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Breaking the Academic Silence: A Cross-Database Analysis of Early-Career International Scholars

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ABSTRACT: *Structural inequalities in global academia shape the career prospects of early-career scholars, creating systemic barriers for internationally mobile scholars. This study characterizes core-periphery dynamics in knowledge production among early-career scholars and explores implications for transnational careers. Through a comparative bibliometric analysis of 282 articles from WoS and CNKI (2010–2025), we develop a double marginalization index that integrates spatial centrality and discursive power. The findings reveal entrenched asymmetries: WoS research shows theory-driven growth in Anglophone core regions, while CNKI scholars follow policy-cyclical patterns in elite eastern China. The index quantifies a persistent “double marginalization” of peripheral institutions, despite their active participation, with low visibility. This mapping elucidates the hierarchical field navigated by early-career scholars—especially internationally mobile students and researchers—linking geographic and discursive capital to uneven career trajectories. We conclude by calling for policies to foster equitable academic ecosystems.*

Keywords: Early Career Academics, Global Knowledge Production, Academic Inequality, International Scholars, Bibliometric Analysis

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INTRODUCTION

As higher education systems worldwide undergo governance reforms and generational shifts, the career development of early-career academics (ECAs) has become a prominent topic in global scholarly discourse (Oliveira et al., 2025). The international academic labor market is undergoing a structural transformation, placing ECAs under growing pressure to meet standardized performance benchmarks, such as research output and grant acquisition, even as institutional support becomes scarcer and more unevenly distributed (Aprile et al., 2021). This professional precarity is further intensified for the expanding cohort of internationally mobile scholars, who must contend not only with these universal career pressures but also with the additional challenges of cross-cultural adaptation and systemic barriers within host academic environments.

In China, where institutional change has been particularly rapid, more than 92% of universities have now implemented tenure-track systems (Ministry of Education, 2024). While designed to incentivize research productivity, this reform has heightened competition and instability. Recent studies indicate that 31% of early-career scholars in China change institutions within their first three years (Yin et al., 2024), highlighting the acute tension between enduring hierarchical academic traditions and emerging performance-driven evaluation regimes.

Despite increasing scholarly attention to the transnational transfer of institutional models (Cai & Mountford, 2022), significant gaps persist in the literature. First, a deep epistemological divide remains: Western scholarship frequently employs postcolonial and critical theoretical lenses to analyze academic labor (Chatterjee & Barber, 2021), whereas Chinese research tends to favor technocratic, policy-oriented evaluation frameworks (Lin, 2020), resulting in limited cross-cultural dialog or theoretical synthesis. Second, prevailing methodological narrowness skews understanding. A substantial proportion of global studies on faculty stress rely predominantly on administrative datasets and often overlook the experiential and psychological dimensions of early-career life (Taggart, 2021). Third, and most critically for this study, a phenomenon of “database localism” fragments the empirical evidence base. International research is predominantly indexed in global databases such as Web of Science or Scopus (Asubiaro et al., 2024), while Chinese scholarship is concentrated within the China National Knowledge Infrastructure (CNKI) (Wang et al., 2020).

This bifurcation not only sustains parallel, noncommunicating literature but also actively reproduces and reinforces entrenched center-periphery dynamics in knowledge production (Keim, 2010). For instance, although Northwest China contributes 9.3% of the nation's academic workforce, it accounts for a mere 0.4% of ECA-related publications in the Web of Science. This disparity exemplifies how geographic and institutional peripherality translates directly into discursive invisibility within global knowledge indices. Furthermore, the limited theoretical integration between center-periphery frameworks and Southern epistemologies (Marginson & Xu, 2023; de Sousa Santos & Meneses, 2020) perpetuates what Rudolph (2013) terms a hermeneutical injustice, wherein academic narratives originating outside the Anglophone core remain systematically marginalized in global discourse.

This structural and discursive marginalization critically defines the terrain that internationally mobile early-career scholars must navigate, directly impacting their professional visibility, network formation, and long-term career trajectories. While studies in this journal have valuably documented the transformative potential of international mobility for faculty development (Eidson, 2023) and have also critically examined how institutional cultures can marginalize international students (Hassan, 2023), the structural barriers that predetermine unequal access to such opportunities and their subsequent benefits remain underexplored. This study directly addresses this gap by mapping the hierarchical knowledge production landscape that these mobile scholars enter.

To address these intertwined issues, this study employs a dual-database bibliometric approach, analyzing 121 articles from the Web of Science and 161 from CNKI (2010–2025). By systematically comparing these two distinct knowledge ecosystems, this study aims to map the structural asymmetries embedded within ECA research and to explore their broader implications. The investigation is guided by the following research questions:

RQ1: How do temporal and spatial trends in ECA research differ between international (WoS) and Chinese (CNKI) literature?

RQ2: How do research foci and thematic priorities reflect underlying institutional and cultural differences?

RQ3: To what extent is the asymmetry of scholarly influence, measured through citations and network centrality, associated with the geographic distribution of authorship?

Through this analysis, we seek not only to quantify inequalities in knowledge production but also to illuminate the broader systemic context that shapes the professional integration and development of early-career scholars globally. This study maps the structural hierarchies that constitute a preexisting and uneven field—a context of paramount relevance for understanding the compounded challenges faced by those engaged in transnational academic mobility.

METHOD

This study employs a quantitative, comparative bibliometric design to analyze the knowledge production landscape concerning early career academics (ECAs).

The design is explicitly comparative, contrasting publication patterns from two distinct knowledge ecosystems: the international English-language corpus indexed in the Web of Science (WoS) and the Chinese-language corpus within the China National Knowledge Infrastructure (CNKI). This cross-database approach allows for the systematic mapping of structural asymmetries, aligning with the study’s conceptual grounding in center-periphery theory. While the analysis encompasses the broader ECA population, its findings hold particular relevance for understanding the structural barriers faced by internationally mobile early-career scholars, who must navigate these preconfigured hierarchies.

Conceptual Framework: The Cross-Database Knowledge Asymmetry Framework (CKAF)

The analysis is guided by a cross-database knowledge asymmetry framework (CKAF) (see Figure 1), developed to examine marginalization across three interlinked dimensions:

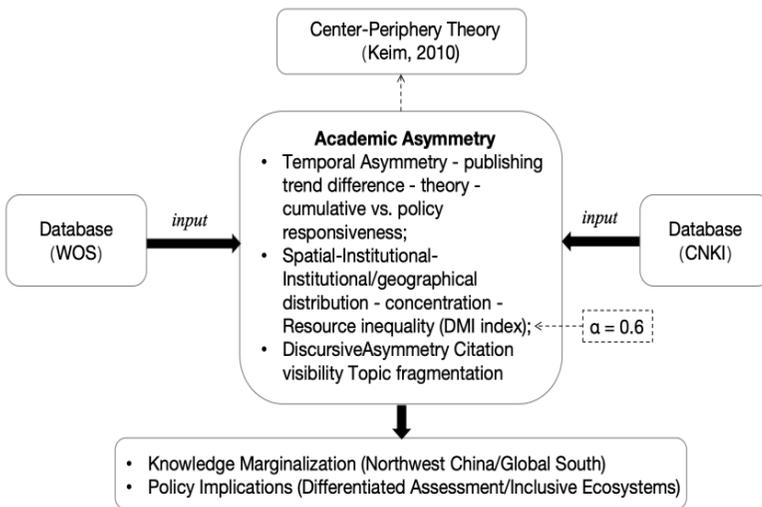


Figure 1: The CKAF Framework

Temporal Asymmetry: Divergences in publication volume and growth trajectories over time.

Spatial-institutional asymmetry: Concentrations of research output across geographic regions and institutional affiliations.

Discursive Asymmetry: Variations in thematic focus, keyword networks, and citation-based influence.

This framework integrates insights from center-periphery theory (Keim, 2010) with perspectives on global academic competition as a stratified field where

various forms of capital—including geographic and symbolic/discursive capital—are unevenly distributed and contested (Marginson, 2006). It posits that geopolitical and institutional hierarchies are reproduced within global knowledge systems. Our novel Double Marginalization Index (DMI) operationalizes this integrated perspective by quantifying two key, mutually constitutive dimensions of institutional capital within this global field: spatial centrality and discursive power.

Data Collection and Sampling

a. Data Sources and Period

Data were retrieved from the Web of Science (WoS) Core Collection and the China National Knowledge Infrastructure (CNKI) database, covering the period from January 2010 to March 2025. These sources represent the highest-impact international and Chinese scholarly indices in the social sciences and education, respectively.

b. Search Strategy and Sampling

A systematic search was conducted in each database to capture the core discourse on ECAs. To ensure comparability of core scholarly output, the search was restricted to peer-reviewed journal articles (and review articles in WoS).

For CNKI, the search was conducted in CSSCI (Chinese Social Sciences Citation Index) journals using a combination of Chinese keywords: young teachers, university teachers, career development, academic career, and tenure-track system. This process yielded an initial corpus, which was manually screened for relevance to ECA issues, resulting in a final sample of $n = 161$ articles.

For WoS, the search was performed in the 'Topic' field using the following query: TS=(“early career” OR “young faculty” OR “junior academic”) AND (“academic” OR “scholar” OR “researchers”) AND (“higher education” OR “university” OR “tertiary education”). The results were filtered for 'Article' and 'Review' document types. After the relevance screening, the final sample included 121 articles.

This purposive sampling strategy aimed not for exhaustiveness but for a representative corpus of high-quality, thematically focused publications from each system, enabling a structured comparison.

c. Data Analysis

The analysis proceeded in two stages: general bibliometric profiling and the calculation of the double marginalization index (DMI).

Bibliometric Profiling: Descriptive statistics and science mapping techniques were used. CiteSpace (version 6.3. R1), we generated coword networks to identify research hotspots and thematic clusters and plotted temporal trends in publications. Institution and author location data were cleaned and normalized using OpenRefine to ensure consistency in geographic mapping.

Construction and Calculation of the Double Marginalization Index (DMI): To quantitatively assess institutional marginality, we developed the DMI. It is a composite measure calculated for each institution in the dataset as follows:

$$\text{DMI} = \alpha \times \text{Spatial Centrality (SC)} + (1 - \alpha) \times \text{Discursive Power (DP)}$$

The resulting DMI score ranges from 0 to 1, where a higher score indicates greater centrality within the global academic field. The weighting coefficient α was set to 0.6, a value theoretically grounded in the path dependency of regional inequality (Wei & Ye, 2009), as detailed below.

Spatial centrality (SC) is a normalized score (0-1) derived from an institution's geographic location. Institutions in globally recognized academic core regions (e.g., Eastern U.S., Western Europe, Eastern Chinese coastal provinces) received higher scores, while those in peripheral regions (e.g., inland China, Global South) received lower scores. This classification was based on established economic–geographic zoning and global university ranking distributions.

Discursive power (DP) is a normalized composite score (0-1) combining three equally weighted indicators: (a) publication volume (article count from the institution), (b) citation impact (total citations per article, normalized by publication year), and (c) network centrality (eigenvector centrality of the institution within the coauthorship network derived from the dataset).

Weighting Coefficient (α): The coefficient α was set to 0.6, assigning greater weight to spatial centrality. This weighting is theoretically grounded in the work of Wei & Ye (2009) on the path dependency of regional inequality, emphasizing that long-standing structural and geopolitical factors (captured by SC) are primary determinants of academic capital accumulation. A value of 0.6 was chosen to reflect this structural primacy while retaining substantial weight (0.4) for discursive power, acknowledging that institutional agency and scholarly excellence can, to a degree, mitigate geographic disadvantage.

The DMI thus quantifies an institution's position on a spectrum from “core” (high SC, high DP) to “doubly marginalized” (low SC, low DP).

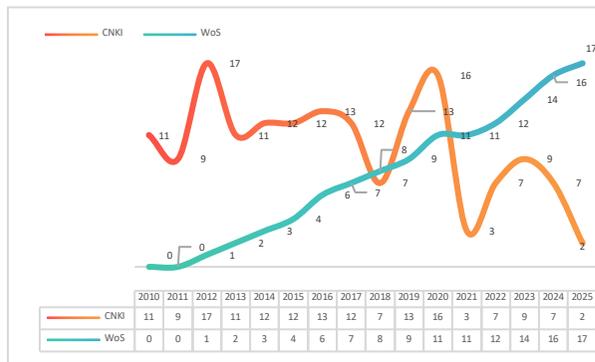
d. Validity and Reliability Considerations

To enhance the validity of the bibliometric analysis, standard protocols in the field were followed (Zupic & Čater, 2015). The DMI, as a novel instrument, represents a first-stage conceptual model. Its construct validity is supported by its grounding in center-periphery theory and its operationalization of key dimensions of academic capital (geographic and discursive). The transparency of its calculation (detailed above) allows for critique, replication, and future refinement.

FINDINGS

Longitudinal Time Distribution

Research on early career academics (ECAs) increased in both the China National Knowledge Infrastructure (CNKI) and Web of Science (WoS) databases between 2010 and March 2025 but followed divergent trajectories (Figure 2). Publications in WoS show a steady increase from 2012, peaking at 17 articles in 2025, which indicates a pattern of sustained global scholarly engagement. In contrast, publications in CNKI peaked early in 2012, a trend that coincides with the launch of a major national faculty development program in China, and subsequently declined to only 2 publications by 2025.



Note. Number of the CNKI = 161, WOS = 121, total N = 282.

Figure 2: Publication Trends Over Time

A pivotal shift occurred in 2018, when the annual publication volume in WoS surpassed that in CNKI for the first time. Thereafter, WoS output has remained relatively stable, whereas CNKI output has continued to fluctuate at a lower level. This divergence in publication trajectories suggests underlying differences in academic ecosystems: WoS-indexed literature exhibits a cumulative, theory-driven growth pattern integrated into broader global discourses, whereas CNKI-indexed output appears more responsive to short-term policy cycles, with less evident sustained theoretical accumulation.

In summary, the international (WoS) literature on ECAs has evolved within relatively stable scholarly paradigms, whereas the Chinese (CNKI) literature presents a more cyclical, policy-responsive pattern. These contrasting temporal dynamics lay the empirical groundwork for examining deeper epistemological divides between inquiry-based and policy-driven knowledge production systems.

Horizontal Geographical Distribution

The geographic distribution of early career academics (ECA) research reveals pronounced concentrations at both global and national scales, aligning with broader patterns of resource allocation in higher education (Figure 3).

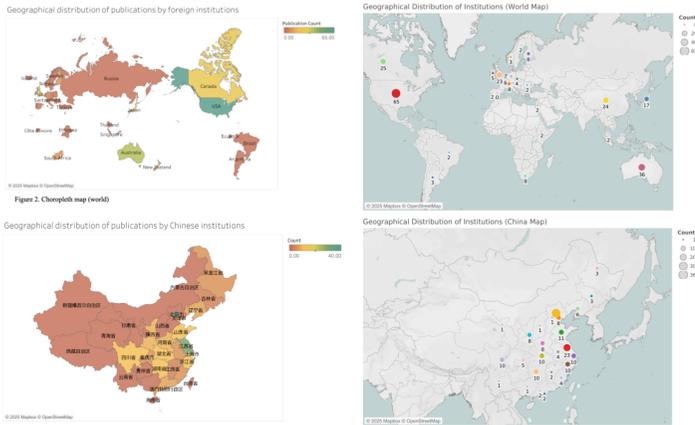


Figure 3: Geographical Distribution of Research Output

Globally, publications in the Web of Science (WoS) dataset are heavily concentrated in high-income regions, primarily North America, Europe, and Oceania. The United States, Australia, and Canada emerge as the leading contributors to publication volume. In contrast, contributions from institutions in the Global South remain markedly limited. This stark asymmetry in global research output underscores the enduring influence of Anglophone academic networks and mirrors the center-periphery dynamics theorized in global knowledge production (Keim, 2010).

Within China, a parallel pattern of concentration is evident in the CNKI dataset. ECA publications are overwhelmingly concentrated in the economically developed eastern coastal provinces, with Beijing, Jiangsu, and Shanghai being the top contributors. Conversely, inland and western provinces, such as Gansu and Yunnan, demonstrate minimal research output. This intranational disparity reflects and reinforces significant regional inequalities in academic capacity and engagement within China's higher education system (Yan & Sun, 2023).

Together, these nested patterns—global core-periphery and national center-margin—illustrate how research activity is fundamentally shaped by the geographic clustering of economic, institutional, and discursive resources. The persistence of these spatial inequalities highlights structural barriers to equitable knowledge production and signals an imperative for more inclusive regional development strategies within academia (Yang, 2022).

Discipline Distribution

The disciplinary composition of early career academics (ECA) research reveals distinct epistemic landscapes between the international and Chinese scholarly communities.

Analysis of the Web of Science (WoS) corpus indicates a broadly interdisciplinary foundation. While education serves as the central anchor, it maintains strong and visible connections to adjacent fields such as psychology and management. This interconnected structure suggests that international ECA scholarship is oriented toward a holistic examination of the academic profession, integrating concerns about individual faculty development, psychological well-being, and institutional governance (Hollywood et al., 2020).

Conversely, research within the China National Knowledge Infrastructure (CNKI) database presents a more centralized disciplinary profile. The field of education overwhelmingly dominates the literature. Although peripheral connections to areas such as psychology and comparative education are detectable, they remain tenuous and underdeveloped. Notably, managerial and organizational perspectives are scarce within this corpus. The predominance of a mono-disciplinary, education-centric approach points to a research paradigm that is predominantly macro-oriented and policy-engaged, with less emphasis on interdisciplinary synthesis at the individual or organizational level.

In summary, a fundamental contrast in epistemic orientation emerges: the international literature characteristically employs interdisciplinary frameworks to investigate micro- and meso-level phenomena affecting early-career scholars, whereas the Chinese literature is predominantly channeled through a singular disciplinary lens to address macrolevel, policy-informed questions.

Journal Distribution Patterns

The dissemination outlets for early career academics (ECA) research further elucidate the systemic differences between international and Chinese academic ecosystems.

In the international dataset indexed by the Web of Science (WoS), publications are dispersed across a wide spectrum of journals spanning diverse fields such as education, psychology, medical education, and management. Higher Education Research & Development emerges as the most frequent outlet, yet it accounts for only 14.2% of the total sample, followed by Studies in Higher Education and BMC Medical Education (each at 5%). Notably, only 22.5% of all publications are concentrated in the top 10 most frequent journals. This pattern of high dispersion and low concentration in specific journals is indicative of a research field that is not yet consolidated within a narrow set of core outlets, supporting its characterization as an evolving and thematically expansive domain (Wallace et al., 2011).

Conversely, the Chinese dataset from CNKI exhibits a markedly centralized publication pattern. A small cluster of core higher education journals, including Jiangsu Higher Education, Higher Education Exploration, and the Journal of the

National Academy of Education Administration, accounts for more than 20% of the publications. The editorial scope and frequent thematic content of these leading journals are closely aligned with national higher education policy agendas, focusing predominantly on institutional governance, reform evaluation, and macrolevel system analysis. Consistent with the disciplinary distribution, explicit engagement with psychological, organizational, or other noneducation fields within these core journals remains limited.

In summary, the journal distribution maps onto and reinforces the previously observed disciplinary patterns: The international ECA literature is characterized by thematic and outlet diversity, reflecting a decentralized and interdisciplinary scholarly conversation. In contrast, the Chinese ECA literature is channeled through a concentrated set of policy-aligned education journals, underscoring a more centralized, discipline-bound, and policy-responsive knowledge dissemination system.

Research hotspots

Keyword co-occurrence analysis reveals the dominant thematic structures and evolving concerns within ECA research across the two databases, revealing both distinct priorities and points of potential convergence.

Research Hotspots Abroad (WOS)

Analysis of the Web of Science (WoS) corpus identifies two prominent, interlinked thematic clusters. The first cluster consolidates around issues of academic career development, professional identity formation, and institutional integration, which are frequently discussed in the context of mentorship programs, support structures, and role adaptation processes (Djerasimovic & Villani, 2020). A second, robust cluster focuses on the psychosocial dimensions of academic work, prominently featuring keywords such as “well-being,” “mental health,” “stress,” and “burnout,” highlighting sustained scholarly engagement with the affective and mental health challenges faced by early-career scholars (Herman et al., 2020). Furthermore, emerging keywords such as “gender,” “culture,” “diversity,” “equity,” and “community” signal an expansion of the research agenda to incorporate critical perspectives on identity, inclusion, and the social context of academia.

The coexistence and interconnection of these themes—career systems, psychological experience, and social equity—characterize the international ECA literature as progressively interdisciplinary and human centered, indicating an evolution from a narrower focus on productivity and performance toward a more holistic inquiry into the conditions of academic life (Lazaridou & Fernando, 2022).

Research Hotspots in China (CNKI)

In the CNKI corpus, keyword analysis reveals a strong and consistent focus on career progression within institutional hierarchies, faculty identity negotiation, and the mechanisms of institutional support. High-frequency keywords such as “academic career”, “higher education”, and “university teachers” dominate the landscape, indicating a primary concern with how early-career faculty navigate and succeed within defined structural and policy frameworks (Zhao et al., 2021). Attention to gendered dimensions of careers is present, as seen in keywords such as “women teachers”.

Methodologically, the literature is characterized predominantly by quantitative, model-driven inquiry, utilizing techniques such as factor analysis, structural equation modeling, and analysis of moderating effects. The recent appearance of “grounded theory” as a keyword suggests a nascent interest in qualitative approaches, although such studies remain limited in volume.

Notably, recent keyword trends indicate a gradual broadening of scope. Terms such as “private universities”, “regional colleges”, and “occupational stress” point to a growing research interest in the experiences of faculty in nonelite and underrepresented institutional settings. Concurrently, keywords such as “emotional factors” and “preemployment training” reveal emerging engagement with themes of psychosocial adaptation and preparation, demonstrating partial thematic overlap with international discourses on emotional labor and institutional fit.

In summary, the Chinese ECA research landscape is predominantly structured around policy-informed, empirical investigations of career and institutional dynamics within the domestic higher education system. While showing signs of thematic and methodological diversification, its engagement with interdisciplinary perspectives and explicit comparative international frameworks remains less developed than it is in the WoS literature.

Evolutionary Trends

Evolutionary Trend of Research Hotspots of WOS

Thematic evolution in international ECA research clearly progresses across three phases. Between 2010 and 2015, high-frequency keywords such as “faculty”, “professional development”, and “geography” reflected early concerns with institutional roles, academic identity, and regional disparities (Austin & Sorcinelli, 2013).

From 2015 to 2020, emerging terms such as gender, academic careers, and perceptions signaled a shift toward individual experience, equity, and identity construction. Keywords such as science and community indicated growing interest in disciplinary contexts and collaborative networks (Levecque et al., 2017).

Since 2021, terms such as work, well-being, and mental health have surged, reflecting increased attention to academic labor, burnout, and post-pandemic

emotional resilience (da Silva, 2021). Concurrently, keywords such as expectations, culture, and inclusivity suggest expanding concern with the psychological and sociocultural aspects of academic life (Zacher & Rudolph, 2020).

Overall, the field has shifted from a structural and institutional focus to a more interdisciplinary and human-centered orientation. This evolution aligns with broader changes in global higher education, emphasizing sustainability, emotional well-being, and inclusive academic environments.

Evolutionary Trend of Research Hotspots in the CNKI

Keyword burst analysis of Chinese ECA research reveals a three-phase developmental trajectory. In the first phase (2010–2015), terms such as university and local university reflected attention to regional disparities and structural differentiation in China’s higher education system. These studies often examine institutional inequalities shaped by initiatives such as the “double first-class” policy (Wang, 2011).

The second phase (2016–2020) marked a shift toward individual-level concerns, with emphasis on teacher rights, career adaptation, and academic careers. The term “teacher development” showed the greatest burst strength during this period, underscoring its centrality in discourse around faculty roles amid governance reforms (Sugrue et al., 2018).

In the third phase (2021–2025), keywords such as grounded theory, institutional logic, and faculty evaluation indicate a growing interest in theory-informed, system-level inquiry. Researchers increasingly adopt analytical models to examine institutional mechanisms, evaluation practices, and organizational dynamics affecting early-career academics.

This evolution suggests a gradual progression from descriptive structural analysis to a more theory-driven and systematized research orientation. It also reflects growing methodological sophistication and convergence with international approaches to academic careers and institutional governance.

Marginalization Analysis and Comparison

To quantitatively assess institutional disparities and their association with geography, this study introduces and applies the double marginalization index (DMI). The DMI synthesizes two dimensions: spatial centrality (capturing an institution’s position within established geographic hierarchies of academic resources) and discursive power (a composite metric based on publication volume, citation impact, and network centrality). The index is calculated as follows:

$$DMI = \alpha \times \textit{Spatial Centrality} + (1 - \alpha) \times \textit{Discursive Power}$$

The weighting coefficient α was set to 0.6 (see Methods), reflecting the path-dependent nature of geographic advantage in shaping academic capital (Wei & Ye, 2009).

The application of the DMI across both the Web of Science (WoS) and CNKI datasets reveals a consistent and powerful pattern (Figure 4). A strong positive correlation is observed between spatial centrality and discursive power, indicating that institutional location and scholarly influence are closely aligned.

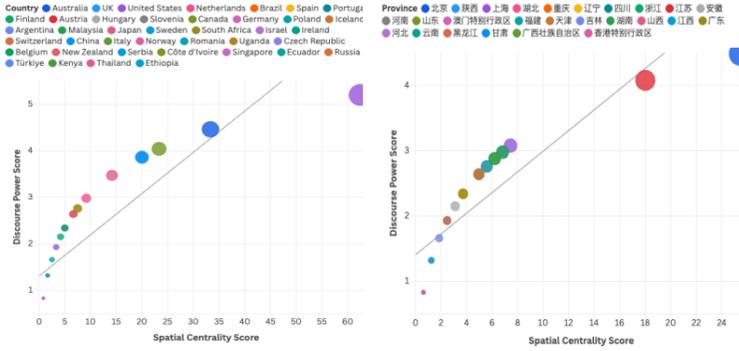


Figure 4: Double Marginalization Index (DMI) Scatter Plots

Core Institutions: In the WoS dataset, institutions located in the United States, the United Kingdom, Canada, and Australia achieve the highest DMI scores, dominating both spatial and discursive dimensions. Similarly, within the CNKI dataset, institutions in Beijing and Shanghai score highest, confirming a parallel pattern of intense centralization within the national context.

Double-Marginalized Institutions: The DMI clearly identifies a cohort of institutions suffering from “double marginalization” low scores on both dimensions. Within China, institutions from western provinces (e.g., Gansu and Guangxi) exemplify this pattern, exhibiting minimal spatial centrality and very low discursive power. At the global level, institutions affiliated with countries in the Global South (e.g., Kenya, Ethiopia, Uganda) occupy the same marginal quadrant in the DMI mapping.

This empirical mapping substantiates the core-periphery dynamics theorized in global knowledge production (Keim, 2010). The concentration of discursive power in geographically core regions and the systemic disadvantage faced by institutions at peripheries—both within a national (China) and global frame—provides measurable evidence of deeply embedded structural inequalities in the scholarly ecosystem. The predicament of doubly marginalized institutions highlights a critical disconnect: active research participation does not readily translate into proportional visibility or influence within dominant academic networks.

LIMITATIONS

This study acknowledges several limitations that frame the interpretation of its findings and suggest directions for future research. First, the bibliometric analysis is inherently constrained by the scope and architecture of the two primary databases. Differences between Web of Science (WoS) and CNKI in terms of indexing criteria, language coverage, and disciplinary classification mean that the analyzed corpora represent distinct, nonequivalent slices of the global scholarly conversation. This structural divergence, while central to the study's investigation of "database localism," necessarily qualifies direct comparability and may introduce selection biases. Second, while cword and burst analysis effectively maps discursive structures, the study does not triangulate these patterns with qualitative data (e.g., interviews, policy documents, or ethnographic accounts) that could provide deeper, actor-centered explanations for the observed trends.

Third, the double marginalization index (DMI) represents a specific operationalization of center-periphery theory for this comparative, cross-database context. As a composite measure, its construction—particularly the weighting ($\alpha=0.6$) informed by the path-dependency of regional inequality (Wei & Ye, 2009) and the integration of spatial centrality with discursive power—constitutes a key methodological contribution of this study. To enhance the robustness and generalizability of the DMI, future research should conduct sensitivity analyses (e.g., testing alternative α values or operationalizations of its components) and apply them to other national, regional, or disciplinary contexts. Such work is essential for further validating the index and exploring its utility as a tool for comparative studies of academic marginalization.

DISCUSSION

Theoretical Implications and Synthesis

The findings of this study, while centered on the broad population of early-career academics (ECAs), provide a critical structural lens through which to examine the uneven terrain encountered by a key subset of this group: internationally mobile scholars. The stark contrast between the policy-aligned, mono-disciplinary landscape of Chinese (CNKI) research and the thematically dispersed yet structurally coherent international (WoS) literature vividly illustrates how divergent institutional logics—one oriented toward national policy instrumentation and the other toward global, interdisciplinary scholarly discourse—produce and reproduce distinct knowledge ecosystems.

This analysis extends core-periphery theory by operationalizing it in a cross-database, comparative framework. The DMI quantifies how marginalization operates at nested scales: globally, privileging Anglophone core regions, and nationally within China, concentrating power in eastern metropolises. This dual marginalization reinforces critiques from Southern epistemologies, demonstrating how geographic and discursive peripherality are mutually constitutive,

systematically excluding certain institutions and perspectives from mainstream visibility (de Sousa Santos & Meneses, 2020; Marginson & Xu, 2023). Furthermore, the bifurcation observed in China's publication patterns-between CSSCI-oriented domestic scholarship and WoS-oriented international output-exemplifies how institutional isomorphism to different global models can create fragmented research agendas within a single national system, potentially weakening integrative knowledge development.

Implications for International Student Scholars and Early Career Development

The structural inequalities mapped in this study have direct and profound implications for the trajectory of internationally mobile scholars, a group that notably includes international doctoral students and postdoctoral researchers, often conceptualized as early-career international graduate researchers (ECIGRs) who are navigating their entry into the global academic profession (Mukherjee & Fernandes, 2024). The DMI reveals that the disadvantages associated with institutional origin, low spatial centrality and discursive power are not erased upon entry into transnational academia; they persist within global knowledge networks.

For an early-career scholar originating from a “double-marginalized” institution, whether in a Global South country or a peripheral region of a larger nation such as China, this structural legacy creates compounded barriers. They confront not only the universal challenges of early-career precarity but also a relative deficit in the very forms of capital (network connectivity, citation visibility) that are critical for career advancement within a transnational academic field. Consequently, the journey of an international student from such a background into a professional academic career is systematically steepened. Their struggle for recognition and integration is, therefore, not merely a matter of individual effort or cross-cultural adaptation but is fundamentally shaped by the documented structural hierarchies of global knowledge production.

However, this does not negate the role of individual agency. As poignantly illustrated through autoethnography by Castiello-Gutiérrez (2022), the journey from ‘being’ a marginalized Other to ‘becoming’ a scholar with an affirmed academic identity is itself an agential process of resistance and negotiation. The structural inequalities mapped in this study define the very terrain that must be traversed in this ‘becoming.’ For those originating from or affiliated with institutions in peripheral regions, this terrain is characterized by an initial deficit in the spatial and discursive capital that the transnational academic field rewards, adding a profound structural dimension to individual narratives of mobility and struggle. Recognizing this terrain is not intended to dismiss individual struggle, but to clarify why the path is systematically steeper for scholars from the periphery and to underscore that fostering a more equitable academic ecosystem is essential to support more such journeys of becoming.

Practical and Policy Implications

To address these inequities and foster more inclusive academic ecosystems, targeted interventions are needed:

Promoting Equitable Evaluation and Career Pathways: Evaluation regimes, especially in contexts such as China, must move beyond a monolithic reliance on publication metrics. Differentiated, context-sensitive frameworks are needed that value diverse academic missions, such as teaching excellence, community engagement, or regional innovation, thereby creating legitimate and sustainable career pathways for scholars in nonelite or teaching-focused institutions (Zhang & Nardon, 2024). This is crucial for retaining talent in marginalized regions and for validating diverse forms of scholarly contribution.

Building Academic Cohesion and Infrastructure for Margins: Beyond project-based funding, sustained investment in collaborative academic infrastructure is vital for marginalized institutions. This includes forming regional research consortia, creating dedicated mentorship and peer-support networks for early-career faculty, and establishing platforms for scholarly exchange that bypass traditional core-periphery channels. Such initiatives build essential “academic social capital” and can help form counternetworks that enhance visibility and support (Marginson & Xu, 2023).

Facilitating Inclusive Internationalization requires moving beyond ad hoc programs to implement structured support systems. Research with international graduate students underscores that barriers such as institutional opacity, cultural misalignment, and fragmented career-immigration guidance systematically hinder integration and success (Mai et al., 2025). In response, international collaboration programs must be intentionally (re)designed with early-career scholars as core participants. Initiatives could include guaranteed participation in cross-border projects, formalized cosupervision, and mentorship programs. Crucially, these should be embedded within a broader framework, such as the Global Belonging Support Framework proposed by Mai et al. (2025), which ensures proactive advising, peer support networks, and culturally responsive training. This holistic approach is key to translating structured access into meaningful inclusion and breaking cycles of marginalization.”

Fostering Linguistically and Epistemically Inclusive Knowledge Ecosystems: Confronting linguistic hegemony is imperative. Empirical studies in scientometrics have consistently shown that non-English-language publications are cited less frequently outside their country of origin and are systematically underrepresented in global citation indices, which reinforces the discursive disadvantage of scholars working in non-Anglophone contexts (Moskaleva & Akoev, 2019). Therefore, support for bilingual publishing and the expansion of multilingual reviewers and editorial boards are concrete steps toward dismantling these barriers to participation.

In conclusion, this study not only maps the contours of inequality in ECA research but also highlights that supporting the next generation of academics—wherever they are located—requires conscious, structural efforts to redistribute resources, reconfigure networks, and reevaluate diverse forms of knowledge. The

career prospects of early-career scholars and the vitality of global scholarship itself depend on such transformative actions.

CONCLUSION

This study has mapped the persistent and hierarchical core–periphery dynamics that structure global knowledge production concerning early career academics (ECAs). Through a novel dual-database bibliometric analysis of Web of Science and CNKI, profound asymmetries in temporal trajectories, geographic distribution, disciplinary engagement, and discursive influence have been systematically documented.

This research makes distinct empirical and methodological contributions. By explicitly comparing two structurally divergent knowledge databases, it moves beyond single-system analyses to reveal how “database localism” both reflects and reinforces epistemic divides. The introduction of the Double Marginalization Index (DMI) provides a quantifiable framework for assessing the compounded spatial and discursive disadvantages faced by institutions in peripheral regions, both globally and within national contexts such as China.

These structural findings have significant implications for the global academic community, particularly for internationally mobile scholars and early-career international graduate researchers (ECIGRs). The study demonstrates that the challenges of career launch and professional integration are not evenly distributed but are prefigured by geopolitical and institutional hierarchies. For scholars from marginalized institutions, achieving visibility and connectivity within transnational academia requires navigating a field already skewed by unequal distributions of geographic and discursive capital.

Consequently, fostering more equitable research ecosystems demands concerted policy and institutional action. As discussed, this includes adopting differentiated evaluation frameworks that recognize diverse scholarly missions, building targeted academic infrastructure to support marginalized institutions, designing inclusive internationalization programs that center early-career scholars, and promoting linguistically just knowledge practices. Future research should build on this bibliometric groundwork by employing mixed methods to investigate the lived experiences of scholars within these structural constraints and to evaluate the impact of interventions designed to mitigate them.

Ultimately, supporting the next generation of academics and enriching global scholarship itself depends on our collective commitment to dismantling the structural barriers to equitable participation and recognition in knowledge creation.

Data Declaration

Data supporting this study's bibliometric analysis are derived from the China National Knowledge Infrastructure (CNKI) and Web of Science (WoS) Core Collection. Owing to database subscription restrictions, full-text access is only available with institutional rights. Processed metadata and analytical protocols are available from the corresponding author upon reasonable request. The authors declare that they have no conflicts of interest. This research received no external funding.

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In the preparation of this manuscript, we did not use any artificial intelligence (AI) tools for content creation. We used only DeepL and Grammarly for grammar correction, punctuation standardization, and fluency improvement and DeepSeek for academic expression optimization. Prompts included instructions such as “optimize academic expression while preserving technical terms” and “improving sentence fluency”. The AI-generated output was strictly limited to language polishing. The authors declare that, in accordance with COPE guidelines, they own full intellectual property rights to all the research content and assume full responsibility for this work.

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