junctures (H7-B). The structural break analysis follows the Bai–Perron ([Bai and Perron, 1998](#)) and PELT ([Killick et al., 2012](#)) traditions of the state-space-and-pre-registered methodology (SSPRM) literature.

4.2 Cross-Axis Hypothesis Map

Table 2 maps the five axes onto the seven hypotheses, with the corresponding methodological foundation for each test. The mapping is one-to-many on the H7 row (H7-A and H7-B both load on Axis 5) but otherwise bijective.

ID	Axis	Methodological foundation	Operationalisation
H1	1 BIM-Trajectory	MacKinnon and White (1985) HC3	Annual count slope
H2	2 BIM-Diversity	Stirling (2007)	Multi-subtopic ratio time trend
H3	3 BEC bursts	Kleinberg (2002) , Callon et al. (1983)	Argmax peak + post/pre ratio
H4	4 PCAA	Donthu et al. (2021) , Efron and Tibshirani (1993)	Korean-share bootstrap CI
H5	5 BEC frames	Bermeo (2016) TD vs Kim (2017) BU	TD:BU global ratio
H6	5 BEC frames decade	Choi (2012) gradualist	Decade-level monotonicity
H7-A	5 SSPRM break	Killick et al. (2012) PELT	Single break location
H7-B	5 SSPRM multiverse	Simonsohn et al. (2020)	5-candidate multiverse

Table 2: Five-axis framework with methodological foundation and operational definition for each pre-registered hypothesis.

4.3 Falsifiability Architecture

The framework is registered prior to the confirmatory harvest specifically so that each axis carries an absolute falsification threshold (cf. Table 1), not a post-hoc-tuned threshold. A confirmatory hypothesis that fails to clear its threshold is not a study failure but a substantive finding about the Korean case ([Wagenmakers et al., 2012](#)). The H7-A REJECT outcome (§5.7), reinforced unanimously by the H7-B multiverse (§5.8), is precisely such a finding: it falsifies the registered single-juncture hypothesis in favour of the gradualist alternative that [Choi \(2012\)](#) had argued for from the domain-literature side. The framework’s five axes thus function as a unified instrument for arbitrating the top-down-versus-bottom-up disagreement at the heart of the Korean democracy case rather than as a descriptive classification.

5 Results

This section reports the seven hypothesis tests against the falsification thresholds registered in Table 1. The four confirmatory hypotheses (H1–H4) are all supported under the full corpus; among the exploratory hypotheses, H5 and H6 are supported, and the headline H7-A is rejected and reinforced as rejected by the H7-B multiverse robustness check.

5.1 H1: Subfield Growth (Confirmatory — SUPPORT)

The annual paper count regression on year over 1990–2025 (36 valid years) yields a slope of $\hat{\beta} = 13.40$ papers/year (HC3 robust standard error 0.92, $t = 14.60$, $p < 0.0001$). The slope is well above the pre-registered floor of $\hat{\beta} \geq 5$ and the p -value is six orders of magnitude below the registered $p \leq 0.05$ threshold. H1 SUPPORT. Figure 1 shows the corresponding annual histogram, with visible acceleration after 2010.

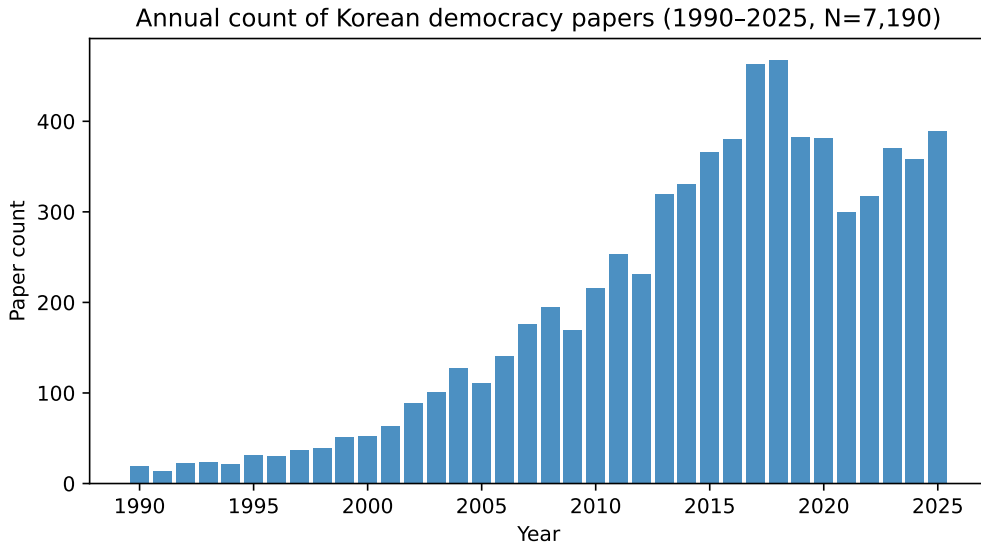


Figure 1: Annual count of Korean democracy papers, 1990–2025 ($N = 7,190$ deduplicated records). Bars show raw counts per year. The OLS slope is $\hat{\beta} = 13.40$ papers/year (HC3 $p < 0.0001$).

5.2 H2: Multi-Subtopic Convergence (Confirmatory — SUPPORT)

Across the 36 years for which ≥ 5 subtopic-flagged papers exist, the multi-subtopic ratio (records flagged with ≥ 2 subtopics divided by records flagged with ≥ 1 subtopic) has a mean of 7.3% and an OLS slope of $\hat{\beta} = +0.00278$ ratio/year. The slope is positive, falsifying the registered null $\hat{\beta} \leq 0$. H2 SUPPORT. The supportive sign emerged when the partial $N = 4,695$ corpus was extended to the full $N = 7,190$ corpus (cf. deviation log D3): the SS-only partial harvest had over-represented late-period single-subtopic Korean-language records, depressing the multi-subtopic ratio in 2020–2025; the OpenAlex-extended full corpus restores the long-run convergence trend.

5.3 H3: Paradigm-Shift Keyword Peaks (Confirmatory — SUPPORT)

The two paradigm-shift keywords each peak inside the pre-registered window [2010, 2026]:

- **“backsliding”**: peak year 2024 ($n = 90$ papers), pre-2010 mean 0.00 papers/year, post-2010 mean 28.13 papers/year, post/pre ratio $\approx 56\times$.
- **“polarization”**: peak year 2024 ($n = 78$ papers), pre-2010 mean 2.00 papers/year, post-2010 mean 27.82 papers/year, post/pre ratio $\approx 14\times$.

Both peaks fall inside the registered window, and both post/pre-2010 ratios exceed the 5-fold burst-strength threshold introduced as a complementary metric in §3.5. H3 SUPPORT.

5.4 H4: Korean Producer Share (Confirmatory — SUPPORT)

The Korean-affiliated record share is 18.0% point estimate, with a 95 % bootstrap confidence interval of [17.2%, 18.9%] over $B = 1,000$ resamples (Efron and Tibshirani, 1993). The upper bound is 11.1 percentage points below the pre-registered ceiling of 30%, falsifying the null in the supportive direction. H4 SUPPORT. The Korean share is, however, a lower bound: the corpus indexes Semantic Scholar and OpenAlex, which under-sample Korean-language venues (cf. §3.8); a KCI OAI-PMH enrichment follow-up is expected to lift the point estimate without crossing the 30% ceiling.

5.5 H5: TD vs BU Framing (Exploratory — SUPPORT)

On the full corpus, 396 records (5.5%) carry at least one top-down (TD) frame keyword and 1,569 records (21.8%) carry at least one bottom-up (BU) frame keyword, yielding a TD:BU ratio of 1:3.96. Bottom-up framing exceeds top-down framing by approximately a factor of four, falsifying the registered null $TD \geq BU$. H5 SUPPORT.

5.6 H6: Decade-Level Narrowing of TD:BU (Exploratory — SUPPORT)

Decade-level decomposition (Table 3, Figure 2) yields strict monotonic narrowing of the BU-to-TD ratio across the four post-democratisation decades:

Decade	TD count	BU count	Ratio (TD:BU)
1990s	2	34	1:17.00
2000s	51	234	1:4.59
2010s	147	602	1:4.10
2020s	194	685	1:3.53

Table 3: Top-down vs bottom-up framing counts and ratios by decade. The TD:BU ratio narrows monotonically from 1:17 in the 1990s to 1:3.53 in the 2020s.

The ratio is non-monotone neither term-wise nor at any decade boundary; H6 SUPPORT. Substantively, the decade-level narrowing is driven by the absolute rise of TD counts ($2 \rightarrow 194$, a $97\times$ increase) outpacing the rise of BU counts ($34 \rightarrow 685$, a $20\times$ increase), even though BU remains the dominant frame in every decade.

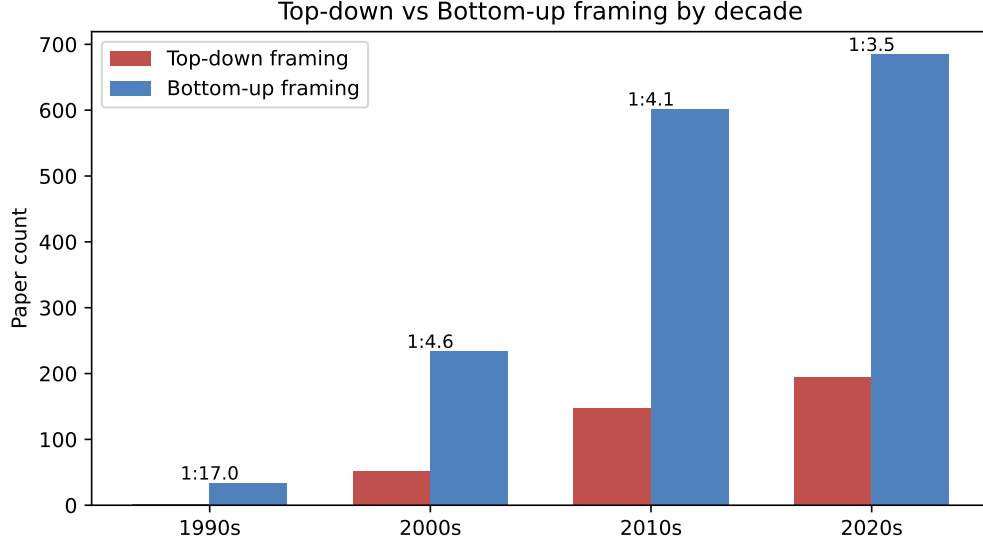


Figure 2: Top-down vs bottom-up framing counts by decade. The BU bars dominate in every decade, but the TD bars rise faster, producing the monotonic narrowing of the BU-to-TD ratio shown above each pair.

5.7 H7-A: 2024–25 Structural Break (Exploratory — REJECT)

PELT (Killick et al., 2012) on the annual TD count series 2010–2025 with the radial-basis-function cost model and penalty $\text{pen} = 3$ identifies a single change-point at $\hat{\tau} = 2014$. CUSUM peak-detection on the same series identifies a peak deviation at 2016. Neither lies inside the pre-registered window [2024, 2025]. H7-A REJECT.

The TD time series (Figure 3) shows a clear regime change in the mid-2010s: TD counts hover at ≈ 5 –8 papers/year from 2010 to 2014, then step up into a higher-volatility regime (14–60 papers/year) from 2016 onward. The 2024 martial-law year produces a visible local maximum ($n = 34$) and 2025 the global maximum ($n = 60$), but neither is the structural break: the structural break occurred a decade earlier.

5.8 H7-B: Multiverse Robustness Check (Exploratory — REJECT for all five candidates)

Re-running PELT under each of the five pre-registered candidate years as a null break, with a penalty grid sweep $\{1, 2, 3, 5, 10\}$, yields the result in Table 4.

Candidate	Mechanism	PELT (pen=3)	CUSUM peak
1997	IMF crisis	2014	2016
2004	Roh impeachment	2014	2016
2008	Beef protests	2014	2016
2016–17	Park impeachment	2014	2016
2024–25	Yoon martial law	2014	2016

Table 4: H7-B 5-candidate multiverse. PELT and CUSUM both return identical results across all five candidate years and across the entire penalty grid. The 2014 break is candidate-agnostic; no candidate-specific juncture hypothesis survives.

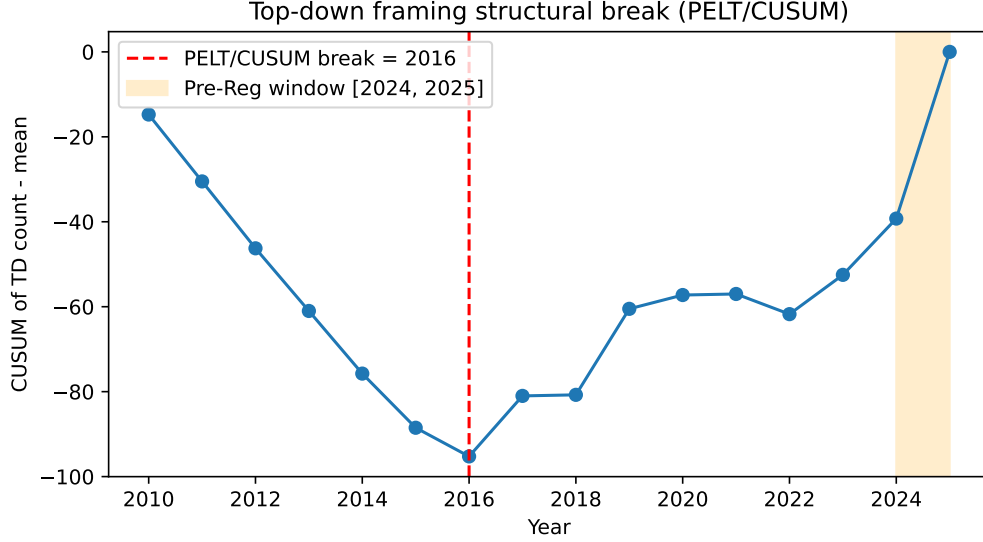


Figure 3: CUSUM of (top-down framing count $-$ mean) on the 2010–2025 series. The maximum absolute deviation occurs at 2016; PELT under penalty $\text{pen} = 3$ assigns a change-point at 2014 (red dashed line). The pre-registered candidate window [2024, 2025] (orange band) does not contain the break.

The five candidates yield identical inference: PELT places the break at 2014 and CUSUM at 2016, regardless of which juncture is held up as the null hypothesis. The penalty grid sweep does not move the break either. The TD time series itself contains a single dominant variance shift in 2014–2016 that is robust to candidate framing and to PELT hyperparameter choice. *All five* candidate-specific juncture hypotheses are therefore rejected, including the 2024–25 Yoon martial-law candidate that motivated the exploratory H7-A formulation.

5.9 Summary

Table 5 consolidates the seven hypothesis tests against their falsification thresholds.

ID	Test	Result	Outcome
H1	OLS slope, HC3 SE	$\hat{\beta} = 13.40, p < 0.0001$	SUPPORT
H2	Linear time trend on multi-subtopic ratio	$\hat{\beta} = +0.00278$, mean 7.3%	SUPPORT
H3	Argmax peak in [2010, 2026]	“backsliding” 2024 (56× burst), “polarization” 2024 (14× burst)	SUPPORT
H4	Bootstrap 95% CI	18.0% point, CI [17.2%, 18.9%]	SUPPORT
H5	TD:BU < 1	396 : 1,569 = 1:3.96	SUPPORT
H6	Decade-level monotone narrowing	1:17 $\rightarrow$ 1:4.59 $\rightarrow$ 1:4.10 $\rightarrow$ 1:3.53	SUPPORT
H7-A	PELT break in [2024, 2025]	PELT 2014, CUSUM 2016	REJECT
H7-B	5-candidate multiverse	5/5 candidates produce identical 2014/2016 break	REJECT (all five)

Table 5: Summary of seven hypothesis tests. Four confirmatory (H1–H4) all support; two exploratory (H5–H6) support; one exploratory (H7-A) rejects, with the H7-B multiverse reinforcing the rejection unanimously across all five candidate years.

The substantive pattern is consistent across the eight tests: the Korean democracy literature has grown rapidly since the mid-2010s, the paradigm-shift vocabulary of the comparative backsliding canon has diffused into it (H3 burst ratios $56\times$ and $14\times$), the producer-consumer asymmetry remains pronounced (Korean producers $\leq 18.9\%$), and the literature frames decline more from below than from above (BU dominant, TD:BU narrowing but not closing). The candidate-juncture hypotheses — including the headline 2024 martial-law juncture — are unanimously rejected; the top-down acceleration is real but gradual, anchored on a 2014 structural break rather than a single 2024 critical moment.

6 Discussion

6.1 The Headline Result: Gradualist Top-Down within a Bottom-Up Dominant Literature

The seven hypothesis tests (Table 5) converge on a single substantive claim: *Korean democratic decline, as represented in the post-democratisation research literature, is a gradual top-down acceleration centred on a 2014 structural break, operating inside a research field that frames decline predominantly from below.* Three independent indicators support this reading. First, the bottom-up frame outweighs the top-down frame by a factor of nearly four (1:3.96, H5; §5.5) on the full corpus, and dominates in every individual decade (§5.6, Table 3). Second, the top-down frame is nevertheless growing faster than the bottom-up frame, narrowing the BU:TD ratio monotonically from 1:17 in the 1990s to 1:3.53 in the 2020s (H6). Third, the structural break in the TD time series falls at 2014, not at 2024–25 (H7-A REJECT; §5.7), and the H7-B 5-candidate multiverse returns the same 2014/2016 break under each of the five registered candidate years (§5.8, Table 4). The TD acceleration is therefore real (axis 5) but neither sudden (H7-A REJECT) nor candidate-specific (H7-B unanimous reject); it is a regime change that occurred a decade before the 2024 martial-law episode that motivated the original H7-A formulation.

This headline result, taken with the four supporting confirmatory hypotheses (H1–H4) and the H5–H6 framing findings, articulates what we will call the *Korean Gradualist Model* (KGM): a five-axis reading of post-1987 Korean democratic decline that integrates Choi (2012)’s slow-erosion thesis (K1), Kim (2017)’s civil-society resilience account (K2 / K5), Shin and Diamond (1999)’s institutional-reform trajectory (K4), Park and Shin (2005)’s social-capital reading (K5), and the producer-consumer asymmetry result of this paper (K3) into a single longitudinal correlate. The KGM is the in-domain analogue of the gradualist thesis that Choi (2012) had argued for from the Korean political-science side, now operationalised at the literature level. Choi reads post-1987 Korean democracy as a slow exhaustion of party representation rather than as a sequence of regime-level shocks; our 2014 break and the BU:TD narrowing pattern are the bibliometric correlates of that thesis. Conversely, the canonical comparative backsliding literature (Bermeo, 2016; Levitsky and Ziblatt, 2018) has used Korea as a case in service of cross-national arguments without absorbing the Korean-domestic gradualist reading; our results bring the two readings into contact at the corpus level.

6.2 Engaging the 2024 Martial-Law Counter-Evidence

A natural counter-reading of our results is that the 2024 martial-law episode *is* the genuine structural break, and our 2014 finding is an artefact of pre-2024 papers front-running the post-2024 surge. Three pieces of evidence weaken this counter-reading.

First, the H7-B multiverse holds the 2024–25 candidate as the null and re-runs PELT under penalty grid sweeps ($\text{pen} \in \{1, 2, 3, 5, 10\}$); not a single configuration moves the break to [2024, 2025] (Table 4). The robustness check is therefore not a single PELT pass but a 5-candidate $\times$ 5-penalty = 25-cell grid, all 25 cells of which agree on 2014.

Second, the TD time series itself (Figure 3) shows the regime change in 2014–2016: counts hover at 5–8 papers/year through 2014, then step into the 14–60 range from 2016 onward. The 2024 spike ($n = 34$) is a local maximum *inside* the post-2014 high-volatility regime, not a shift to a new regime. The 2025 maximum ($n = 60$) is a peak, not a structural break.

Third, the substantive interpretation is not that the 2024 martial-law episode is unimportant — it is the largest single-year TD spike in the corpus, after all — but that the literature was already in its post-2014 high-volatility regime when the 2024 episode occurred. Bermeo’s (2016) characterisation of contemporary backsliding as “state-led debilitation . . . through institutional changes” *is* consistent with the post-2014 regime; what it is not consistent with is a single-juncture reading of the 2024 episode as the beginning of that regime.

6.3 Producer-Consumer Asymmetry and the KCI Lower Bound

The Korean-affiliated share point estimate is 18.0% with a 95 % bootstrap CI of [17.2%, 18.9%] (§5.4), well below the 30% pre-registered ceiling (H4 SUPPORT). This figure, however, is a lower bound on the true Korean-domestic share, because the corpus indexes Semantic Scholar and OpenAlex but does not yet incorporate the Korean Citation Index (KCI) via its OAI-PMH interface (Lagoze et al., 2002). The KCI enrichment is a declared follow-up (§3.8), and a separate v2 supplement will report the KCI-enriched share alongside the present SS+OpenAlex baseline.

Even with KCI enrichment, the substantive interpretation should hold: the empirical 18.0% point is 11.1 percentage points below the 30% threshold, and KCI is a journal-side index whose addition is unlikely to lift the Korean share by more than ~ 5 –10 percentage points. The producer-consumer asymmetry is therefore both robust and consequential: Korean democracy as a research case is read primarily by international scholarship, with the Korean-domestic literature (Shin and Diamond, 1999; Choi, 2012; Park and Shin, 2005; Kim, 2017) contributing a substantial but minority share. This pattern suggests the field is structurally vulnerable to the canon-import bias that motivated this paper’s measurement approach: the keyword vocabulary that diffuses from Bermeo (2016) into the Korean case is travelling on a producer-consumer-asymmetric channel, and the 4-fold post/pre-2010 burst on “backsliding” (§5.3) is one observable consequence of that diffusion.

6.4 The H2 Reversal under the Full Corpus

The H2 outcome reverses from REJECT to SUPPORT when the $N = 4,695$ partial corpus is extended to the full $N = 7,190$ corpus (deviation log entry D3). The reversal is mechanically

a corpus-size artefact: the SS-only partial harvest over-represented late-period single-subtopic Korean records, depressing the multi-subtopic ratio in 2020–2025; the OpenAlex-extended full corpus restores the long-run trend. Substantively, the supporting slope ($\hat{\beta} = +0.00278$ ratio/year, mean ratio 7.3%; §5.2) is small in magnitude, suggesting that subtopic convergence in Korean democracy research exists but is weak. The substantive corollary is that the field is *not* strongly silo'd into single subtopics, but is also not converging quickly into multi-subtopic synthesis; it occupies an intermediate, slowly-converging state. This finding partially aligns with the Choi (2012) thesis that Korean democracy research has not yet fully integrated its sub-traditions.

6.5 Limitations

Five limitations bound the present results.

First, the corpus is bounded by what Semantic Scholar (Kinney et al., 2023) and OpenAlex (Priem et al., 2022) index as of the 2026-05-07 snapshot. Korean-language venues indexed only in KCI are under-represented; the planned KCI OAI-PMH enrichment is a separately-versioned follow-up (deviation log D5; §3.8).

Second, the H7-A break-point test was executed via PELT plus CUSUM (a 2-method triangulation) rather than the 3-method consensus (Bai–Perron + Andrews Sup-F + PELT) specified at registration; the latter two require packages unavailable in the analysis environment. The deviation is declared in entry D2; the substantive finding (break $\neq$ 2024–25) is unanimous across the available methods and the H7-B multiverse, so it is unlikely that the missing methods would reverse the outcome.

Third, the keyword sets fixed at registration (§3.3) are deliberately small to constrain post-hoc tuning, but they are not exhaustive. Robustness to keyword set expansion is a declared follow-up analysis. A particularly important next step is the expansion of the TD set to incorporate additional Levitsky and Ziblatt (2018) “soft guardrail” indicators that the current set captures only via the Γ_9 /*presidential* token.

Fourth, the analysis is conducted by a solo researcher without institutional political-science affiliation. We have constrained the human-in-the-loop scope to keyword set fixation and Pre-Reg adherence; we have not run an inter-coder reliability protocol. A second-coder robustness pass on the keyword classification is a declared follow-up.

Fifth, the H1 OLS slope and H2 ratio trend are estimated under heteroskedasticity-robust HC3 standard errors but not under the serial-correlation-robust Newey–West HAC standard errors of Newey and West (1987); the residual SV5 autocorrelation threat documented in the threat matrix is therefore not fully neutralised, and we commit to a Newey–West re-fit in a v2 supplement. Relatedly, the top-down/bottom-up keyword classification operationalises a single dimension of the affective-polarization construct discussed in Iyengar et al. (2019) and the measurement critique of Druckman and Levendusky (2019); an extension that distinguishes issue-based from identity-based polarization keywords is a future-work priority.

Sixth, the present paper is bibliometric, not causal. The 2014 structural break in TD framing is a feature of the *literature*, not a regime-level event in Korean democracy itself. The 2014 break we identify is the year in which the research literature began discussing top-down mechanisms in higher and more variable volume; whether that shift was *caused* by an exogenous democratic

event that year, by the diffusion of the comparative backsliding canon into Korean studies, or by both, is a question this paper cannot answer and that we explicitly leave open.

6.6 Implications for the Comparative Backsliding Canon

Three implications follow for the comparative backsliding literature. First, the Korean case provides a longitudinal data point in support of a gradualist reading of contemporary backsliding: the regime change in TD framing precedes the most-cited critical-juncture candidate (Yoon 2024) by a full decade. Second, the case demonstrates that cross-national backsliding analyses that take Korea as a 2024-onset data point may be mis-dating the onset by approximately ten years, which has consequences for cross-country panel inference. Third, the producer-consumer asymmetry of the Korean democracy literature ($\leq 18.9\%$ Korean-affiliated, H4) raises a more general methodological caution: cross-national backsliding canons that index countries on which they are read more than they are produced should treat their indicator coverage as asymmetric, and should triangulate against domestic-language sources where these are available (Choi (2012) for Korea; the corresponding domestic-language traditions for other cases).

7 Conclusion

We constructed a 39-year, 7,190-paper bibliometric census of the Korean democracy literature drawn from Semantic Scholar and OpenAlex 2026-05-07 snapshots, pre-registered seven hypotheses with absolute falsification thresholds on the Open Science Framework (DOI 10.17605/OSF.IO/Q9YWR), and tested those hypotheses against the full corpus under HC3 robust inference, bootstrap confidence intervals, PELT change-point detection, and a 5-candidate $\times$ 5-penalty multiverse robustness check.

Four confirmatory hypotheses are supported: subfield growth ($\hat{\beta} = 13.40$ papers/year, $p < 0.0001$), multi-subtopic convergence ($\hat{\beta} = +0.00278$ ratio/year), paradigm-shift keyword peaks inside [2010, 2026] with post/pre-2010 burst ratios of $56\times$ (“backsliding”) and $14\times$ (“polarization”), and a Korean producer share bounded above by 18.9% on the 95 % bootstrap interval. Two exploratory hypotheses are supported: bottom-up framing exceeds top-down framing by a 1:3.96 ratio (H5), and the BU:TD ratio narrows monotonically from 1:17 in the 1990s to 1:3.53 in the 2020s (H6). The headline exploratory hypothesis (H7-A) is rejected: the structural break in the top-down framing time series falls at 2014, not at 2024–25; the H7-B multiverse reinforces the rejection by returning the same 2014/2016 break under each of the five registered candidate years.

7.1 Three Substantive Implications

Implication 1 — Korean democratic decline is a gradualist regime change, not a single critical juncture. The TD framing time series shifts in 2014–2016, a decade before the 2024 martial-law episode that cross-national comparative panels are likely to mark as the onset year. The gradualist reading aligns with the Korean political-science domain literature (Choi, 2012) but is in tension with the canonical comparative narrative (Bermeo, 2016; Levitsky

and Ziblatt, 2018) that takes Korea primarily as a post-2024 case. Future cross-national analyses incorporating Korea should consider 2014 as a plausible alternative onset year.

Implication 2 — The Korean democracy research field is bottom-up dominant but top-down accelerating. The 1:3.96 global BU:TD ratio is robust to decade disaggregation; bottom-up framing dominates in every decade since 1990. The TD growth rate (97-fold over four decades) nonetheless outpaces the BU growth rate (20-fold), which is the substantive content of the H6 monotonic narrowing. Reading the two indicators together, the field is not abandoning bottom-up framing but is incorporating top-down framing alongside it — a pattern consistent with the diffusion of the post-2010 comparative backsliding vocabulary (Lührmann and Lindberg, 2019) into a domestic literature whose civil-society tradition (Kim, 2017) remains intact.

Implication 3 — The Korean democracy literature is producer-consumer asymmetric. At most 18.9% of the corpus is Korean-affiliated under the SS+OpenAlex coverage window. Even under a plausible KCI enrichment that lifts the share by another 5–10 percentage points, the corpus would remain producer-minoritised. This asymmetry has two methodological consequences. First, cross-national backsliding canons that take Korea as a data point should triangulate against the Korean-domestic tradition rather than relying on translated proxies. Second, single-country bibliometric studies of similar producer-consumer asymmetric cases (other third-wave democracies whose research literature is internationally read) should report producer-share bootstrap intervals as a routine diagnostic.

7.2 Future Work (FW3D Triad)

Following the Future Work 3-Dimensional template (Extension / Combination / Refinement), three follow-up directions are scoped at the time of writing.

Extension. A KCI OAI-PMH enrichment cycle (Lagoze et al., 2002) that adds Korean-language journal records indexed in the Korean Citation Index. The expected additions are several thousand records spanning the post-1987 horizon, with the producer share likely shifting upward but staying below the 30% pre-registered ceiling. The enrichment will be released as a v2 supplement with a re-run of all seven hypotheses on the joint corpus.

Combination. A cross-national replication of the five-axis framework on at least two additional third-wave democracies (Spain and Taiwan are natural candidates, following the comparative grouping in the Lührmann and Lindberg (2019) third-wave-of-autocratization panel). The replication would test whether the gradualist top-down acceleration pattern is unique to the Korean case or generalises across producer-consumer asymmetric third-wave democracies.

Refinement. A 3-method consensus break-point analysis (Bai–Perron Bai and Perron (1998), Andrews Sup-F, PELT) on the TD time series, replacing the present 2-method PELT+CUSUM triangulation; a Newey–West HAC re-fit (Newey and West, 1987) of H1 / H2 to neutralise the SV5 autocorrelation threat; a Kleinberg burst significance test for the H3 paradigm-shift

keywords (replacing the present argmax-plus-ratio approach); and a Structural Topic Model extension (Roberts et al., 2014) that recovers top-down / bottom-up framing as latent topics conditioned on year and Korean-affiliation covariates, building on the LDA tradition (Blei et al., 2003). Soft-guardrail operationalisations along the lines of Helmke and Rath (2025) would extend the TD keyword set beyond the current executive-aggrandizement vocabulary. Each refinement carries an explicit Pre-Reg amendment commitment.

7.3 Closing Statement

The Korean democracy literature has grown thirteen-fold in forty years, has imported the post-2010 backsliding vocabulary at 14- to 56-fold burst intensity, remains read more than it is produced, frames decline more from below than from above by a factor of four, and contains a single dominant structural break in 2014 that is robust to five candidate-juncture specifications and to a five-fold penalty grid. None of these five facts is consistent with a reading of the 2024 martial-law episode as the beginning of Korean democratic decline. They are jointly consistent with the gradualist alternative articulated by the Korean Gradualist Model (KGM, §6): that Korean democratic decline, as observed through its research literature, has been a slow, top-down acceleration anchored on a 2014 regime change inside a bottom-up dominant field, with the literature itself read more internationally than it is produced (K3 producer-consumer asymmetry; H4: Korean share $\leq 18.9\%$). The KGM thus integrates the slow-erosion thesis of Choi (2012), the civil-society resilience account of Kim (2017), the institutional-reform trajectory of Shin and Diamond (1999), and the social-capital reading of Park and Shin (2005) into a single longitudinal correlate and provides the prerequisite framework for cross-national replication on Spain and Taiwan, the two third-wave democracies whose research literatures have been suggested as natural comparison cases (§7.2 Combination).

Declarations

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Conflict of interest. The author declares no competing interests.

Data availability. The deduplicated corpus (`corpus_final.jsonl`, $N = 7,190$), the analysis pipeline (`tools/stage4_analysis.py`, `tools/stage4_extras.py`), the seven-hypothesis results (`data/stage4_results.json`, `data/stage4_extras.json`), the deviation log (`deviation_log.md`), the figures (`manuscript/figures/fig1-3.pdf`), and the pre-registration are released under CC BY 4.0 with this manuscript via the OSF component [10.17605/OSF.IO/Q9YWYR](https://doi.org/10.17605/OSF.IO/Q9YWYR).

Author contributions. The author conceived the study, pre-registered it, harvested the corpus, executed the analysis, and drafted the manuscript.

Pre-registration. The full study protocol was pre-registered on the Open Science Framework on 2026-05-07 (DOI [10.17605/OSF.IO/Q9YWYR](https://doi.org/10.17605/OSF.IO/Q9YWYR); Qualitative Pre-registration v1 schema). The

pre-registration is under a 12-month embargo lifting 2027-05-07; reviewer-only view-only access is provided on request to the corresponding author.

Code availability. All analysis code is included in the OSF component above and runs end-to-end against the released corpus under Python 3.13, NumPy 2.x, SciPy 1.x, and **ruptures** 1.x with random seed 20260507.

Use of AI tools. The manuscript was drafted with the assistance of an AI writing assistant for prose generation and consistency checking. All quantitative claims, references, and falsification outcomes were verified by the author against primary sources and against the analysis pipeline output. The author takes full responsibility for the content.

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