Data and Metadata. 2025; 4:1262 doi: 10.56294/dm20251262

### ORIGINAL



# Rethinking the Performance of Industrial Policies: New Approaches and Recomposition of Scientific Themes

# Repensando el desempeño de las políticas industriales: nuevos enfoques y recomposición de temas científicos

Fatima-Zahrae Lakhlifi<sup>1</sup>, Mohammed Abdellaoui<sup>1</sup>

<sup>1</sup>Sidi Mohamed Ben Abdellah University, Interdisciplinary Research Laboratory on Economic Dynamics, Finance and Entrepreneurship. Fez, Morocco.

Cite as: Lakhlifi FZ, Abdellaoui M. Rethinking the Performance of Industrial Policies: New Approaches and Recomposition of Scientific Themes. Data and Metadata. 2025;4:1262. https://doi.org/10.56294/dm20251262

Submitted: 28-06-2025 Revised: 09-08-2025 Accepted: 12-11-2025 Published: 13-11-2025

Editor: Dr. Adrián Alejandro Vitón Castillo

Corresponding Author: Fatima-Zahrae Lakhlifi

### **ABSTRACT**

Since the end of the Washington Consensus, industrial policies have regained strategic importance as tools for competitiveness, innovation, and sustainability. However, research on their performance remains fragmented and lacks an integrated perspective. This study used a bibliometric approach based on SCOPUS data covering the period 1999-2025. The analysis was conducted on a corpus of 4,026 documents retrieved from the SCOPUS database, using Bibliometrix (R) for quantitative mapping and VOSviewer for keyword co-occurrence and network visualization. The analysis followed a transparent and reproducible protocol based on a clearly defined search query, inclusion criteria, and a robustness test comparing alternative extractions to ensure the stability of thematic structures and keyword networks. The results revealed three main lines of research within the field: studies evaluating the economic and productive performance of industrial policies, works linking these policies to innovation and sustainability dynamics, and a growing stream addressing technological sovereignty and institutional frameworks. This study offers an integrated understanding of how research has approached the performance of industrial policies, highlighting a shift toward systemic perspectives that link performance with innovation, sustainability, and technological sovereignty. It calls for future studies to connect these insights with empirical evidence from real industrial transformations.

**Keywords:** Industrial Policy Performance; Sustainability and Innovation; Bibliometric Analysis; Thematic Evolution; Technological Sovereignty.

### **RESUMEN**

Desde el fin del Consenso de Washington, las políticas industriales han recuperado importancia estratégica como herramientas para la competitividad, la innovación y la sostenibilidad. Sin embargo, la investigación sobre su desempeño sigue siendo fragmentada y carece de una perspectiva integrada. Este estudio empleó un enfoque bibliométrico basado en datos de SCOPUS para el período 1999-2025. El análisis se realizó sobre un corpus de 4026 documentos recuperados de la base de datos SCOPUS, utilizando Bibliometrix (R) para el mapeo cuantitativo y VOSviewer para la coocurrencia de palabras clave y la visualización de redes. El análisis siguió un protocolo transparente y reproducible basado en una consulta de búsqueda claramente definida, criterios de inclusión y una prueba de robustez que compara extracciones alternativas para garantizar la estabilidad de las estructuras temáticas y las redes de palabras clave. Los resultados revelaron tres líneas principales de investigación en este campo: estudios que evalúan el desempeño económico y productivo de las políticas industriales, trabajos que vinculan estas políticas con las dinámicas de innovación y sostenibilidad, y una corriente creciente que aborda la soberanía tecnológica y los marcos institucionales. Este estudio ofrece una comprensión integral de cómo la investigación ha abordado el desempeño de las

© 2025; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https://creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada

políticas industriales, destacando un cambio hacia perspectivas sistémicas que vinculan el desempeño con la innovación, la sostenibilidad y la soberanía tecnológica. Es necesario realizar estudios futuros que vinculen estas perspectivas con la evidencia empírica de transformaciones industriales reales.

Palabras clave: Desempeño de la Política Industrial; Sostenibilidad e Innovación; Análisis Bibliométrico; Evolución Temática; Soberanía Tecnológica.

### INTRODUCTION

Since the early 2000s, industrial policies have returned to the heart of economic strategies, after a period in which they had been neglected under the influence of the Washington Consensus.<sup>(1)</sup> This recovery does not mean a simple return to old approaches: States are now seeking to use industrial policy to stimulate innovation, strengthen technological sovereignty,<sup>(2)</sup> relocate certain activities, and support the ecological transition.<sup>(3,4)</sup> In other words, it is no longer a single policy, but a set of combined tools and objectives that reflect an adaptation to new economic and environmental challenges.<sup>(5,6)</sup> This renewed interest reflects the growing recognition that industrial policy is essential for addressing global crises, ensuring strategic autonomy, and guiding sustainable growth in an increasingly competitive world economy.

The literature on industrial policy is characterized by considerable conceptual, methodological, and empirical diversity, which makes it difficult to construct a cumulative framework of knowledge. Conceptually, definitions vary depending on whether industrial policy is viewed as a selective intervention in favor of strategic sectors or "national champions", <sup>(7,8)</sup> or as a set of horizontal instruments aimed at competitiveness, innovation, and sustainability. <sup>(9,10)</sup> These approaches reflect two distinct logics: the first oriented toward correcting market failures, the second toward the structural transformation of economies, which makes the analytical frameworks difficult to compare. Understanding this diversity is crucial, as it justifies the need for a comprehensive and systematic mapping of the field, a gap that this study seeks to address.

Previous studies have employed a wide range of methodological approaches — including descriptive analyses, panel models, difference-in-differences, matching techniques, and qualitative case studies — to assess the effectiveness of industrial policies. (9,10,11) This methodological diversity reflects the dynamism of the field but also complicates the formulation of robust and comparable results. Variations in findings often stem from both methodological choices and contextual factors, as reliability depends on data structures institutional diversity across countries, (11) and the persistent tension between econometric rigor and institutional depth. (10)

The very notion of performance remains multifaceted: it refers in turn to productivity, employment, value added, innovation, exports, and even resilience and the green transition. These choices reflect national priorities<sup>(12)</sup> and explain the variability of results depending on the indicator chosen.<sup>(13)</sup> This plurality of criteria can even lead to contradictory conclusions, with the same policy appearing effective from an innovation perspective but ineffective from an employment perspective.<sup>(14)</sup>

Despite an abundant literature, research on industrial policies remains fragmented and incomplete. Studies struggle to link policy measures to their measurable effects on overall performance and focus mainly on developed countries, neglecting emerging contexts. The lack of harmonized indicators limits international comparisons, while new issues (sustainability, technological sovereignty, and reshoring) are not yet integrated into a coherent analytical framework. This conceptual and analytical void highlights the need for a scientific cartography capable of identifying trends, neglected areas, and thematic recompositions of the field.

Given the conceptual fragmentation and methodological diversity observed in the literature, there is a growing need to better understand how academic research has approached the question of industrial policy performance over time. While numerous studies have examined isolated aspects (such as competitiveness, innovation, or sustainability) few have provided an integrated vision capable of connecting these dimensions within a coherent analytical framework. This lack of cumulative understanding limits both theoretical progress and the formulation of effective public strategies.

In this context, the present study seeks to provide a comprehensive and structured overview of the field of research on industrial policies and their performance. By analyzing its thematic evolution, conceptual orientations, and structural dynamics, the study aims to clarify how this body of knowledge has been organized, what its dominant trends and persistent gaps are, and how it can inform future work on the design and evaluation of industrial policies in an era of sustainability and technological transformation.

## **METHOD**

### **Process**

The choice of a bibliometric approach is explained by the very nature of the field, marked by a great conceptual and methodological dispersion. Unlike a systematic review, which aims for the critical exhaustiveness of the works, bibliometrics allows for the objective mapping of structures, trends, and relationships between

themes. It thus offers a data-based overview, essential for understanding how research on the performance of industrial policies has been organized, consolidated and transformed over time.

This bibliometric approach is based on a clear principle: industrial policy constitutes the public lever (independent variable) and industrial performance represents its outcome. This choice stems from the query used, which combines the terms' industrial policy' or 'industrial strategy' with concepts such as performance, effectiveness, impact, and competitiveness. This study conducted the data collection using a query designed to identify studies addressing the performance and effectiveness of industrial policies and associated strategies.

To situate this research within the international scientific landscape, we compiled a bibliographic corpus from the SCOPUS database, which is recognized for its reliability and multidisciplinary coverage of indexed publications. SCOPUS was chosen as the exclusive data source to ensure methodological consistency with the majority of recent bibliometric studies on industrial policy and innovation. Using a single, homogeneous database avoids duplication, discrepancies in citation formats, and coverage overlaps that can bias network analyses and thematic mapping. The bibliometric study was carried out on October 10, 2025, with the following query: TITLE-ABS-KEY ( "industrial policy" OR "industrial policies" OR "industrial strategy" OR "industrial strategy" OR "industrial development policy" OR "manufacturing policy" OR "industry policy" ) AND TITLE-ABS-KEY ( performance OR effectiveness OR impact OR outcomes OR success OR competitiveness OR evaluation OR assessment ) AND PUBYEAR > 1998 AND PUBYEAR < 2026 AND NOT TITLE-ABS-KEY ( "corporate strategy" OR "business strategy" OR "operations strategy" OR "lean manufacturing" OR "industrial relations" ) AND ( LIMIT-TO ( SUBJAREA , "ECON" ) OR LIMIT-TO ( SUBJAREA , "BUSI" ) OR LIMIT-TO ( SUBJAREA , "SOCI" ) OR LIMIT-TO ( SUBJAREA , "DECI" ) ).

The study integrated the PRISMA method into the bibliometric analysis to ensure maximum transparency and rigor in the publication selection process. Although this method was designed for systematic reviews, its adaptation to bibliometrics allows us to clearly document each step, from the identification to the final inclusion of articles, while ensuring the reproducibility of the analysis. It helps visualize the logical flow between the exploration, filtering, and exclusion phases, which reinforces the methodological credibility of our work.

The corpus was compiled without automatic filters, using deliberate methodological choices to ensure coherence and relevance. The identification aimed to gather all work related to industrial policies and strategies. A broad query in SCOPUS made it possible to avoid an narrow selection bias and to include all the terms used in the international literature. This temporal screening was introduced (1999-2025) for two reasons: first, this choice aimed both to situate the analysis in the contemporary period corresponding to the launch of modern Moroccan industrial policies, and to benefit from a sufficient observation period to follow the evolution of themes and debates.

Exclusion by keyword plays an essential role here: it allows us to eliminate significant conceptual noise. Indeed, many articles address "industrial strategy" from a microeconomic perspective focused on business strategy, lean manufacturing, or operations, which risks distorting the analysis if the objective is to understand public policies and their macroeconomic effects. The disciplinary restriction to the fields of economics, management, decision sciences, and social sciences aims to ensure that the selected corpus reflects a truly academic approach to industrial policy, and not a technical or technological perspective derived from engineering or industrial computing.

All types of documents available in SCOPUS were included to ensure a comprehensive representation of the field (articles, conference papers, book chapters, and journals) without applying any specific filter. This choice was deliberate because we felt it was important to represent the true richness of the field, without reducing it to only the most formal academic publications. Indeed, conferences and chapters often constitute spaces for intellectual experimentation, where ideas, theoretical frameworks, and initial results emerge before being consolidated into articles. By maintaining an open approach, we sought to capture the full dynamics of research, as expressed in the scientific community, while avoiding biasing our analysis through artificial exclusions.

This progressive approach allows us to obtain a corpus that is representative, relevant, and consistent with the objective of the thesis: to evaluate the performance of industrial policies from a macroeconomic perspective. Once the data were collected, we used the Bibliometrix package and its Biblioshiny interface in R and VOSViewer (to analyze and visualize keyword co-occurrence networks), which allow us to perform detailed bibliometric analyses and produce clear and robust visualizations. (15) This approach guarantees transparency, rigor, and, above all, a solid foundation to guide the rest of the thesis.

### Robustness test

To test the robustness of our query, we first froze everything that had to remain constant: same time window (1999-2025), same SCOPUS domains (ECON, BUSI, DECI, SOCI), same types of included documents (articles, journals, chapters, conferences), and no language filter. Then, we built an alternative query very close to the basic query: we kept the "industrial policy/strategies/manufacturing policy" block, added related formulas like "industrial development" and "industrial transformation", specified the result section with "economic

performance" and "industrial performance", and removed a classic source of noise, "energy policy", which often draws towards an energy/climate corpus. We ran both queries on the same day, exported the results in the same format (CSV/BibTeX), and then cleaned them in the same way: deduplication by DOI and title, simple keyword harmonization (lowercase, unified singular/plural, merged obvious variants).

In Bibliometrix, we applied the same parameters to both corpora: an identical minimum occurrence threshold for keywords, normalization of co-occurrences by association strength, the same clustering algorithm (Louvain), and the same thematic map settings. The comparison followed a consistent menu: total volume, top 20 keywords, top 10 journals and countries, share of "core" journals, distribution by document type, overlap of the top 50 keywords (measured simply by an overlap/Jaccard rate), density and center of the co-occurrence network, and the relative position of the basic and driving themes on the map. The idea was not to redo the entire analysis, but to verify that the structure of the field did not change when the query wording was reasonably varied.

We examined whether the "industrial policy → performance" core remained at the center of the maps, whether the major categories of themes remained in place, and whether the dominant countries and journals did not shift. This protocol, applied identically to both extractions, allows us to assert that our conclusions do not depend on an arbitrary choice of keywords, but rather reflect structural trends in the literature. (We provide the two exact queries and the parameters used in the appendix to ensure that the test is reproducible.)

### **RESULTS**

This section is dedicated to presenting the results of the bibliometric research. As this is a very broad scientific field, the data obtained are considerable and sometimes too vague if we try to analyze them in their entirety. Rather than getting lost in scattered results, we have chosen to focus on a few aspects that seem most significant to us to shed light on our subject.

The following table 1 represents our bibliometric corpus in the form of an adapted PRISMA flow diagram:

Table 1. Simplified PRISMA method		
Stage	Description	Results
Identification	Articles found with the query: ( "industrial policy" OR "industrial policies" OR "industrial strategy" OR "industrial strategies" OR "industrial development policy" OR "manufacturing policy" OR "industry policy" ) AND ( performance OR effectiveness OR impact OR outcomes OR success OR competitiveness OR evaluation OR assessment )	6189 documents initially identified
Screening	Limitation to the period 1999-2025 (PUBYEAR > 1998 AND PUBYEAR < 2026)	706 excluded 5 483 remaining
Eligibility	Exclusion of documents with off-topic keywords ("corporate strategy" OR "business strategy" OR "operations strategy" OR "lean manufacturing" OR "industrial relations")	168 excluded 5315 remaining
Inclusion	Limitation to relevant disciplinary subfields (ECON, BUSI, DECI, SOCI)	4026 documents included in the analysis

We will focus on four elements: keywords, which reflect the way in which researchers frame and define the notion of industrial policy performance; the most active countries, which reveal the geography of research and the centers where the debates are structured; the most cited documents, which represent in some way the essential references or anchor points of the field; and the themes, which allow us to see how ideas are grouped, evolve and are renewed over time.

# **Basic metrics**



Figure 1. General characteristics of the analyzed corpus

This figure (figure 1) highlights several key elements to situate our research. The high number of documents and sources shows that the subject of industrial policies and their performance is already explored, but not stabilized, since annual growth exceeds 8 %.

Scientific production follows a clearly upward trajectory throughout the period, reflecting a continuous expansion of the field and an intensification of the publication rate. This evolution, marked by several phases of acceleration, illustrates a process of progressive structuring of research. However, in 2025, a specific inflection was observed which temporarily interrupted this dynamic, without calling into question the general trend towards growth and consolidation of the field.

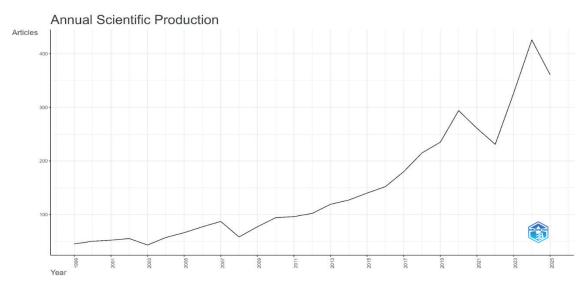


Figure 2. Annual scientific production

The geographical distribution of scientific production highlights a strong concentration around a few dominant poles. The United States, China, and the United Kingdom form the heart of the global network, accumulating the majority of publications and structuring the main international collaborations. Around this core gravitate several countries with high academic intensity (Germany, France, Italy, Canada, Japan, and Australia), ensuring continuity between the major Anglo-Saxon and Asian centers. At an intermediate level, certain emerging economies, notably Brazil, India, and South Korea, are gradually consolidating their presence, testifying to a measured expansion of the field into new scientific spaces.

Figure 3. Country scientific production

# Analysis of keywords and trending themes

Country Scientific Production

Thematic evolution highlights a gradual transformation of research priorities, marked by a shift in the center of gravity towards issues of a more global and sustainable scope. The classic notions of industrial policy, competitiveness and performance are giving way to themes articulated around sustainability, the green transition and new geoeconomic balances. This change reflects a continuous adaptation of the field to the

structural transformations of the global economy and the broadening of its analytical frameworks, where the logics of growth, innovation and sovereignty are now part of a more systemic and sustainable perspective.

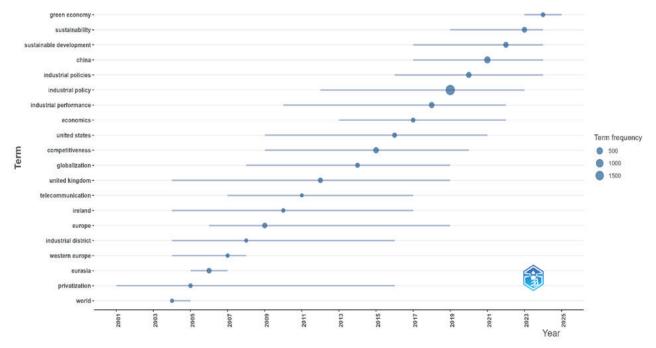


Figure 4. Temporal evolution of research themes on industrial policies (1999-2025)

Continuing the analysis of thematic trends, the network of co-occurrences of keywords highlights a strong consistency with the dynamics observed. The most central terms "industrial policy, innovation, manufacturing, competitiveness, and sustainable development" occupy structuring positions throughout the corpus. Related concepts such as industrial policies, economic development, industrialization, technology policy, and public policy gravitate around these cores, reflecting the consolidation of a scientific vocabulary common to the field. Overall, this confirms the preeminence of the concepts identified in the trending topics and underlines the continuity between the temporal evolutions of the themes and their semantic structuring in the overall network.

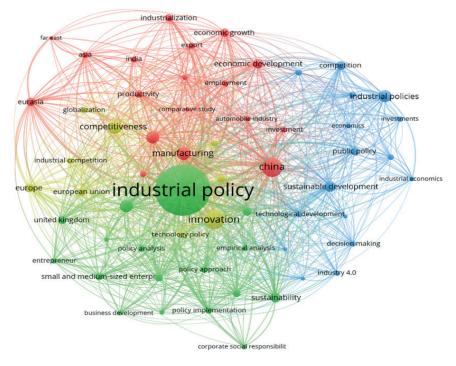


Figure 5. Keyword co-occurrence network

The conceptual mapping highlights a clear structuring of the field around two distinct sets. The first brings together notions related to European dynamics, competitiveness, and innovation, linked to growth and economic development. The second set combines terms related to public policies, regulation, and industrial competition. This organization reveals a coherent semantic architecture where economic, political, and institutional approaches are articulated in a complementary manner in the analysis of industrial policies and their effects.

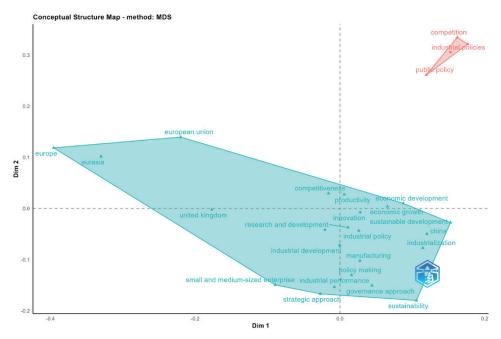


Figure 6. Conceptual Structure of the Field on Industrial Policy Performance (MDS Method)

In line with the previous conceptual structuring, the thematic map highlights three main groups. The first, located in the area of driving themes, brings together the notions of competitiveness, manufacturing and industrial performance, indicating their central role in the organization of the field. The second group, positioned on the side of basic themes, brings together industrial policy, innovation and China, testifying to their strong presence and anchoring in the literature. Finally, a third, more peripheral group, consists of industrial policies, competition and public policy, representing a related but less central axis in the overall structuring of the field.

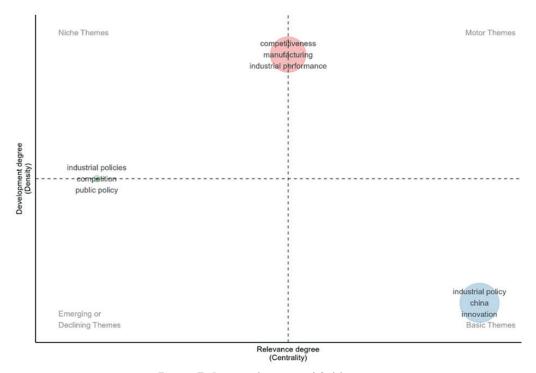


Figure 7. Driving themes and field structure

### **DISCUSSION**

Industrial policies have regained a central place in national economic strategies. However, research remains fragmented in terms of its actual scope and effects on industrial performance, due to the diversity of approaches, indicators, and evaluation frameworks used. In this context, the results obtained highlight a gradual structuring of the field, marked by the convergence of several dimensions (economic, technological, and institutional) within a now coherent whole, but still traversed by distinct thematic specializations.

The fact that no article is written alone and that the average reaches nearly seven co-authors reflects collective and internationalized research (18% international collaborations), reflecting a field where expertise circulates beyond national borders. The significant volume of references and the average level of citations confirm that we are dealing with an active, recognized, and constantly updated field. The diversity of keywords reflects a conceptual fragmentation, a sign that industrial performance is approached from multiple angles. These results are valuable: they allow to understand that we are entering a debate and they help us better situate our contribution within a literature still riddled with numerous areas of uncertainty.

These patterns are consistent with broader transformations observed in global scientific production. Recent studies have shown that the growth of co-authorship and international collaboration reflects the intellectual maturity and specialization of research fields. (22,23,24,25) The increase in multinational research teams enhances both productivity and citation impact, reinforcing the idea that collaboration has become a central driver of scientific advancement. (26) Moreover, international partnerships contribute to greater visibility and conceptual diversity, which helps explain the coexistence of multiple analytical approaches observed in this study. (27) Overall, the field of industrial policy research appears to follow the same trajectory of globalization and knowledge integration as other domains of social sciences and applied economics.

The figures on the annual evolution of scientific production and the geographical distribution of publications were combined because they reflect the same logic of evolution: the former shows the pace, the latter the space of this dynamic. Together, they reveal that the increase in the volume of publications on industrial policies has not spread but has been concentrated in a restricted network of leading countries.

This configuration is not insignificant: it reflects a cumulative specialization effect where the most developed scientific ecosystems consolidate their lead by generating more research, collaborations, and citations. (16) The strong contribution of the United States, China, and the United Kingdom can also be explained by their strategic role in producing analytical frameworks on the effectiveness of industrial policies and their influence on publication standards. (17,18) The upward trend in global volume, alongside this geographic concentration, illustrates an asymmetrical integration of the field: research is growing rapidly but remains channeled through hubs that combine institutional capacity, funding, and international visibility. (19) In other words, the global dynamics of the field are based on a quantitative expansion that relies on dominant cores rather than on a homogeneous diffusion of scientific production.

The figures relating to thematic evolution, the network of co-occurrences, the conceptual mapping, and the thematic map have been combined because they reflect, from different perspectives, the same intellectual dynamic: the transformation of the scientific content of the field and the way in which its components have gradually been organized. Together, they show that research on industrial policies has shifted from an analytical core focused on performance, competitiveness, and growth to a broader vision integrating sustainability, resilience, innovation, and technological transition. In other words, industrial policy is no longer studied solely as a lever of economic efficiency, but as a structuring framework for systemic transformation.

Similar evolutions have been reported in adjacent domains, where research agendas have progressively incorporated environmental and social dimensions into traditional economic frameworks. (28,30) Recent analyses also emphasize that the integration of sustainability and technological change reflects a paradigm shift in development economics, moving from short-term productivity gains to long-term structural transformation. (30,31) Empirical analyses have demonstrated that this evolution corresponds to a deeper integration between technological upgrading, institutional learning, and green innovation, signaling the emergence of a mission-oriented policy framework in industrial research. (32,33)

The network of co-occurrences confirms this evolution: the notions of industrial policy, innovation, manufacturing, competitiveness, and sustainable development constitute the anchor points of a common language, around which gravitate related concepts such as technology policy, industrialization, and public policy. This reflects a process of lexical stabilization typical of maturing fields, where the scientific community converges towards a shared vocabulary and common theoretical frameworks. The conceptual mapping and the thematic mapping point in the same direction: they reveal a polarization between two major poles (one focused on competitiveness, innovation, and growth, the other on public policies and regulation) which coexist rather than oppose each other. This dual structuring illustrates a hybridization of the field, where economic and institutional approaches are now articulated around cross-cutting issues such as sustainability or productive sovereignty. (10,14)

Overall, these results confirm that the field of industrial policy has reached a stage of intellectual

consolidation: research no longer simply measures the economic effects of public interventions; it places them within a broader reflection on the transformation of production systems and new development models. This reshaping is in line with recent work advocating for a mission-oriented and sustainable industrial policy, (20) in which performance and sustainability are no longer separated but are considered as two dimensions of a single process of structural adaptation.

The bibliometric results largely confirm the findings of the literature and organize them into a cumulative perspective. The sustained rise in scientific production, concentrated around a few dominant poles, is consistent with the analyses that describe the re-emergence of global interest in industrial policies as levers of structural transformation. (8,10) The preponderance of countries with high research capacity (the United States, China, and the United Kingdom) is consistent with the observations on the concentration of expertise networks in economies with high scientific capital. (18)

The evolution identified in trending topics and co-occurrences confirms the broadening of the scope beyond competitiveness and productivity to include issues of sustainability, innovation, and sovereignty, as anticipated. (10) This shift reflects the transition described: (9) the shift from a corrective logic to a transformational approach in which industrial policy becomes an instrument of systemic change. Similarly, the structuring of the conceptual network around the terms innovation, sustainable development, and industrial performance empirically validates the theoretical convergence between growth, resilience, and the green transition. (12,13) Finally, the duality observed in the conceptual mapping reflects the theoretical tension between approaches focused on measurable economic outcomes and those emphasizing governance and institutional capacities.

Thus, the results of this study not only illustrate the divergences highlighted by the literature: they also organize and confirm them, revealing how the field has structured itself around an implicit consensus linking performance, innovation, and sustainability in contemporary industrial policy analysis.

### **ORIGINALITY AND LIMITATIONS**

This work brings real added value to research, as it does not simply describe the field of industrial policies but offers an integrated and up-to-date reading of it. By linking performance, political approaches, and recent transformations in the global context, it highlights how research has shifted towards new issues (sustainability, technological sovereignty, green innovation) without these dimensions being fully theorized. The study therefore provides a structured vision that helps to understand where research really stands, where it is fragmented, and, above all, in which directions it is evolving. It thus provides a solid basis for rethinking future work on the evaluation and design of industrial policies within a comprehensive and coherent framework.

This study has several limitations that should be considered when interpreting the results in a balanced manner. First, it relies exclusively on the SCOPUS database, which, while extensive and rigorous, does not cover the entire global scientific output. As a result, some important works published in local journals, institutional reports, or unindexed works may be missing from the corpus. This coverage bias naturally favors English-language publications and countries with high academic visibility, thus limiting the overall representativeness of the field. A second limitation relates to the temporal dimension. The most recent publications, particularly those from 2024 and 2025, have not yet benefited from a complete cycle of citations or sufficient dissemination in the scientific community. Their real influence on the structuring of the field therefore remains underestimated. In this sense, the proposed results must be understood as a snapshot, which only imperfectly captures emerging trends.

Furthermore, the bibliometric analyses used are based on quantitative relationships (co-occurrence of keywords, co-citation, lexical similarity), which do not always reflect the conceptual or theoretical proximity between the works. Two articles may share a common vocabulary while defending opposing methodological or normative positions. Hence the need, for any in-depth interpretation to complement bibliometrics with a qualitative reading of the contents. Finally, this research focuses on academic production and not on the actual effects of industrial policies in the observed economies. It sheds light on how researchers design, evaluate, and debate these policies, but does not allow for direct measurement of their economic or social impacts.

Extensions involving empirical or econometric analyses would therefore be necessary to link research dynamics to industrial performance observed in the field, and to better understand how Academic thought influences or accompanies the concrete transformations of productive systems.

# **CONCLUSIONS**

This study provides a comprehensive understanding of how research on industrial policies and their performance has evolved and structured itself between 1999 and 2025. By examining conceptual developments, thematic trends, and intellectual structures, it highlights the progressive maturation of the field from fragmented approaches to an increasingly integrated framework. Over time, studies have converged toward multidimensional perspectives that link economic performance with innovation, sustainability, and technological transformation, reflecting the growing complexity of industrial challenges in a globalized and transitional economy. Beyond offering a bibliometric mapping, the study contributes to clarifying how industrial policy

research has organized its theoretical foundations and to identifying the conceptual bridges that now connect performance, governance, and long-term structural change.

Several research avenues are emerging. The first step will be to explore more closely the connections between industrial policy, sustainability, and digital transition, which appear to constitute the new structuring axes of the field. Second, expanding the corpus to include non-English-language publications and regional policies would help mitigate the remaining geographical and linguistic biases. Finally, strengthening comparative and empirical approaches would provide a better understanding of national models of public intervention and their influence on industrial performance in a changing global context. In short, this study lays the foundations for a renewed understanding of the field, while paving the way for more integrated work, capable of linking scientific production to the concrete transformations of contemporary production systems and to the structural changes in the global economy.

### **BIBLIOGRAPHIC REFERENCES**

- 1. Andreoni A, Chang HJ. The political economy of industrial policy: Structural interdependencies, policy alignment and conflict management. Structural Change and Economic Dynamics. 2019;48:136-150. doi:10.1016/j.strueco.2018.10.007
- 2. Robinson DKR, Mazzucato M. The evolution of mission-oriented policies: Exploring changing market-creating missions in the US and Europe. Research Policy. 2019;48(4):936-948. doi:10.1016/j.respol.2018.10.005
- 3. Dosi G, Lamperti F, Mazzucato M, Napoletano M, Roventini A. Mission-oriented policies and the "Entrepreneurial State" at work: An agent-based exploration. Journal of Economic Dynamics and Control. 2023;151:104650. doi:10.1016/j.jedc.2023.104650
- 4. Hekkert MP, Janssen MJ, Wesseling JH, Negro SO. Mission-oriented innovation systems. Environmental Innovation and Societal Transitions. 2020;34:76-79. doi:10.1016/j.eist.2019.11.011
- 5. Uyarra E, Bugge MM, Coenen L, Flanagan K, Wanzenböck I. Geographies of mission-oriented innovation policy. Environmental Innovation and Societal Transitions. 2025;56:100970. doi:10.1016/j.eist.2025.100970
- 6. Jakob M, Overland I. Green industrial policy can strengthen carbon pricing but not replace it. Energy Res Soc Sci. 2024 Oct;116:103669. doi:10.1016/j.erss.2024.103669.
- 7. Pack H, Saggi K. The case for industrial policy: a critical survey. The World Bank Research Observer. 2006;21(2):267-297. doi:10.1093/wbro/lkl001
- 8. Rodrik D. Normalizing industrial policy. Commission on Growth and Development Working Paper No. 3. Washington (DC): World Bank; 2008.
- 9. Warwick K. Beyond industrial policy: Emerging issues and new trends. OECD Science, Technology and Industry Policy Papers No. 2. Paris: OECD Publishing; 2013. doi:10.1787/5k4869clw0xp-en
- 10. Aiginger K, Rodrik D. Rebirth of industrial policy and an agenda for the twenty-first century. Journal of Industry, Competition and Trade. 2020;20(2):189-207. doi:10.1007/s10842-019-00322-3
- 11. Lavopa A, Szirmai A. Structural modernisation and development traps: An empirical approach. World Development. 2018;112:59-73. doi:10.1016/j.worlddev.2018.07.005
- 12. Lee K. The art of economic catch-up: Barriers, detours and leapfrogging in innovation systems. Cambridge: Cambridge University Press; 2019.
- 13. Criscuolo C, Gal P, Leidecker T, Nicoletti G, Schwellnus C. Productivity growth and finance: The role of intangible assets Evidence from OECD countries. OECD Productivity Working Papers No. 36. Paris: OECD Publishing; 2022. doi:10.1787/1d290e9f-en
- 14. Andreoni A, Chang HJ, Scazzieri R. Industrial policy in context: Building blocks for an integrated and comparative political economy agenda. Struct Change Econ Dyn. 2019 Mar;48:1-6. doi:10.1016/j. strueco.2018.11.003.

- 15. Aria M, Cuccurullo C. Bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of Informetrics. 2017;11(4):959-975. doi:10.1016/j.joi.2017.08.007
- 16. Bornmann L, Daniel HD. What do citation counts measure? A review of studies on citing behavior. Journal of Documentation. 2008;64(1):45-80. doi:10.1108/00220410810844150
- 17. Leydesdorff L, Wagner CS. International collaboration in science and the formation of a core group. J Informetr. 2008 Oct;2(4):317-25. doi:10.1016/j.joi.2008.07.003.
- 18. Glänzel W, Schubert A. In: Moed HF, Glänzel W, Schmoch U, editors. Handbook of quantitative science and technology research: The use of publication and patent statistics in studies on S&T systems. Dordrecht: Springer; 2004. p. 257-76.
- 19. Larivière V, Haustein S, Mongeon P. The oligopoly of academic publishers in the digital era. PLoS One. 2015;10(6):e0127502. doi:10.1371/journal.pone.0127502
- 20. Rodrik D. Towards a more inclusive globalization: An anti-social dumping scheme. Economists for Inclusive Prosperity (Econfip) Research Brief. 2018 Dec.
- 21. Andreoni A, Kuan M, Scazzieri R. Industrial Policy in Context: Building Capabilities for Structural Transformation. Structural Change and Economic Dynamics. 2021;59:21-36. doi:10.1016/j.strueco.2021.04.003
- 22. Beaver DD. Reflections on scientific collaboration (and its study): past, present, and prospective. Scientometrics. 2001;52(3):365-77.
  - 23. Wagner CS, Jonkers K. Open countries have strong science. Nature. 2017;550(7674):32-3.
- 24. Leahey E, Beckman CM, Stanko TL. Prominent but less productive: The impact of interdisciplinarity on scientists' research. Adm Sci Q. 2017;62(1):105-39.
  - 25. Adams J. Collaborations: The rise of research networks. Nature. 2012;490(7420):335-6.
- 26. Gazni A, Sugimoto CR, Didegah F. Mapping world scientific collaboration: Authors, institutions, and countries. J Am Soc Inf Sci Technol. 2011;63(2):323-35.
- 27. Costantini V, Crespi F, Palma A. Characterizing the policy mix and its impact on eco-innovation: A patent analysis of energy-efficient technologies. Res Policy. 2017;46(3):799-819.
- 28. Altenburg T, Rodrik D. Green industrial policy: Concept, policies, country experiences. Oxf Rev Econ Policy. 2017;33(1):1-24.
- 29. Lema R, Rabellotti R, Gehl Sampath P. Innovation trajectories in developing countries: Co-evolution of global value chains and innovation systems. Eur J Dev Res. 2018;30(3):345-63.
- 30. Cohen B, Winn MI. Market imperfections, opportunity and sustainable entrepreneurship. J Bus Venturing. 2007;22(1):29-49.
  - 31. Pisano GP, Shih WC. Restoring American competitiveness. Harv Bus Rev. 2009;87(7/8):114-25
- 32. Smith A, Stirling A, Berkhout F. The governance of sustainable socio-technical transitions. Res Policy. 2005;34(10):1491-510.
  - 33. Sorrell S. Explaining sociotechnical transitions: Acritical realist perspective. Res Policy. 2018;47(7):1267-82.

# **FINANCING**

The authors receive financing from the CNRST in Morocco.

## **CONFLICT OF INTEREST**

None.

# **AUTHORSHIP CONTRIBUTION**

Conceptualization: Fatima-Zahrae Lakhlifi. Data curation: Fatima-Zahrae Lakhlifi.

Formal analysis: Fatima-Zahrae Lakhlifi, Mohammed Abdellaqui.

Research: Fatima-Zahrae Lakhlifi. Methodology: Fatima-Zahrae Lakhlifi.

Project management: Mohammed Abdellaqui.

Resources: Fatima-Zahrae Lakhlifi. Software: Fatima-Zahrae Lakhlifi. Supervision: Mohammed Abdellaqui. Validation: Mohammed Abdellaqui. Display: Fatima-Zahrae Lakhlifi.

Drafting - original draft: Fatima-Zahrae Lakhlifi.

Writing - proofreading and editing: Fatima-Zahrae Lakhlifi.