Management and Development for Research and Studies | Volume: 15 / N°: 01 Juin (2026), p 409-425

Exploring the Role of Legal Studies in Intangible Capital: A Bibliometric Analysis

AFIA Kada [1*], DATOUSSAID Aimad [2]
[1] Enterprise Management Laboratory (Sidi Bel Abbes University, Algeria), kada.afia@univ-sba.dz
[2] Sidi Bel Abbes University, Algeria, datou_imad@yahoo.fr

Received: 15/03/2026 Accepted: 08/05/2026 Published: 01/06/2026

Abstract:

This study aims to explore the trajectory of scholarly trends concerning the topic of the role of legal studies in intangible capital, in order to facilitate understanding of future directions in academic interest. A bibliometric and content analysis was conducted based on the PRISMA framework, supported by the VOSviewer software. The study examined all research published from 1981 to 2025, analyzing a set of 252 publications up to 2025, as documented in the Scopus database after applying inclusion and exclusion criteria, along with manual verification. The study results revealed the predominance of developed countries in the first place, followed by emerging countries, while highlighting the absence of developing countries from the global scene, especially African nations, which are now facing the imperative of transitioning toward intangible capital and Innovation. The finding also indicate that the fields of entrepreneurship and management are the most active in studying this topic compared to other scientific discipline

Keywords: Law; Intangible Capital; Bibliometric Analysis; Intellectual Capital; Legal Studies.
Jel Classification Codes: K11, O34.

* Corresponding author

1. INTRODUCTION

Before the 1980s, economic approaches focused on the material aspect of intangible capital, until the Scandinavian school emerged in the late 1980s and early 1990s to focus on the other aspect, namely intangible capital (Bounfour, 2003; Labiad N, Datoussaid A; 2021; Datoussaid, A & Hamadi, A), with the emergence of the works of Sveiby, Edvinsson, Stewart, and others. The evolutionary theory led by Richard Nelson and Sidney Winter emerged, particularly in their book An Evolutionary Theory of Economic Change (1982) (Dosi, Nelson, 1994).

The importance of intangible capital has been further reinforced in the era of digital transformation, especially with the emergence of artificial intelligence, where attention has increasingly focused on inventions and creativity, and the importance of knowledge has grown (Tambe P et al., 2019; Liu, Xing, 2023). This transformation has been accompanied by remarkable interest from scientific circles, which have produced numerous writings on intangible capital, especially in the fields of entrepreneurship and management (Fadi A et al., 2024).

This importance has led countries to reinforce it with special legal protection, by enacting a set of laws and mechanisms that protect it from copying, imitation, and illegal use, making this topic also of interest to the field of legal sciences and not only to scientific fields related to management, entrepreneurship, and economics. This study aims to examine the scientific and academic approaches to the interface between law and intangible capital in order to chart future directions.

This remarkable shift towards intangible capital in knowledge-based economies has been accompanied by significant attention from scientific studies, which have shown notable proliferation and expansion. However, given the role of law in regulating its procedures, limits, and methods of protection, there is a scientific need to examine the extent to which legal studies have addressed this role. Accordingly, the following main research question arises: **Has intangible capital received sufficient coverage in legal scientific studies that explore its relationship with the law?**

From this main question, the following sub-questions are derived:

RQ1: What is the distribution about the law & intangible capital Publication by years between 1981 and 2025?
RQ2: What are the most relevant journals and authors in about law & intangible capital?
RQ3: What are the most productive countries in law & intangible capital Research area?
RQ4: What are the most published authors in law & intangible capital?
RQ5: What is the primary research keyword concerning law and IC between 1981 and 2025?

2. Literature Review

2.1 Intangible Capital – A Conceptual Debate

Most studies addressing the topic of IC focus on three elements: first, attempting to define the concept; second: examining its most important components, which are often human capital (DATOUSSAID A, 2019), structural capital (Luminita M.G, 2014; Boudaoud F, 2024), and relational capital (Ramírez-Solis et al., 2022); and third, the most scientifically challenging element, which relates to the difficulty of measuring it due to its intangible nature (van Ark et al., 2009). Studies that have attempted to define it focus on its intangible nature—that is, its lack of a physical form. Examples include patents, software, databases, trademarks, and research and development, which are collectively referred to as structural capital. We also find knowledge in its explicit and tacit forms, as well as the expertise and skills of individuals, all of which constitute human capital—considered the most important component of IC in addition to customers and other external stakeholders who constitute relational capital (Crouzet, Nicolas et al, 2022; Afia K, Datoussaid A, 2024). According to Sveiby (1986), Bontis (2000), and Meritum (2002), the main components of IC are human capital, structural capital, and relational capital, while Edvinsson & Malone (1997) focused on human and structural capital, and Stewart (1997) added

customer capital as a third component. Other studies have attempted to include additional components such as productive capital, organizational capital, and others (Wael Bakhit et al., 2019). With technological developments leading to the widespread adoption of artificial intelligence, the latter has emerged as one of the components of IC in knowledge-based economies (AFIA K, 2025).

As for the issue of measuring IC, several methods have been proposed based on different economic approaches. Among these methods is Tobin's Q model, developed by James Tobin (1978), which measures the ratio between a company's market value and the replacement value of its assets. There are also accounting methods, such as Human Resource Accounting, which is considered one of the oldest methods to emerge and gain widespread use in the 1960s and 1970s, as it relies on measuring the costs of work units and the economic value of individuals. The most well-known method in the field of measurement is the Scandia Navigator method, which tested a wide range of approaches and techniques covering five main areas. Another method of equal importance is the Human Resource Costing and Accounting method, which relies on calculating the hidden costs associated with the impact of human resources. Several other methods have also garnered scientific attention, including Technology Broker, Intangible Assets Monitor, Calculated Intangible Value, and Economic Value Added (Toolabi M et al., 2015).

2.2 Common Elements between Intangible Capital and Law

Despite the attention that IC has received in academic fields related to management, entrepreneurship, and economics, this does not mean that it is a subject independent of the field of laww, since it is the latter that regulates its scope, defines its legal framework, and provides it with protection. There are several points of intersection between act and IC, primarily evident in trademarks, patents, copyrights, trade secrets, software, and even in the regulation of related contracts, agreements, and licenses. Consequently, the Act provides protection for the components of I.C by safeguarding them against unauthorized copying or exploitation, as is the case, for example,

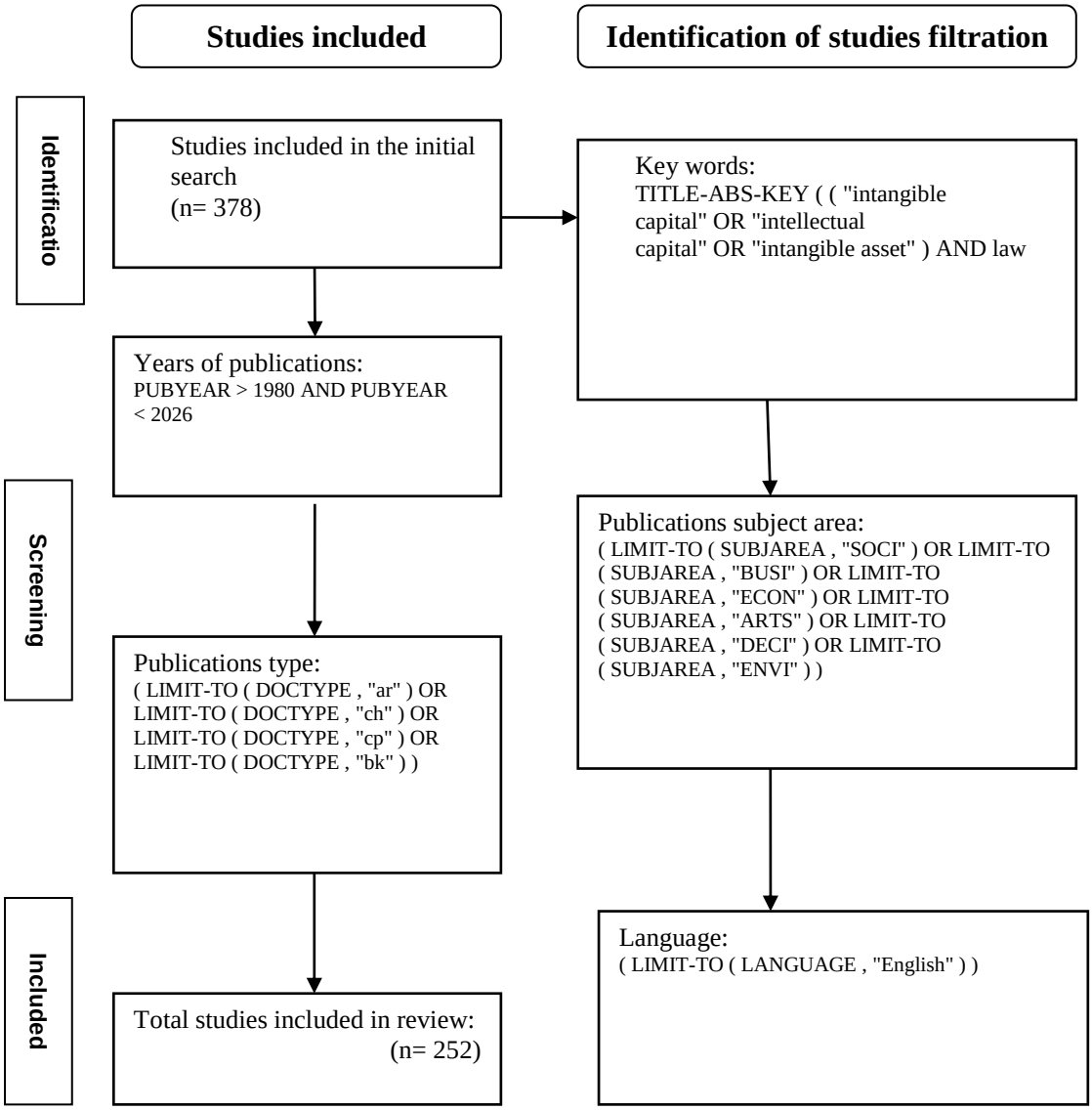
with intellectual property, where the duration of protection and registration mechanisms are defined. In this regard, most national laws grant a specific term for the exploitation of patents, allowing organizations to increase their competitiveness (Ahmad Hidayat, 2023).

WIPO is one of the most important international mechanisms reflecting the legal protection of intellectual property, through its supervision of a set of agreements and regulations that protect inventions, innovations, and intellectual creations. This has led many countries to follow suit by enacting a set of law.s governing these inventions and innovations (Henning G., 2012). As a result, this legal importance requires scientific attention in the field of publishing and related scientific research.

3. Materials and methods

This review aims to reveal the profile of the studies carried on laww and I.C for the last decades. To achieve this, bibliometric analysis review was conducted in this study to identify research foci and anticipate future research directions in an academic field. This research was conducted on 07-03-2026, Scopus data bases was used in this search. The initial search revealed 378 articles in laaw and Intangible Capital, the keywords that were used: TITLE-ABS-KEY (("intangible capital" OR "intellectual capital" OR "intangible asset") AND law) AND PUBYEAR > 1980 AND PUBYEAR < 2026 AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "BUSI") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "ARTS") OR LIMIT-TO (SUBJAREA , "DECI") OR LIMIT-TO (SUBJAREA , "ENVI")) AND (LIMIT-TO (DOCTYPE , "ar") OR LIMIT-TO (DOCTYPE , "ch") OR LIMIT-TO (DOCTYPE , "cp") OR LIMIT-TO (DOCTYPE , "bk")) AND (LIMIT-TO (LANGUAGE , "English")). This research covered the last years from 1981 to 2025. Finally, the research language used articles, chapters, conferences published in English language excluded any other languages, Moreover, and the final articles used in this review were 252 articles.

Fig.1. PRISMA Framework



Source: PRISMA Framework

4. RESULTS AND DISCUSSION

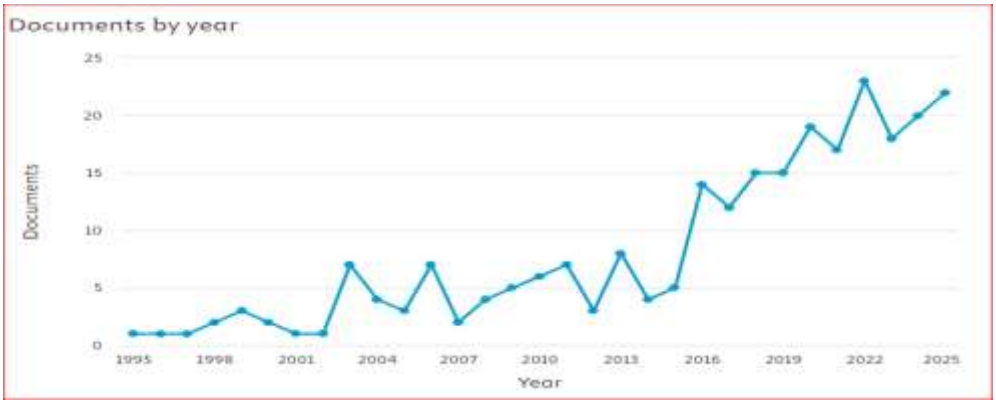
This review reveals the research profile of studies on legal studies and intangible capital (1981–2025). The findings of this review were discussed based on the research questions.

4.1 The distribution of publications between 1981 and 2025

To address the first finding, an analysis was conducted of the publication year of the articles from 1981 to 2025. It was noticed that the papers were primarily published in the previous couple of years; the year 2022 recorded the highest number of publications with 23 scientific papers, then decreased to 18 and subsequently increased to 20 and 22 in the years 2023, 2024, and 2025, respectively. It is observed from Figure 2 below that the number of publications linking I.C to legal dimensions fluctuated in recent years. Although there was a slow overall increase, the years that experienced rapid growth were 2016, with 14 publications compared to 5 publications in 2015, and 2022, with 23 publications compared to 17 publications in 2021.

Another observation is that the first publication linking the two variables appeared in 1995, as no scientific publications discussing the legal accompaniment of I.C were found in the database for the period between 1981 and 1995, as shown in Figure 2 below.

Fig.2. distribution of documents by Year



Source: Scopus database

4.2 The Most relevant Journals and Authors About Legal studies and intangible capital

In the content analysis made for the most cited journals, "Total Publication, "Total Citation", Cite Score of the journal, "The most cited article, "Times cited, and "Publisher‖ was chosen as the analysis criteria as presented in Table 1. This table shows that the most productive journal concerning I.C and scientific studies was "Proceedings of the European Conference on Knowledge Management", with a total general publications number of 641 and a total citation of 418. Secondly, journal of advanced research in llaw and economics with a total publications number of *884*, a total citation of *1284*, thirdly, sustainability with a total publications number of 58414 and a total citation of 450030.

It can be observed from Table 1 below that the most cited articles focus heavily on the variable **"**I.C**"** in their titles, with most of them overlooking the legal studies, which reflects the scarcity of scientific publications attempting to integrate the legal approach into this new form of capital. Statistics related to scientific fields indicate that social sciences represent the highest proportion at 30**.**4%, followed by economics and management at 24**.**8%, then political economy and finance at 18**.**4%, while the remaining scientific fields account for only minor percentages, as shown in Figure 3 below.

Accordingly, by linking Table 1 and Figure 3, it becomes evident that the scientific gap in the legal approach is due to the focus of entrepreneurship and management disciplines on I..C according to their scientific specialization, and to a lesser extent, political economy and finance disciplines, where the study of legal dimensions is not primary. Meanwhile, the llaw discipline, within the field of social sciences, lacks studies related to I..C capital. This explanation is further confirmed by Figure 4 and Table 2.

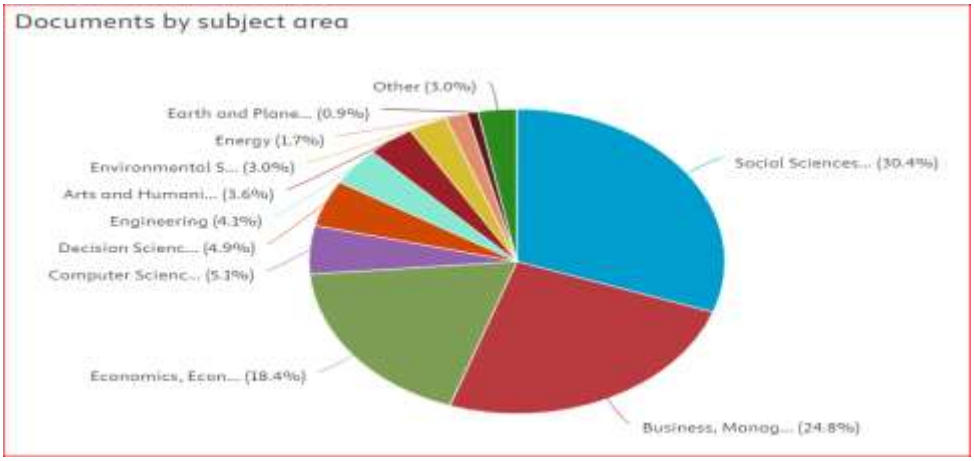
Table 1. The Top 10 Highly Productive Journals (1981-2025)

	journal	*tp*	*tc*	*cite score*	*the most cited articles*	*times cited*	*authors*	*publisher*
1	*proceedings of the european conference on knowledge management, eckm*	641	418	0.7	exploring the interplay between tacit and explicit knowledge in organizational settings: a systematic review	1	pasipamire, e. (2025), 2, pp. 773-781	academic conferences and publishing international limited
2	*journal of advanced research in laaw and economics*	884	1284	1.5	artificial intelligence as a new category of civil laaw	13	ogneva, n.i. et al (2020), 11 (1), pp. 91-98	asers publishing
3	*sustainability (switzerland)*	58414	450030	7.7	the impact of adaptive learning technologies, personalized feedback, and interactive ai tools on student engagement: the moderating role of digital literacy	101	mohammad, a.s. et al (2025), 17 (3), 1133	mdpi
4	*contributions to economics*	703	343	0.5	a review approach to understanding the current status of port resilience: lessons learned for gcc ports	6	anwar, a.h.m.m. et al (2025), part f3776, pp.315-340	springer nature
5	*indonesia laaw review*	52	43	0.8	dynamics of the penitentiary system, transparent and accountable handling of criminal cases in criminal execution laaw in southeast asia: convergence and divergence of international perspectives	9	widyawati, a. et al (2025), 15 (1), pp. 15-36	university of indonesia faculty of laww
6	*international journal of disclosure and governance*	129	706	5.5	an empirical analysis of sdg disclosure (sdgd) and board gender diversity: insights from the banking sector in an emerging economy	28	mazumder, m.m.m (2025), 22 (1), pp. 47-63	springer nature
7	*international journal of learning and intellectual*	117	316	2.7	*elevating firms' sustainability through the power of green intellectual capital: a*	2	shaukat, h.s. (2025), 22(2), pp. 125–145	inderscience publishers

	capital				*study unveiling sustainable success*			
8	*international journal of organizational analysis*	503	4319	8.6	the role of artificial intelligence in auditing and fraud detection in accounting information systems: moderating role of natural language processing	29	qatawneh, a.m. (2025), 33 (6), pp. 1391-1409	emerald publishing
9	*international journal of technology management*	3.0	176	522	overseas r&d investment and enterprise digital transformation	5	xia, m., li, q., yang, y., yang, y. (2025), 97 (2-3), pp. 123-143	inderscience publishers
10	*international review of sociology*	110	265	2.4	indigeneity, precarity, and peace: lessons from cambodia	3	manning, p., keo, d. (2025), 35 (3), pp. 545-570	taylor & francis

Source: Scopus Data base

Fig. 3 Documents by Subject



Source: Scopus Data Base

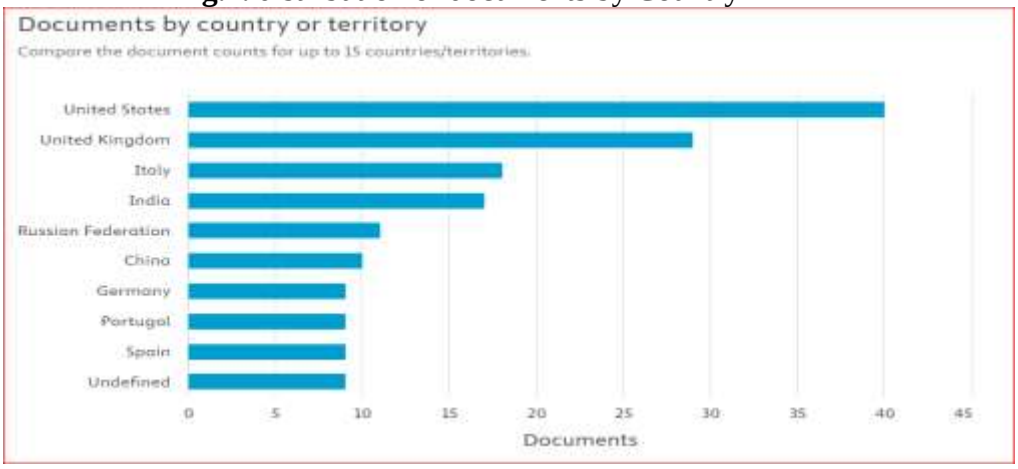
4.3 The Most Productive Countries

In order to address the question regarding the distribution of countries' interest in the topic of la.w and I..C over time, the ten countries with the highest scientific output on the our topic were selected. Among these, USA led with 40 scientific publications, as shown in Fig 02 below. Uk comes second in terms of scientific output on the same topic.

Figure 4 illustrates that the countries dominating the global scientific publishing landscape on the subject of this study are primarily developed countries and secondarily emerging countries. Among the top 10 countries, six are developed: the United States, the United Kingdom, Italy, Germany, Portugal, and Spain, and three are emerging: China, India, and Russia, which are members of the BRICS bloc. This reflects the intense competition between emerging and developed countries in scientific publishing on one of the most debated topics.

Figure 4 also highlights the complete absence of developing countries and African nations, indicating that they need to catch up in this competition, which constitutes one of the recommendations of our study.

Fig.4. distribution of documents by Country



Source: Scopus Data base

These results reflect the correlation between countries that are leaders in knowledge, innovation, and all other components of I..C capital, and their leadership in scientific contributions. For example, the United States ranks third globally in innovation (Global Innovation Index Ranking, 2024), first globally in artificial intelligence (GAII, 2024), and seventh globally in the field of knowledge, while China ranks 11th and 2nd globally in the fields of innovation and artificial intelligence, respectively (GII, 2024; GAII, 2024). The results confirm a significant correlation between African

countries' lag in scientific contributions related to legal studies and I..C capital, and their lag in the areas of innovation and knowledge.

4.4 The Most Published Authors

Table 2 presents the most prolific authors who have attempted to link the legal studies with I/C capital. The Portuguese author Aldeia ranks first, followed by the Chinese author Alsaleh in second place.

The list of the top 10 authors also shows that Sweden and Greece each include two authors, which may explain the connection between these countries and legislative policies related to I/C capital. Furthermore, the list does not include any authors from developing or African countries, which may indicate a lack of awareness of the legal approach to I/C capital in these regions.

Table 2. The Most Published Authors on the Topic of Intangible Capital and Law

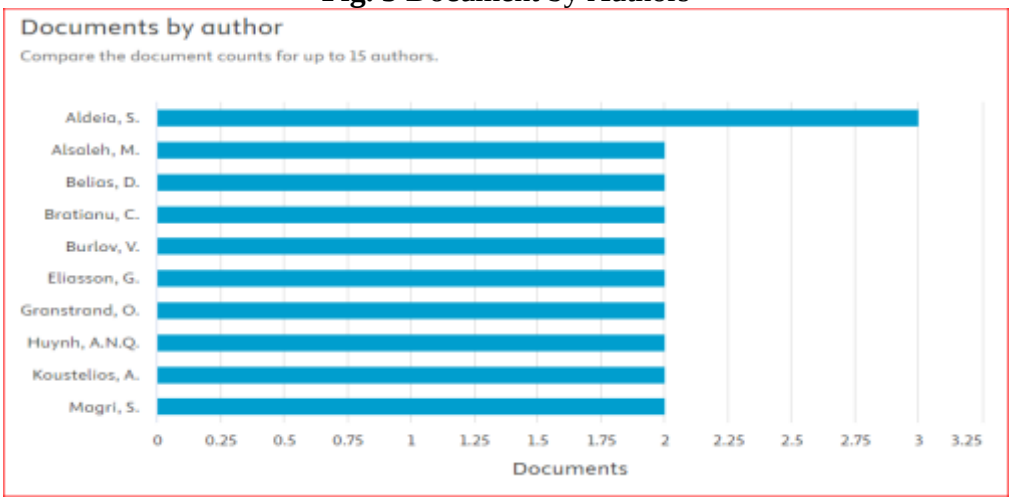
	authors	*institution*	*country*	*Documents*
1	Aldeia, Susana Cristina Rodrigues	Universidade Portucalense Infante D.Henrique	Portugal	3
2	Alsaleh, Mohd	Shanghai Ocean University	China	2
3	Belias, Dimitrios	University of Thessaly	Greece	2
4	Bratianu, Constantin	Bucharest University of Economic Studies	Romania	2
5	Burlov, V. G.	Peter the Great St. Petersburg Polytechnic University	Russian Federation	2
6	Eliasson, Gunnar	The Royal Institute of Technology	Sweden	2
7	Granstrand, Ove	Ghalmers University of Technology	Sweden	2
8	Huynh, Anh Ngoc Quang	University of Economics Ho Chi Minch City	Viet Nam	2
9	Koustelios, Athanasios D.	University of Thessaly	Greece	2
10	Magri, Silvia	Banca d'Italia	Italy	2

Source: Scopus data base

The Scandinavian school has demonstrated the role of knowledge in the field of I-C. Sweden, for example, is one of the countries with the most authors contributing to the topic of the relationship between act and I-C, which confirms the role of the Scandinavian school in this field (Labiad N, Datoussaid A, 2021). Sweden ranked first globally in the Global Knowledge Index in 2024 (GKI, 2024) and second globally in the Global Innovation Index (GII, 2024) for the same year, statistics that confirm the

correlation between countries' investment in I-C and their scientific contributions in the same field (See Fig. 5).

Fig. 5 Document by Authors



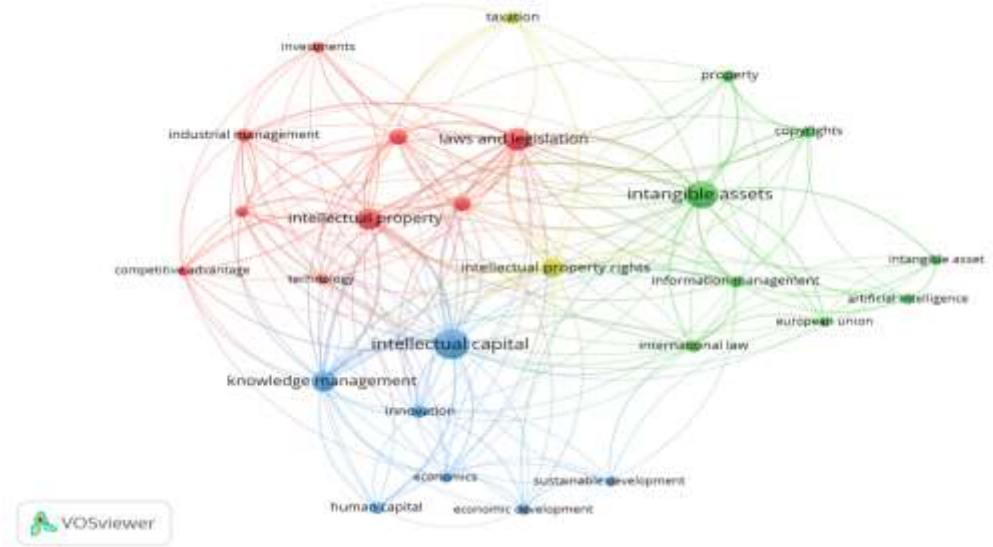
Source: Scopus Dat Base

4.5 Keyword Co-occurrence Analysis

The keyword co-occurrence map generated using the software VOSviewer reveals several thematic clusters representing the main research areas where act intersects with I-C. At the center of the network appears the concept of intangible assets, which functions as a core node connected to various legal, managerial, and economic concepts. The green cluster highlights the relationship between intangible assets and topics such as international Acct, information management, artificial intelligence, and property rights, which reflects the limited legal and regulatory dimensions governing these assets, as they appear to be largely confined to the field of property rights, the red cluster links law.s and legislation, intellectual property, industrial management, investments, and competitive advantage. Additionally, the blue cluster is associated with concepts such as intellectual capital, knowledge management, innovation, economic development, and human capital, illustrating the economic and developmental dimensions of I-C.

Despite the density of connections and the relative size of the nodes within the network, the results show that intangible capital is more strongly associated with economic and managerial concepts than with legal ones. This pattern suggests that the scholarly discussion surrounding intangible capital has been predominantly shaped by economic perspectives, particularly those related to knowledge management, innovation, and economic development. Consequently, the legal dimension appears comparatively underrepresented, reflecting a noticeable gap in legal studies addressing intangible capital. This imbalance indicates the need for greater engagement from legal scholarship in order to better frame the regulatory, institutional, and normative aspects governing intangible assets in the contemporary knowledge-based economy.

Fig. 6 keywords co-occurrence



Source: VOSviewer

3. CONCLUSION

The results of the study revealed that research published on the topic of I_C and Acct tends to focus predominantly on the economic dimension, while legal academic fields show a noticeable lack of engagement with this

subject, with the exception of intellectual property rights. This is despite the fact that I_C encompasses numerous components that require a clear legal framework. It was also observed that legislation has not addressed the components of I_C in detail, particularly human capital, structural capital, and relational capital, which reflects a limited recognition of this type of capital.

Furthermore, the international mapping of the research landscape revealed that developing countries are largely absent from the global scientific arena. Leadership in this field remains primarily with developed countries and, to a lesser extent, with emerging economies. This suggests that countries of the Global South, especially African nations, should strengthen their scientific publications on this topic. These results reflect that the lag of developing and African countries behind developed and emerging nations is due to their lack of reliance on intangible capital as a driver of their economies, particularly investment in knowledge and innovation.

Although studies related to this field have increased in recent years, they remain relatively limited, as research has tended to focus on certain scientific disciplines while neglecting others.

5. Bibliography List :

- Crouzet, Nicolas, Janice C. Eberly, Andrea L. Eisfeldt, and Dimitris Papanikolaou. 2022. "The Economics of I./C." Journal of Economic Perspectives 36 (3): 29–52.DOI: 10.1257/jep.36.3.29
- Giovanni Dosi, Richard R. Nelson (1994), An introduction to evolutionary Theories in economics, Journal of Evolutionary Economics, 4: 153-172
- Mohammad Toolabi, Mohsen Babaee, S. Jayadev (2015), Accounting Models And Methods Of Measuring Intellectual Capital, Management Researcher, Vol.Xxi No.3
- Wael Bakhit et al (2019), The components of I/.C: An exploration of Lebanese companies, International Journal of Finance & Banking Studies, Vol 8 No 3

- AFIA Kada (2025), Artificial Intelligence As IIC Capital In Knowledge-based Economies, Economiic Devellopmentt Reviiew ISSN 2543-3490 , Volume 10(Issue 02)
- Ahmad Hidayat (2023), Legal Protection of Intellectual Property Rights Intellectual Property Rights in the Field of Patents According to Laww Number 13 of 2016, nternational Journal of Social Science And Human Research, Volume 06 Issue 10
- Henning Grosse Ruse – Khan (2012), THE INTERNATIONAL LEGAL FRAMEWORK FOR THE PROTECTION OF UTILITY MODELS, Paper prepared for the WIPO Regional Seminar on the Legislative, Economic and Policy Aspects of the Utility Model System, Kuala Lumpur (Malaysia)
- LABIAD Naima, DATOUSSAID Aimad (2021), La perception du capital immatériel par les managers des PME: illustration à partir d'une étude exploratoire en Algérie The perception of ICC by the managers of SMEs: illustration from an exploratory study in Algeria, DOI: 10.13140/RG.2.2.19189.70885
- Fadi Abdelfattah, Mohammed Salah, Khalid Dahleez, Riyad Darwazeh, Hussam Al Halbusi (2024), The future of competitive advantage in Oman: Integrating green product innovation, AI, and intellectual capital in business strategies, International Journal of Innovation Studies, Volume 8, Issue 2, Pages 154-171, ISSN 2096-2487, https://doi.org/10.1016/j.ijis.2024.02.001.
- van Ark, Bart; Hao, Janet X.; Corrado, Carol; Hulten, Charles (2009) : Measuring ICC and its contribution to economic growth in Europe, EIB Papers, ISSN 0257-7755, European Investment Bank (EIB), Luxembourg, Vol. 14, Iss. 1, pp. 62-93.
- Luminita Maria Gogan, Dan Cristian Duran, Anca Draghici (2014), Structural capital - A proposed measurement model, 2nd GLOBAL CONFERENCE on BUSINESS, ECONOMICS, MANAGEMENT and TOURISM, 30-31 October 2014, Prague, Czech Republic, Procedia Economics and Finance 23 (2015) 1139 – 1146

- Boudaoud Fatima (2024), The role of structural capital in leveraging innovation, Review MECAS, V° 20/ N°2
- Ramírez-Solis, Edgar R.; Llonch-Andreu, Joan; Malpica-Romero, Alberto D. (2022) : Relational capital and strategic orientations as antecedents of innovation: Evidence from Mexican SMEs, Journal of Innovation and Entrepreneurship, ISSN 2192-5372, Springer, Heidelberg, Vol. 11, Iss. 1, pp. 1-19, https://doi.org/10.1186/s13731-022-00235-2.
- Bounfour, A. (2003) The Management of Intangibles: The Organization's Most ValuableAssets. Routledge, London.
- Datoussaid, A & Hamadi, A, (2016). L'Algérie face au défi de l'économie fondée sur laconnaissance : état des lieux dans la région MENA. Journal of Business Administrationand Economic Studies, 2 (1). pp. 253-269.
- Tambe, Prasanna and Hitt, Lorin M. and Rock, Daniel and Brynjolfsson, Erik, IT, AI and the Growth of Intangible Capital (July 8, 2019). Available at SSRN: https://ssrn.com/abstract=3416289 or http://dx.doi.org/10.2139/ssrn.3416289.
- Liu, Xing (2023), The value of intangibles : artificial intelligence, intellectual property, and corporate culture, University of British Columbia.
- Aimad DAOUSSAID (2019), Tacit knowledge in the Algerian industrial SMEs: Elements of location and capital to mobilize for innovation, International Journal of Knowledge Management and Practices , Vol 7, N 1, pp 7-14.
- AFIA K, DAOUSSAID A (2024), The Emergence of Pharmaceutical Entrepreneurship in Algeria: A Case Study of a Cosmetics Company, el-Bahith Review Vol 24(1)
- Global Innovation Index Ranking, 2024
- Global Artificial Intelligence Index, 2024