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THE FIRST DECADE OF THE REVIEW OF INNOVATION AND COMPETITIVENESS

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ABSTRACT

Purpose. *This paper presents a bibliometric analysis of the Review of Innovation and Competitiveness (RIC) - A Journal of Economic and Social Research across its first ten years, examining how the journal aligns with cutting-edge economic and managerial research. By focusing on innovation and competitiveness (key themes within the journal's scope) we assess cumulative publications, citations, keyword trends, and country distributions to understand RIC's evolving impact on both academic theory and practice.*

Design/Methodology/Approach. *Data on publication, citation, and articles' views were collected from the journal's records on Hrčak and Google Scholar to evaluate how topic relevance and paper quality influence scholarly visibility. Descriptive statistics, network visualization, and correlation analyses offer a quantitative perspective of the journal's development.*

Findings and implications. *Results indicate a swift rise in both publications and citations in RIC's early years, followed by stable yet continued growth thereafter. Countries such as Croatia and Nigeria contribute the highest number of articles, while authors from Austria and India achieve notable citation impact. Keyword analysis highlights a broad thematic array, ranging from macroeconomic policy to firm-level decision-making, indicating that innovation and competitiveness are often explored from multiple angles. These findings not only reaffirm RIC's wide-ranging scope but also underscore its capacity to integrate new, cutting-edge research areas (e.g., digital transformation, behavioral finance). The insights offer direction for future submissions and indicate where emerging topics might be further developed to inform practice, policy, and theory.*

Limitations. *Because the analysis relies on a single journal's dataset, the findings cannot be generalized to any broader disciplinary trends. Citation-based metrics also tend to favor older publications, and newer articles may not yet show their full impact. While the study captures clear patterns, the interplay between article quality, topic selection, and external citation drivers requires more extensive qualitative or comparative research.*

Originality. *This paper provides a data-driven reflection on RIC's first decade, offering a comprehensive mapping of the journal's thematic evolution. By integrating citation data with keyword networks and country distributions, the study illuminates how the journal has matured and also the ways it can further position itself as a leading forum for advanced, cross-disciplinary insights on innovation and competitiveness - necessary areas for driving economic and managerial progress worldwide.*

1. INTRODUCTION

The first decade of the Review of Innovation and Competitiveness (RIC) marks a significant milestone in the journal's endeavor to promote and disseminate the diverse economic, managerial, and policy-related dimensions of innovation. Established to encourage the exchange of ideas among researchers, policymakers, and professionals, RIC was devoted to publishing both theoretical and applied works that grapple with the complexities of modern economic development. In doing so, it has offered a multidisciplinary vantage point on global innovation trends, as well as on the micro-level decisions and processes that drive firm-level competitiveness.

Since its inception, RIC has aimed to advance academic discourse by integrating perspectives from economics, management, finance, organizational studies, and more specialized fields such as research and development. By prioritizing research on human resource factors, technological adoption, organizational design, and macroeconomic shifts due to innovation or competitiveness, the journal has consistently reflected the multifaceted nature of innovation itself. Articles published over the past ten years have addressed pressing questions on subjects ranging from industrial development and foreign direct investment to novel business models and cognitive biases in decision-making processes.

RIC's commitment to breadth and inclusivity is grounded in the recognition that fostering innovation - whether in a single company, an entire industry, or across national boundaries - requires robust, multidisciplinary, and interdisciplinary inquiry. Scholars have explored how macroeconomic shifts shape firms' R&D efforts, how corporate governance influences entrepreneurial culture, and how educational policies foster human capital development in an increasingly competitive global landscape. This diversity of themes has helped RIC maintain a forward-looking stance and remain responsive to emerging areas of scholarship, including digital transformation and sustainable innovation.

Over the course of its first decade, the journal itself underwent several transformations in its publication format and organizational structure. Initially released as a printed issue in 2015, RIC quickly recognized the growing importance of digital accessibility and adopted an online version immediately following its first edition. This early move to embrace digital platforms facilitated broader dissemination and easier access for a global audience, aligning with the journal's commitment to inclusivity and international collaboration.

During these changes, the editorial board expanded to include a diverse group of scientists from various countries and disciplines, thereby broadening the journal's academic perspective and enhancing its commitment to interdisciplinary work. This board now features prominent scholars: Jurica Pavičić (University of Zagreb), Nikša Alfirević (University of Split), Tihomir Vranešević (University of Zagreb), Vesna Buterin (University of Rijeka), Soumitra Sharma (Juraj Dobrila University

of Pula), Branka Krivokapić Skoko (Charles Sturt University), Peide Liu (Shandong University), Jerzy Paslawski (Poznan University), Irene Lill (Tallinn University of Technology), Edyta Plebankiewicz (Cracow University of Technology), Edmundas Kazimieras Zavadskas (Vilnius Gediminas Technical University), Romualdas Ginevičius (Vilnius Gediminas Technical University), Maria - Gabriella Baldarelli (University of Bologna), Nawazish Mirza (S P Jain School of Global Management), Moshe Hagigi (Boston University), Alex Kung - Hsiung Chang (National Pingtung University of Science and Technology, Taiwan), and Oliver Radolović (Juraj Dobrila University of Pula). By featuring this extensive international board, RIC ensures that it continues to reflect the global nature of innovation studies and fosters ongoing engagement across related disciplines.

To strengthen its position as a credible platform for multidisciplinary research, the *Review of Innovation and Competitiveness* is indexed in a range of esteemed academic databases and directories. These include Hrčak, ERIH PLUS, Index Copernicus International, DOAJ, Scilit, EBSCO Host, and Google Scholar, among others. Such indexing enhances the journal's accessibility and ensures its inclusion in global academic networks, contributing to its growing influence and reach within the scholarly community.

RIC's dedication to a wide array of topics and methods is similarly evident in the many articles published over the past decade. Scholars have addressed how macroeconomic shifts shape firms' R&D investment, how corporate governance affects the competitiveness of various industries, and how digitalization and emerging technologies transform organizations. Studies on the cognitive and behavioral dimensions of finance, the influence of policy on innovative practices, and the role of human resource capabilities further underscore the journal's embrace of new and interdisciplinary avenues of research.

This paper outlines the journal's first decade of publications through a bibliometric lens. By analyzing citation patterns, identifying co-occurring keywords, and highlighting the most influential articles in terms of views and citations, this paper provides insights into the research directions and intellectual networks that have taken shape in RIC's pages. It also explores how the journal's scope - ranging from theoretical to highly practical aspects of innovation - has evolved over time. In so doing, it sheds light on the interconnectedness of the topics RIC has covered and underscores the journal's impact on shaping both academic debates and real-world practices in innovation-driven economies.

Looking ahead, RIC's editorial mission remains tied to nurturing innovative scholarship, bridging theoretical models with policy discussions, and fostering dialogue across academic and professional communities. The evidence presented here of RIC's first decade underscores the journal's wide scope but also its relevance to contemporary and future challenges in innovation and competitiveness. The following sections offer a detailed overview of the methods, results, and implications

arising from this bibliometric exploration, contributing a reflective look at where the journal has been and pointing to new frontiers in its continued pursuit of rigorous and impactful research.

2. METHODS

All data on article titles, authors, countries, keywords, citation counts, and views were obtained from Hrčak and Google Scholar on January 15th, 2025. Bibliometric analysis, as applied here, is appropriate for assessing the journal's scholarly influence and thematic evolution over time. By systematically compiling article metadata and employing descriptive and network-based techniques, it becomes possible to trace how RIC's coverage and standing have developed across its first decade.

We employed R (R Core Team, 2023) as the primary software environment to organize this information. First, data-wrangling was carried out using the tidyverse (Wickham et al. 2019), reshape2 (Wickham 2022), tidyr (Wickham and Wickham 2017), and lubridate (Spinu, Grolemond, and Wickham 2021) packages, which ensured consistent structures for subsequent analyses. After cleaning and formatting, we performed descriptive statistical analysis and computed correlation coefficients using dplyr (Yarberry and Yarberry 2021) and purrr (Wickham, Henry, and RStudio 2023).

Next, we employed tidytext (Silge and Robinson 2016) to parse article titles and keywords, creating term-frequency matrices used for both descriptive investigations and brief topic exploration. To visualize keyword prominence, we combined wordcloud (Fellows et al. 2018), ggwordcloud (Le Penneć and Slowikowski 2024), and ggplot2 (Wickham and Wickham 2016) to generate word clouds and trend charts of publication and citation patterns. We then shifted to network analysis by constructing co-occurrence graphs of frequently appearing keywords, leveraging igraph (Csárdi and Nepusz 2006) and ggraph (Pedersen 2022) to illustrate how core concepts cluster and interconnect across the journal's corpus.

Finally, we explored more advanced text-analysis techniques by running preliminary topic modeling with topicmodels (Grün and Hornik 2011) and stm (Roberts, Stewart, and Tingley 2019), while also exploring dbSCAN (Hahsler et al. 2022) to detect potential clustering patterns in the bibliometric data. Although these deeper analytical methods were used primarily for exploratory purposes, they offer insights into the thematic trajectories shaping the Review of Innovation and Competitiveness over its first decade.

3. RESULTS

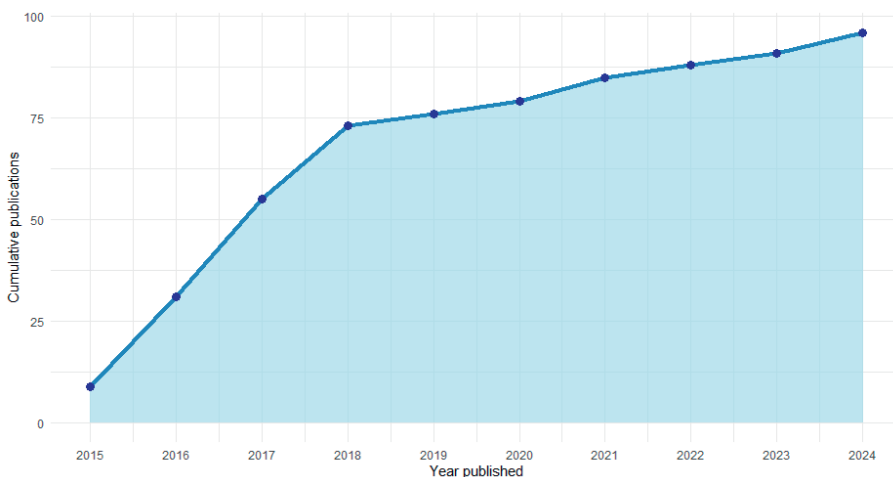
The insights gained from the analysis allow for conclusions about the Journal's publications, citations, and scope. While reflecting on the first decade reveals the journal's success in fostering and disseminating research in the multidisciplinary area of innovation and competitiveness, it paves the way for the years to come.

3.1. Publications and citations over time

The journal was initially released as a printed issue in 2015 but quickly adopted an online version immediately following its first edition. In 2019, anticipating shifts in academic publishing and responding to emerging trends, RIC shifted to a single annual issue, with online-first publishing of accepted papers. This consolidation aimed to enhance the journal's impact by curating a more comprehensive and rigorous collection of articles each year, thereby fostering deeper scholarly engagement and facilitating more substantial discourse within each publication cycle.

The onset of the COVID-19 pandemic in early 2020 further accelerated RIC's transition towards digital exclusivity. In 2021, the journal made the strategic decision to publish exclusively in electronic form. This shift was driven by several factors: the necessity of remote operations during global lockdowns, the increased reliance on digital resources by researchers and practitioners, and a broader industry trend toward sustainability by reducing paper usage. Publishing exclusively online not only ensured uninterrupted dissemination of knowledge during unprecedented times but also allowed RIC to leverage advanced digital venues to enhance interactivity, accessibility, and real-time engagement with its readership.

Figure 1.: Publications over the years

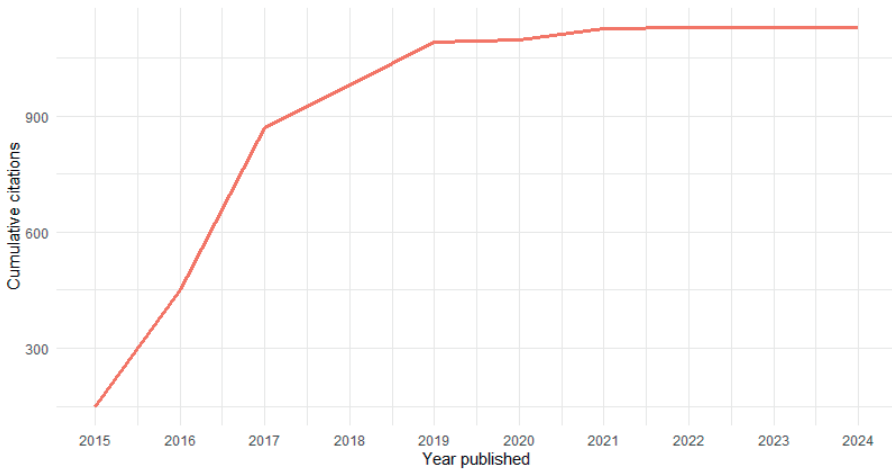


From Figure 1., one can see that the journal’s cumulative number of published articles grew rapidly in its early years, reflecting a particularly active period from 2015 through 2019 before leveling off.

Publications over the years reflect strategic transformations - adopting digital platforms early, consolidating publication frequency, transitioning to exclusive online publication, along with the expansion of the editorial board - demonstrating RIC’s agility and responsiveness to both technological advancements and global disruptions. They underline the journal’s dedication to maintaining relevance and rigor while enhancing accessibility and fostering an international community dedicated to exploring the multitude of dimensions of innovation and competitiveness.

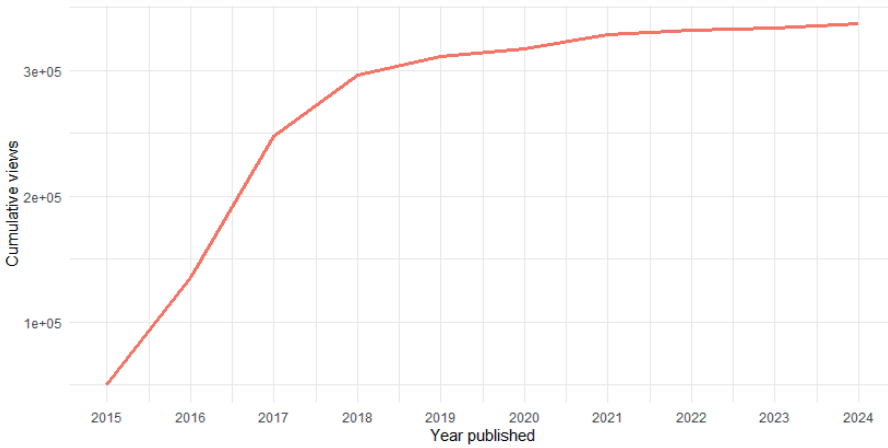
The citations show a similar pattern (Figure 2.) - an initial steep climb for the papers published up to around 2019, suggesting the journal’s increasing visibility and impact in those formative years. After that point, citation growth flattens, indicating that many of the more recent articles have not yet had as long to accumulate citations. Nevertheless, the mean citation of all articles is 11.76.

Figure 2.: Citations over the years



A similar story emerges from the cumulative views chart (Figure 3.). The papers that have been available for a longer period of time accumulated more views. It is also interesting to note that the correlation coefficient between the views and citations is 0.86, confirming the relevance of promoting scientific papers.

Figure 3.: Views over the years



The top-cited list (Table 1.) confirms that papers published earlier often have an advantage in accruing more citations simply because they have had longer to circulate. For instance, articles from 2015 - 2017 frequently appear among the highest-cited works. However, one can also see that some of the more recent papers, such as the 2019 article on the gravity model of trade, have already garnered a substantial number of citations in a shorter window - suggesting that topic relevance, research quality, and widespread applicability also play an important role in citation counts.

Table 1.: Top cited papers

number of views	year published	number wof citation	Title	authors	country
15412	2016	103	The link between students' satisfaction with faculty, overall students' satisfaction with student life and student performances	(Mihanović, Batinić, and Pavičić 2016)	Croatia
10374	2019	79	The gravity model of trade: a theoretical perspective	(Shahriar et al. 2019)	China
10466	2017	60	A study on the risk - adjusted performance of mutual funds industry in India	(Agarwal and Mirza 2017)	India
5027	2017	56	Determinants of foreign direct investment in Nigeria: a Markov regime - switching approach	(Enisan 2017)	Nigeria
8015	2016	55	Revealed comparative advantage index: an analysis of export trade in the Austrian district of Burgenland	(Granabetter 2016)	Austria
13738	2015	51	Competitive intelligence: importance and application in practice	(Gračanin, Kalac, and Jovanović 2015)	Serbia
6468	2017	48	Impact of the FDI on unemployment rate in countries of west Balkan	(Grahovac and Softić 2017)	Bosnia and Herzegovina
7775	2017	46	A next generation of innovation models? An integration of the innovation process model big picture Š towards the different generations of models	(Taferner 2017)	Austria
5190	2017	42	On the determinants of unemployment in Nigeria: what are the roles of trade openness and current account balance?	(Akande Raifu 2017)	Nigeria
6331	2016	32	Innovation in tourism: perception of tourism providers from Croatia and Serbia	(Slivar, Božić, and Batković 2016)	Croatia, Serbia

These top-cited works collectively suggest that readers of the Review of Innovation and Competitiveness are drawn to studies that combine theoretical rigor with practical applications relevant to innovation and economic development. Topics such as the gravity model of trade, foreign direct investment, and unemployment demonstrate the journal's macro-level scope, while works on student satisfaction, mutual fund performance, and innovation models reflect its emphasis on managerial and organizational insights. The high citation counts indicate that these articles

resonate with fellow researchers within the journal’s main fields but also contribute to broader academic conversations in economics, management, and related disciplines.

From a quality standpoint, it is telling that research spanning a wide range of methodologies - quantitative approaches, conceptual frameworks, empirical analyses - has garnered significant recognition. Studies that address pressing economic issues (like FDI and unemployment) or offer new conceptual models (as with innovation processes) often prove highly relevant to policy discussions as well as academic debate. The variety of these articles reflects the journal’s mission to encourage cross-disciplinary and globally oriented work on innovation and competitiveness, thereby underlining the importance of both broad theoretical foundations and context-specific practical implications.

3.2. Geographic distribution

Figure 4 shows that Croatia contributes the largest number of published articles, followed by Nigeria, Poland, China, and Italy. This distribution likely reflects the subject focus areas that resonate most with authors from these countries.

Figure 4.: Geographic distribution

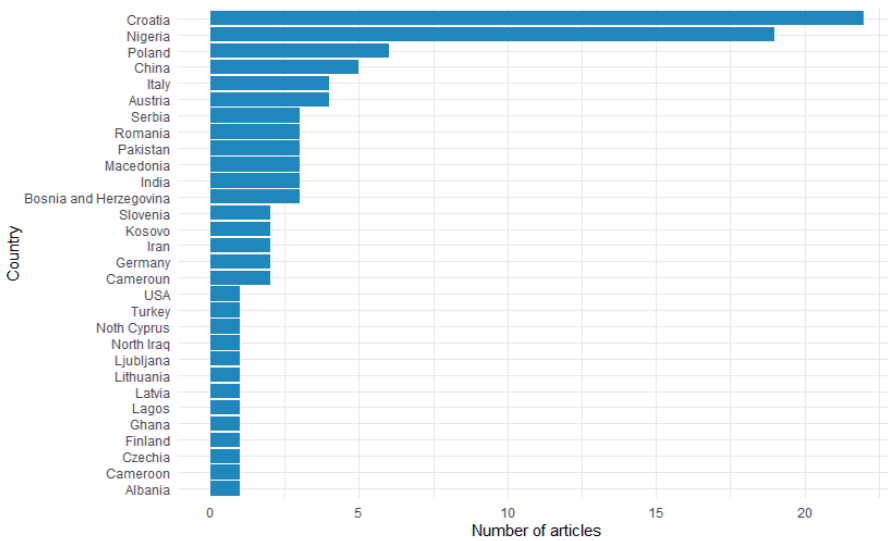


Figure 4. and Table 2. reveal two main patterns: the journal’s geographic distribution of authors and the varying impact of papers (as indicated by average citations) across countries. Croatia stands out as the most frequent contributor, with around twenty papers, which is not surprising given the journal’s regional reach and

collaborative ties. Other countries - such as Poland, Italy, and Macedonia - have produced a moderate number of articles but show different levels of average citation, suggesting that both the topics and perhaps the timing of publication can strongly influence a paper's impact.

Table 2.: Papers by countries

Country	N_papers	Avg_citations
Croatia	19	12.53
Nigeria	18	12.61
China	5	22.6
Poland	5	4
Italy	4	3.25
Austria	3	36
Bosnia and Herzegovina	3	20
India	3	22.67
Macedonia	3	7
Pakistan	3	18.67

At the same time, smaller contributors like Austria, India, and Bosnia and Herzegovina (such as Agarwal and Mirza 2017; Taferner 2017; Grahovac and Softić 2017) have high average citations despite fewer publications. In particular, Austrian authors average 36 citations per paper, and Indian authors surpass 22, indicating that even a handful of well-received articles can significantly elevate a country's scholarly visibility within the journal. Taken together, these findings illustrate that the quantity of publications does not always translate directly into higher citation metrics; instead, a combination of relevant research topics, article quality, and the reach of the authors' networks shapes citation outcomes.

3.3. Keyword analysis and co-occurrence network

The word cloud in Figure 5. highlights the most frequently appearing terms in the journal's articles, centered on themes central to economics and innovation research. Words such as „economic,” „growth,” „development,” „financial,” and „investment” reflect the journal's macroeconomic orientation, while „management,” „performance,” and „factors” point to firm-level and organizational concerns. The presence of „tourism,” „trade,” „quality,” and „volatility” signals the range of specific sectors and issues that authors have addressed, emphasizing the journal's dual interest in both broad policy and contextualized case studies. Overall, the prominence of these words underscores how *Review of Innovation and Competitiveness* bridges the theoretical (e.g., financial and economic concepts) and the applied (e.g., sector-specific or country-level analyses) within its publication scope.

Overall, the visual clustering underscores the journal's dedication to investigating innovation at multiple levels - ranging from broad macroeconomic patterns such as global economic crises and trade dynamics to micro-level phenomena involving decision-making, organizational design, and individual creativity. The diversity of keyword clusters attests to RIC's inclusive scope: rather than limiting itself to a single theoretical framework or methodological approach, the journal fosters intellectual crossover across various disciplines and fields in the service of understanding and advancing innovation and competitiveness.

4. DISCUSSION AND SYNTHESIS

The bibliometric analysis carried out on RIC's first decade of publications underscores the journal's success in drawing together research on both macro-level and micro-level drivers of innovation. The initial surge in published articles between 2015 and 2019 and related citations indicate that RIC successfully attracted a scholarly audience keen on addressing pressing economic and managerial challenges. This period coincides with the journal's strategic transformations, including the early adoption of digital platforms, continuous improvement of the review rigor, and the consolidation of publication frequency, which likely contributed to increased visibility and accessibility.

Over time, the journal appears to have consolidated its focus on core themes, with FDI, corporate governance, trade models, and entrepreneurship emerging as consistent touchpoints. Yet the continued appearance of new keywords - ranging from neurofinance and sustainability to digital transformation - reveals an openness to emerging fields that expand the boundaries of innovation research and reinforce RIC's multidisciplinary identity.

These findings also highlight the pivotal role of collaboration and geographical diversity. While Croatia and Nigeria emerge as primary contributors, the high average citations from countries like Austria and India indicate that quality and relevance can amplify a journal's impact beyond sheer publication volume. This suggests that RIC's niche positioning allows it to attract high-caliber research that significantly contributes to academic discourse, even from a limited number of countries.

At the same time, the co-occurrence network shows how seemingly distant topics overlap - linking macroeconomic variables to firm-level processes and educational settings. Such convergence suggests that RIC does more than host siloed scholarship; it fosters intellectual crossover among researchers from distinct backgrounds, ultimately enriching the discourse on innovation and competitiveness.

In this light, the co-occurrence network underscores the convergence of seemingly distinct themes, illustrating how new directions - like advanced data analytics, cognitive and behavioral finance, and ecosystem-oriented approaches to sustainable innovation - connect back to traditional competitiveness questions.

As RIC continues to broaden its international readership and encourage multidisciplinary contributions, its editorial stance appears well-positioned to attract contributions that push beyond established theories. This bibliometric analysis thus suggests ample room for future submissions that explore the emerging challenges facing firms, societies, and policymakers in a rapidly evolving global landscape. In doing so, RIC can reinforce its role as a platform for scholarship that combines relevance, rigor, and creative approaches to understanding and enhancing competitiveness.

Despite its smaller size, or maybe because of it, RIC's agility in adapting to technological advancements and global events has been a significant strength. The journal's ability to pivot in response to the pandemic has fortified its small but relevant position in the competitive landscape of academic publishing.

Looking ahead, the journal's evolution suggests a continued readiness to host studies on emerging topics in the coming years. Beyond the established pillars of macroeconomics and firm strategy, future avenues may include the exploration of artificial intelligence, metaverse-based business models, green innovation, and ecosystem-based organizational networks. Identifying and nurturing novel areas will remain an integral part of RIC's editorial strategy. By continuing to support research that bridges the conceptual and the applied, the local and the global, rigorous empirical methods with the imaginative theoretical constructs, RIC can sustain its relevance to both policymakers and scholars aiming to navigate an increasingly complex innovation landscape. Hereby, the Editorial extends a standing invitation to cutting-edge scholarship that applies innovative lenses - such as machine learning, big data analytics, and multi-disciplinary theoretical frameworks - to explain innovation and competitiveness.

5. CONCLUSION

The evidence presented in this bibliometric study attests to the Review of Innovation and Competitiveness as a dynamic platform for scholarly engagement on innovation-related topics. Over the past decade, RIC has successfully cultivated a diverse set of research interests - from macroeconomic policy considerations and trade flows to organizational behaviors and emerging technological trends. High citation rates for several articles underscore their relevance to broader academic debates and, in many cases, to practical policy and managerial considerations.

RIC's path has been shaped not only by its editorial vision but also by the collective contributions of geographically varied authorship, reflecting the journal's global outreach. As RIC continues to publish both theoretical and empirical work, it remains well-positioned to enrich conversations about how individuals, firms, and societies adapt to ongoing changes in technology, markets, and governance structures. These insights, in turn, offer valuable guidance for policymakers,

scholars, and practitioners who seek to foster innovation in rapidly evolving economic environments.

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