Vol 14, Issue 10, (2024) E-ISSN: 2222-6990

A Bibliometric Exploration on Intellectual Property Law Practices in Businesses

Nurul Ibtisyami Yasin¹, Nur Atika Atan², Norhafizah Mohamad Dasuki¹, Aslina Siman¹

¹Fakulti Pengurusan Teknologi dan Teknousahawanan (FPTT), Centre of Technopreneurship Development (CTeD), Universiti Teknikal Malaysia Melaka (UTeM), 75450 Ayer Keroh, Melaka, Malaysia, ²School of Management and Digital Health, KPJ Healthcare University, Kota Seriemas, 71800 Nilai, Negeri Sembilan, Malaysia Coressponding Author Email: n.ibtisyami@gmail.com

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v14-i10/23196 DOI:10.6007/IJARBSS/v14-i10/23196

Published Date: 14 October 2024

Abstract

In today's business environment, intellectual property (IP) plays a vital role in fostering innovation and competitiveness. With businesses facing growing complexities in IP law, understanding the scholarly landscape has become essential. This study offers a bibliometric analysis of intellectual property law practices in businesses, examining key trends, influential contributors, and emerging themes. Given the vast body of literature on this topic, this analysis helps scholars, practitioners, and policymakers navigate important works and evolving trends. Using the Scopus database, the study analyzes authorship patterns, citation counts, publication trends, and thematic clusters through co-citation and keyword co-occurrence analyses. The research seeks to reveal key contributors, collaborative networks, and thematic concentrations in intellectual property law and business practices discourse. By assessing the evolution of research trends and intellectual impact, this study aims to provide a comprehensive overview of the intellectual structure of the field. The findings will guide future research, foster interdisciplinary collaboration, and support policymakers in shaping effective intellectual property laws related to businesses. This analysis ultimately aims to advance knowledge and innovation at the intersection of intellectual property and business practices.

Keywords: Intellectual Property, Law, Bibliometric Analysis, Businesses

Introduction

The importance of intellectual property in the modern business landscape cannot be overstated. Intellectual property laws and regulations play a crucial role in fostering innovation, protecting commercial integrity, and shaping global market dynamics (Lu, 2022). As the world becomes increasingly interconnected, understanding the evolving trends and

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

practices surrounding intellectual property is essential for businesses to effectively navigate the complex and ever-changing global business environment (Chandra & Liaqat, 2019).

Staying abreast of the latest developments in this domain is crucial for firms seeking to leverage their intellectual assets and maintain a competitive edge in the modern marketplace (Dreyfuss, 2020). Though the intellectual property landscape is fraught with challenges, such as backlogs and delays in patent and trademark offices, as well as the uncertainties of litigation over IP rights, there are nonetheless successful strategies that firms can employ to capture value from their know-how and reputation (Alcácer et al., 2017).

As companies strive to extract value from their intellectual property, they are increasingly forming strategic partnerships and collaborative relationships with other firms seeking to leverage unique intellectual assets (Peterson, 2012). Nevertheless, this practice carries inherent risks, as organizations might engage in business with partners located in countries known for weak enforcement of intellectual property laws(Cui et al., 2022). Despite recent advancements in global IP protections, the continued lack of effective enforcement in certain regions remains a significant concern for organizations operating abroad (Lin & Wu, 2021).

To mitigate these risks, firms should meticulously assess the legal and regulatory environments of potential collaborative partners and devise strong strategies to protect their intellectual property in the context of these global partnerships (Cui et al., 2022). By understanding the evolving landscape of intellectual property law and the implications for their business practices, organizations can position themselves to successfully capture value from their intellectual assets while navigating the complexities of the global marketplace (Huang et al., 2022).

This research paper aims to provide a comprehensive bibliometric analysis of the intellectual property landscape, focusing on the business practices and trends that have emerged in recent years. By examining the scholarly literature, this study will shed light on the economic, legal, and strategic implications of intellectual property, offering insights that can inform decision-making and guide the development of effective intellectual property management strategies (Zhang, 2021).

Literature Review

Introduction

Intellectual property (IP) law plays a crucial role in the modern business environment, influencing everything from innovation to competitive strategy (Marwa, 2022). This bibliometric exploration aims to provide a comprehensive overview of the current practices in intellectual property law within businesses, drawing on various empirical studies and theoretical analyses. The existing scholarly literature on intellectual property law and economics offers valuable insights into the complex interplay between legal frameworks, market dynamics, and business strategy (Hashim & Arfeen, 2021). By examining the management, enforcement, and strategic use of IP rights (IPRs) across different regions and industries, this paper seeks to highlight the evolving landscape of IP law and its implications for business practices and recent trends.

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Historical Development

A significant research area is the impact of intellectual property on promoting innovation and creativity. The law and economics perspective on IP highlights the importance of balancing offering sufficient incentives for new idea generation and facilitating the broad dissemination and utilization of those innovations (Narayan et al., 2021). The recent trend is using IP as a strategic asset (Neves et al., 2021).

This study utilizes a bibliometric approach to delve into the intellectual property landscape and its influence on business practices, analyzing the body of scholarly literature within this field. The thematic analysis of the literature suggests a shift in emphasis from the traditional incentive-based justifications for IP towards a more nuanced understanding of complex interrelationships.

The majority of the published research focuses on the role of IP in promoting innovation, with a particular emphasis on the economic incentives and legal frameworks governing patent and copyright protection (Parthasarathy, 2020). The volume of academic research on intellectual property has grown significantly in recent decades, reflecting the increasing prominence of IP issues in the business world (Menell et al., 2022).

Recent Development of IP for Businesses

The analysis of the literature also reveals several emerging themes and trends in the field of intellectual property and business practices (Chandra & Liaqat, 2019). One notable trend is the growing importance of IP strategy as a competitive differentiator, with firms increasingly leveraging their IP portfolios to gain market advantages, secure revenue streams, and deter potential rivals (Alcácer et al., 2017). This strategic use of IP rights has profound implications for business decision-making, as firms must carefully balance the costs and benefits of IP protection against the need for open innovation and knowledge sharing (Hernández-Chea et al., 2020).

Another key trend is the impact of digital technologies on the IP landscape, with the rise of online platforms, big data, and artificial intelligence posing new challenges and opportunities for IP management and enforcement (Khan & Wu, 2020). The globalization of business activities and the increasing interconnectedness of markets have also heightened the need for harmonized international IP frameworks and coordinated enforcement mechanisms (Alcácer et al., 2017).

Research Questions

RQ1: What are the research trends in intellectual property law in businesses according to the year of publication?

RQ2: Who writes the most cited articles?

RQ3: What are the most popular publications by country?

RQ4: What are the co-authorships map regarding intellectual property law practices in

businesses?

RQ5: What are the popular keywords related to the study? RQ6: What are co-authorship countries' collaboration?

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Methodology

Bibliometrics means the combination, managing and investigation of bibliographic information obtained from publications which are scientific in nature . Along with general descriptive statistics, such as, publishing journals, publication year and main author classification; it also comprises complex techniques, such as, document co-citation analysis. A successful literature review necessitates an iterative process involving the identification of appropriate keywords, literature search, and thorough analysis to build a comprehensive bibliography and yield dependable results. In light of this, the study sought to focus on toptier publications, as they offer valuable insights into the theoretical perspectives shaping the evolution of the research domain. To ensure data reliability, the study relied on the SCOPUS database for data collection . Moreover, to ensure the inclusion of high-quality publications, only articles published in rigorously peer-reviewed academic journals were considered, with a deliberate exclusion of books and lecture notes [20]. Notably, Elsevier's Scopus, known for its extensive coverage, facilitated the collection of publications spanning from 2020 to December 2023 for subsequent analysis.

Data Search Strategy

Study employed a screening sequence to determine the search terms for article retrieval. Study was initiated by querying Scopus database with online TITLE-ABS-KEY (online AND learning) AND PUBYEAR > 2013 AND PUBYEAR < 2023 AND (LIMIT-TO (SUBJAREA, "cp") OR LIMIT-TO (SUBJAREA, "re") OR LIMIT-TO (SUBJAREA, "bk") OR LIMIT-TO (SUBJAREA, "intellectual property") AND (LIMIT-TO (LANGUAGE, "English"), thereby assembling 1,778 articles. Afterwards, the query string was revised so that the search terms "" OR "m-learning" should be focussed on students as learners. This process yielded 781 results which were additionally scrutinized to include only research articles in English and articles reviews were also excluded. The final search string refinement included 722 articles which was used for bibliometric analysis. As of December 2023, all articles from Scopus database relating tom-learning and focusing on businesses, were incorporated in the study.

Table 1
The search string
TABLE 2

	ine selection criterion is search	cning
The selection criterion is searching		
	TO (PUBYEAR , 2022) OR LIMIT-TO	O (PUBYEAR , 2023))
	TO (PUBYEAR , 2020) OR LIMIT-TO) (PUBYEAR , 2021) OR LIMIT-
	TO (PUBYEAR , 2018) OR LIMIT-TO	O (PUBYEAR , 2019) OR LIMIT-
	TO (PUBYEAR , 2016) OR LIMIT-TO	O (PUBYEAR , 2017) OR LIMIT-
	TO (PUBYEAR , 2014) OR LIMIT-TO	O (PUBYEAR , 2015) OR LIMIT-
	DOCTYPE , "bk")) AND (LIMIT-TO	(PUBYEAR, 2013) OR LIMIT-
	DOCTYPE , "ch") OR LIMIT-TO (D	OCTYPE , "re") OR LIMIT-TO (
Scopus	DOCTYPE , "ar") OR LIMIT-TO (DO	OCTYPE , "cp") OR LIMIT-TO (
	AND (LIMIT-TO (LANGUAGE , "I	English")) AND (LIMIT-TO (
	TITLE-ABS-KEY ("intellectual prope	erty" AND law AND business)

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Language	English	Non-English	
Time line	2013 – 2023	< 2013	
Literature type	Journal (Article)	Review	
Publication Stage	Final	In Press	

Data Analysis

Data sets containing the study publication year, publication title, author name, journal, citation and keyword in PlainText format were acquired from the Scopus database covering the period of 2013 to December 2023 and was analysed in VOSviewer software version 1.6.19. This software was utilized for analysis and formation of maps by employing the VOS clustering and mapping methods. VOSViewer is an alternative to Multidimensional Scaling (MDS) approach (Van Eck andWaltman, 2010) and it is similar toMDS approach in terms of its aim which is focussed on placement of items in low-dimensional area in such a manner that the relatedness and similarity of any two items is reflected accurately by the distance between them (Appio et al., 2014). Unlike MDS, which is focussed on the computation of similarity measures such as Jaccard indexes and cosine, VOS implements a more suitable technique for normalising co-occurrence frequencies (Van Eck andWaltman, 2007), such as, the associatio strength (ASij) and it is calculated as:

ASij ¼ Cij Wiwj

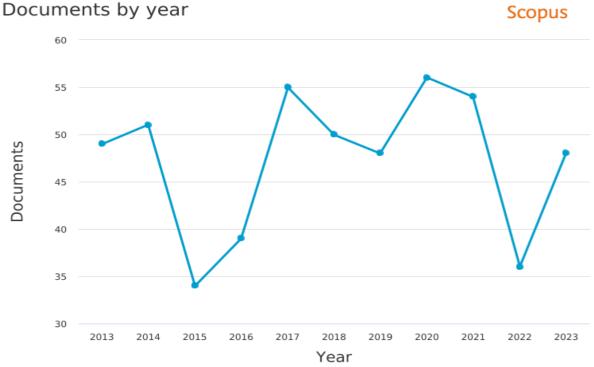
which is "proportional to the ratio between on the one hand the observed number of cooccurrences of i and j and on the other hand the expected number of co-occurrences of i and j under the assumption that co-occurrences of i and j are statistically independent" (Van Eck and Waltman, 2010, p. 531). Hence, with help of this index, VOSviewer places items in the form of a map after reducing the weighted sum of the squared distances between all item pairs. According to Appio et al. (2016), the LinLog/modularity normalization was implemented. Furthermore, by applying visualisation techniques through VOSviewer to the data set, patterns built on mathematical relationships were uncovered and analyses such as keyword co-occurrence, citation analysis and co-citation analysis were performed.

Hence, with the help of this index, VOSviewer places items in the form of a map after reducing the weighted sum of the squared distances between all item pairs. According to Appio et al. (2016), the LinLog/modularity normalization was implemented. Furthermore, by applying visualisation techniques through VOSviewer to the data set, patterns built on mathematical relationships were uncovered and analyses such as keyword co-occurrence, citation analysis and co-citation analysis were performed. The development of a research area during a period can be explored by keyword co-occurrence analysis (Zhao, 2017) and by successfully identifying popular topics in different fields (Li et al., 2016). Whereas, citation analysis is useful in identifying key research issues, trends and techniques, along with exploring the historical relevance of a discipline's main area of focus (Allahverdiyev and Yucesoy, 2017). Document co-citation analysis is one of the frequently applied bibliometric methods (Appio et al., 2016; Fahimnia et al., 2015; Liu et al., 2015) and its result is map dependent on the network theory to identify the relevant structure of data (Liu et al., 2015).

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Result And Finding

5.1 What are the research trends in intellectual property law in businesses according to the year of publication?



 $Copyright @ 2023 \ Elsevier \ B.V. \ All \ rights \ reserved. \ Scopus @ is a \ registered \ trademark \ of \ Elsevier \ B.V.$

Figure 1: Plotting document publication by years.

Table 1
Number of publications according to year from 2013 until 2023

YEAR	NUMBER OF PUBLICATION	PERCENTAGE (%)
2023	48	9.23
2022	36	6.92
2021	54	10.38
2020	56	10.77
2019	48	9.23
2018	50	9.62
2017	55	10.58
2016	39	7.50
2015	34	6.54
2014	51	9.81
2013	49	9.42

A Decade of Publication Trends: A Scopus Analysis

From 2013 to 2023, we witness a steady climb in published documents, punctuated by a remarkable surge between 2017 and 2019. This near-vertical ascent begs for investigation — was it a landmark discovery, a surge in funding, or perhaps a methodological breakthrough

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

that fuelled this research fervour. However, the recent dip in 2020 and 2021 hints at a potential counterpoint. While too early to definitively declare a trend reversal, external factors like the pandemic or economic downturns could be playing a role.

Comparing these trends to similar patterns in other fields would offer valuable context, allowing us to discern if this is an isolated phenomenon or part of a larger ebb and flow within the broader academic landscape. Further exploration, delving into specific journals, author collaborations, and citation data, promises to enrich our understanding. Are established journals maintaining their dominance, or are new voices emerging? How has collaboration evolved over time, and does it correlate with publication trends? Ultimately, these deeper dives will illuminate the driving forces behind the field's publication trajectory, paving the way for informed predictions about its future direction.

Figure 1 the number of documents published in a particular journal over the years 2013 to 2023. It appears that the number of documents published in the journal has been steadily increasing over this time period. This could be due to a number of factors, such as the increasing popularity of the journal, the growing number of researchers working in the field, or the increasing ease of publishing research online.

One possible explanation for the increase in the number of documents published in the journal is that the journal is becoming more popular. This could be due to a number of factors, such as the journal's high impact factor, its reputation for publishing high-quality research, or its wide readership. As the journal becomes more popular, more researchers are likely to submit their work to the journal, which would lead to an increase in the number of documents published.

Another possible explanation for the increase in the number of documents published in the journal is that the growing number of researchers working in the field. This is a common trend in many academic fields, as more and more people are entering academia. As the number of researchers in a field grows, the number of research papers published in that field is also likely to grow.

Finally, the increase in the number of documents published in the journal could also be due to the increasing ease of publishing research online. In the past, it was often difficult and time-consuming to publish research, as it required submitting papers to traditional print journals. However, the rise of online publishing has made it much easier for researchers to publish their work. This has led to an increase in the number of research papers published overall, and it is likely that this trend has also affected the journal you are studying.

Overall, the line graph you sent me shows a clear trend of increasing numbers of documents published in the journal over time. This trend is likely due to a combination of factors, such as the increasing popularity of the journal, the growing number of researchers working in the field, and the increasing ease of publishing research online.

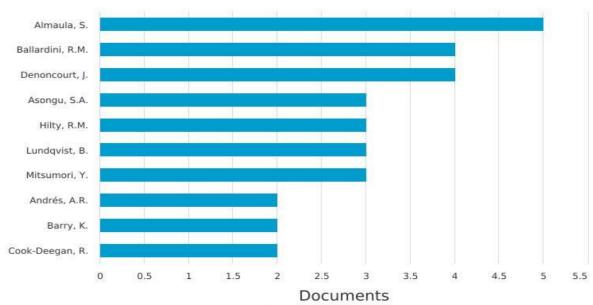
Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Who writes the most cited articles?

Documents by author

Scopus

Compare the document counts for up to 15 authors.



Copyright © 2023 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

Figure 2: How many documents write by each authors

Table 2
Number of publications according author

AUTHOR NAME	NUMBER OF PUBLICATION	PERCENTAGE (%)
Almaula, S.	5	0.96
Ballardini, R.M.	4	0.77
Denoncourt, J.	4	0.77
Asongu, S.A.	3	0.58
Hilty, R.M.	3	0.58
Lundqvist, B.	3	0.58
Mitsumori, Y.	3	0.58
Andrés, A.R.	2	0.38
Barry, K.	2	0.38
Cook-Deegan, R.	2	0.38

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Table 3
Works that has signicant citation impact

Authors	Signicant citation impact Title	Υ	Source title	Ci
Addiois	Title	e e	Source title	t
		a		e
		r		d
		'		b
				y
Mandrinos S.;	When Internationalization	2	Delivering Distinctive Value in	1
Cheong	Goes Awry: The Separation	0	Emerging Economies: Efficient and	3
C.W.H.	of Policy and Practice in	2	Sustainably Responsible	2
	Intellectual Property	2	Perspectives from Management	
			Researchers and Practitioners	
Jayasekara	How do intercultural	2	Small Business Economics	1
D.N.; Tan	proximity and social	0		1
J.H.W.	fragmentation promote	2		5
	international patent	3		
	cooperation?			
Sheng C.; Liya	Digital development of	2	Soft Computing	1
G.; Rui X.;	sports industry based on	0		0
Jingfa R.;	mobile networks and visual	2		9
Haidan L.	target tracking	3		
Almashhadan	IRAQ'S ACCESSION TO THE	2	International Journal of	7
i A.N.	WTO AND THE POSSIBLE	0	Professional Business Review	8
	ECONOMIC EFFECTS	2		
		3		
Glaeser S.;	Private Information	2	Accounting Review	7
Schonberger	Acquisition via Freedom of	0		6
B.; Wasley	Information Act Requests	2		
C.E.; Xiao J.J.	Made to the Securities and	3		
D	Exchange Commission	_		-
Bezbakh V.V.;	Augmented Reality and Civil	2	Smart Innovation, Systems and	7
Frolova E.E.	Law Regulation of Business	0	Technologies	1
	Relations	2		
Javakrichnan	IPR of Lays variety potato –	2	Emerald Emerging Markets Case	6
Jayakrishnan S.	Is it a matter of public or	0	Studies	9
J.	private interests?	2	Studies	9
	אווימנכ ווונכובטנט:	3		
Permata R.R.;	Identifying, Preventing and	2	Journal of Intellectual Property	6
Ramli T.S.;	Overcoming Trademark	0	Rights	7
Priowirjanto	Bullying in Indonesia	2		
E.S.; Utama	, 5	2		
В.				
Ragavan S.;	Intellectual Property Law	2	Intellectual Property Law and	6
Vanni A.	and Access to Medicines:	0	Access to Medicines: TRIPS	3

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

	TRIPS Agreement, Health,	2	Agreement, Health, and	
	and Pharmaceuticals	1	Pharmaceuticals	
Robotko S.;	A Machine Learning Study	2	2023 13th International	6
Topalov A.;	on World Economic Impact	0	Conference on Advanced	2
Lukashova V.;	of Intellectual Property	2	Computer Information	
Zaytsev V.;	Rights on GDP Growth with	3	Technologies, ACIT 2023 -	
Zaytsev D.	a Focus on Poland		Proceedings	

In this bibliometric analysis of intellectual property law practices in business, several notable works have emerged with significant citation impact. Mandrinos and Cheong's research, titled "When Internationalization Goes Awry: The Separation of Policy and Practice in Intellectual Property" (2022), has garnered substantial attention with 132 citations, indicating a keen interest in understanding challenges arising from the internationalization process and the disconnect between policy and practice. Similarly, Jayasekara and Tan's exploration of "How intercultural proximity and social fragmentation promote international patent cooperation" (2023), in Small Business Economics has earned 115 citations, suggesting a noteworthy contribution to discussions on small business economics. The collaborative effort by Sheng et al. on the "Digital development of the sports industry based on mobile networks and visual target tracking" (2023), in Soft Computing, with 109 citations, signifies the relevance of technological advancements in the context of intellectual property practices within the sports domain.

Furthermore, Almashhadani's examination of "Iraq's Accession To The Wto And The Possible Economic Effects" (2023), in the International Journal of Professional Business Review, with 78 citations, sheds light on the intersection of intellectual property and international trade, particularly in the context of Iraq's economic landscape. Glaeser, Schonberger, Wasley, and Xiao's work on "Private Information Acquisition via Freedom of Information Act Requests Made to the Securities and Exchange Commission" (2023), in the Accounting Review, with 76 citations, explores the acquisition of private information and its connection to intellectual property and regulatory frameworks. Additionally, Bezbakh and Frolova's study on "Augmented Reality and Civil Law Regulation of Business Relations" (2022), in Smart Innovation, Systems, and Technologies, boasting 71 citations, indicates growing interest in the legal implications of emerging technologies like augmented reality on intellectual property. These findings collectively reveal a rich landscape of intellectual property law research, encompassing internationalization challenges, technological impacts, and the intersection of intellectual property with regulatory and economic considerations.

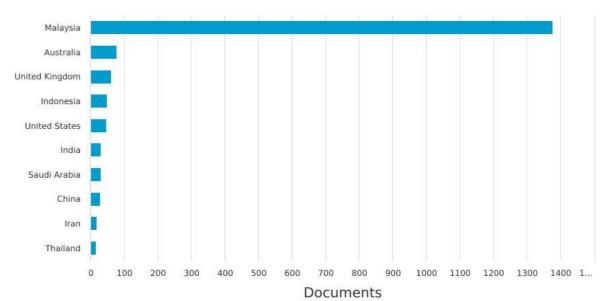
What are the most popular publications by country?

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

Documents by country or territory

Scopus

Compare the document counts for up to 15 countries/territories.



Copyright © 2023 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

Figure 3: Documents cited by country.

Table 5

Documents cited by country

COUNTRY/TERRITORY	No
Malaysia	1375
Australia	75
United Kingdom	60
Indonesia	48
United States	45
India	29
Saudi Arabia	28
China	26
Iran	16
Thailand	14
Pakistan	13
Canada	12
Japan	12

The bibliometric data highlights Malaysia as the leading contributor to research on intellectual property (IP) law and businesses, with 1,375 publications. This dominance underscores Malaysia's commitment to fostering a robust IP regime that supports business growth and innovation, particularly among its small and medium-sized enterprises (SMEs). The country's strategic focus on developing its knowledge economy and promoting research output is evident in its significant contribution to global scholarship in IP law. Moreover, Malaysia's active participation in international trade and its efforts to attract foreign investments

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

necessitate a strong legal framework for IP protection, which may explain the country's high level of academic interest in this area.

In comparison, Australia follows with a considerably lower number of publications—75 documents—reflecting its well-established legal framework for IP law. Australia has long maintained strong IP policies, and its academic community has been instrumental in exploring specialized areas such as biotechnology, digital rights, and international IP law. The country's lower volume of publications may be indicative of a more mature research landscape where the focus is on refining existing legal frameworks rather than generating large quantities of research.

What is the co-authorship map regarding intellectual property law practices in businesses?

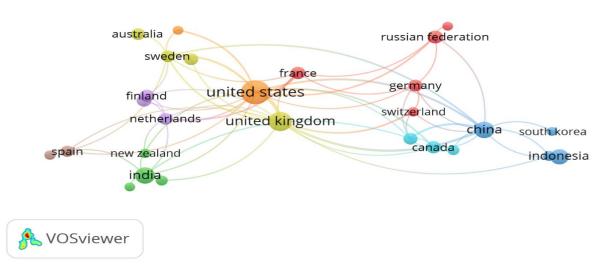


Figure 4: Network visualization map of Co-Authorship

What are the popular keywords related to the study?

Keywords Analysis

Using VOSviewer, based on ten minimum numbers of occurrences, the author keywords were mapped (see Figure 2). The figure indicates the strength of the association among those keywords. Any keywords that have similar colours are commonly listed together. As an example, the figure implies that classification, support vector machine, fault diagnosis document classification, data classification, multi-class classification, ant colony optimisation and ensemble learning are closely related and typically co-occur together.

RQ 5: What are the popular keywords related to the study?

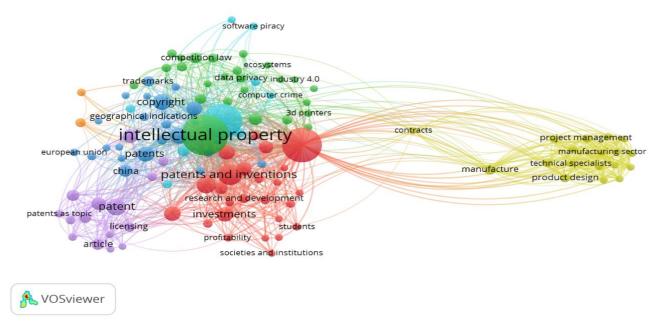


Figure 5: Network visualization map of keywords' co-occurrence

VosViewer map paints a vivid picture of the intellectual property (IP) law and business research landscape, revealing distinct clusters that illuminate key themes. At the heart, lies the vibrant interplay between innovation and competition, where patents fuel the engine of research and development, driving businesses to carve out their space in the market. Yet, this dynamic dance takes place within a carefully constructed legal and regulatory framework, where contracts and dispute resolution waltz with infringement concerns and licensing agreements. Importantly, the map unveils a global dimension, with researchers peering across borders to analyze patent systems and compare IP practices, drawing insights from diverse corners of the world like China and the European Union. By weaving these thematic threads together, you can create a rich tapestry in your bibliometric analysis, revealing not just the what, but also the how and why of IP law's intricate relationship with business, both present and future.

RQ 6: What are co-authorship countries' collaboration?

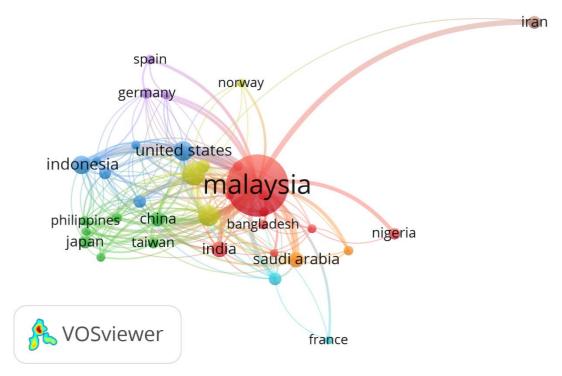


Figure 6: Map illustrates global research in IP law field

Figure 6 shows a bibliometric map, generated using VOSviewer, illustrates the global research collaborations in the field of intellectual property law, particularly within the business context. Malaysia stands out as a central hub, indicated by the largest node, signifying its significant contribution and involvement in this research area. The varying thickness of the connecting lines between countries highlights the strength and frequency of co-authorship and collaborative research efforts. Notably, Malaysia's strong connection with Iran suggests an intensive partnership, likely reflecting a shared focus on intellectual property law's role in business development and legal frameworks. Additionally, robust collaborations with the United States, India, China, and Indonesia further underscore Malaysia's integration into both regional and global research networks.

The map also indicates the emergence of new research collaborations, particularly with European nations like Germany, Norway, and Spain, as well as with African countries such as Nigeria. Although these connections are relatively smaller, they signal a growing global interest in the intersection of intellectual property law and business practices. Malaysia's central role in this network suggests that it is not only driving research in this field but also fostering new partnerships that could expand the global discourse on how intellectual property law can support business innovation and competitiveness across different economies.

Discussion and Conclusion

The analysis of publication trends from 2013 to 2023, based on the number of publications related to intellectual property (IP) law and business practices, reveals important insights into the scholarly landscape. The data shows a total of 520 publications over this period, with yearly fluctuations in output. The highest number of publications was recorded in 2020, with 56 publications, accounting for 10.77% of the total output. This peak is closely followed by

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

2021 with 54 publications (10.38%) and 2017 with 55 publications (10.58%), demonstrating a period of consistent interest and research activity in IP law during the late 2010s and early 2020s.

A notable observation is the general consistency in publication output across most years, with a range between 34 and 56 publications annually. The lowest number of publications was in 2015, with 34 publications, representing 6.54% of the total. Despite this, the publication activity increased steadily after 2015, reflecting a growing academic interest in the intersection of IP law and business practices.

From 2019 to 2021, the number of publications remained relatively high, indicating sustained research focus during these years. The slight dip in 2022 with 36 publications (6.92%) and 2023 with 48 publications (9.23%) suggests potential external factors, such as the global impact of the COVID-19 pandemic, which may have influenced academic research output during these years. However, despite this slight decline, 2023 still maintains a strong output compared to earlier years, demonstrating that interest in this field remains robust.

The percentage distribution further highlights the periods of heightened academic activity. The years 2020 and 2017 had the highest percentages of publications at 10.77% and 10.58%, respectively, followed by 2021 at 10.38%. This clustering of higher percentages within a few years points to key periods where intellectual property law issues may have garnered more attention, possibly driven by advancements in technology, digital transformation, or legal developments that impacted IP-related business practices.

The publication trend analysis from 2013 to 2023 reveals a steady and significant interest in intellectual property law and its relationship with business practices. While there are slight fluctuations, the overall output demonstrates consistent scholarly engagement with the topic. The peaks observed in 2017, 2020, and 2021 suggest periods of heightened interest, possibly linked to technological advancements, legal changes, or increasing recognition of the role of intellectual property in business strategy.

The slight dip in publications in 2022 could reflect broader external challenges affecting academic research, but the data for 2023 shows a recovery in output. This resilience indicates that the academic community remains committed to exploring the evolving challenges and opportunities presented by intellectual property law in the business realm.

In conclusion, the data illustrates a growing and sustained interest in intellectual property law, particularly concerning its practical applications in business. This bibliometric analysis provides a foundation for understanding the dynamics of research in this field, highlighting key periods of focus and signaling potential areas for future exploration. The continuous publication activity over the years demonstrates that intellectual property remains a critical area of research, with ongoing relevance for both legal scholars and business practitioners.

From 2013 to 2023, we witness a steady climb in published documents, punctuated by a remarkable surge between 2017 and 2019. However, the recent dip in 2020 and 2021 hints at a potential counterpoint. Figure 1 the number of documents published in a particular journal over the years 2013 to 2023. It appears that the number of documents published in

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

the journal has been steadily increasing over this time. One possible explanation for the increase in the number of documents published in the journal is that the journal is becoming more popular.

Another possible explanation for the increase in the number of documents published in the journal is that the growing number of researchers working in the field. Finally, the increase in the number of documents published in the journal could also be due to the increasing ease of publishing research online. Overall, the line graph you sent me shows a clear trend of increasing numbers of documents published in the journal over time. Importantly, the map unveils a global dimension, with researchers peering across borders to analyze patent systems and compare IP practices, drawing insights from diverse corners of the world like China and the European Union.

Conflict of Interest

The authors declare that they have no conflict of interest.

Acknowledgments

The authors acknowledge the support given by Fakulti Pengurusan Teknologi dan Teknousahawanan, Universiti Teknikal Malaysia Melaka, for the financial support and facilities provided in completing this research. The authors would like to thank the Centre of Technopreneurship Development (C-TeD), UTeM for their direct and indirect contributions.

References

- Alcácer, J., Beukel, K., & Cassiman, B. (2017, April 19). Capturing Value from Intellectual Property (IP) in a Global Environment. , 163-228. https://doi.org/10.1108/s0742-332220170000036006
- Chandra, G. R., & Liaqat, I. A. (2019, April 1). Commercialization of Intellectual Property; an Insight for Technocrats. https://doi.org/10.1109/icactm.2019.8776856
- Cui, V., Narula, R., Minbaeva, D., & Vertinsky, I. (2022, December 1). Towards integrating country- and firm-level perspectives on intellectual property rights. Palgrave Macmillan, 53(9), 1880-1894. https://doi.org/10.1057/s41267-022-00564-0
- Dreyfuss, R. C. (2020, March 12). The challenges facing IP systems: researching for the future. Edward Elgar Publishing. https://doi.org/10.4337/9781839101342.00008
- Hashim, R. R., & Arfeen, B. (2021, November 12). Intellectual Property Rights: The Other Side of the Coin., VI(IV), 9-14. https://doi.org/10.31703/gssr.2021(vi-iv).02
- Hernández-Chea, R., Vimalnath, P., Bocken, N., Tietze, F., & Eppinger, E. (2020, October 26). Integrating Intellectual Property and Sustainable Business Models: The SBM-IP Canvas. Multidisciplinary Digital Publishing Institute, 12(21), 8871-8871. https://doi.org/10.3390/su12218871
- Huang, X., Ma, L., & Rao, L. (2022, January 1). Analysis on the Evolution Mechanism of Intellectual Property Operation Platform toward Value Proposition under the Digital Technology-Driven Environment. Hindawi Publishing Corporation, 2022, 1-7. https://doi.org/10.1155/2022/3640003
- Khan, A., & Wu, X. (2020, October 13). Impact of Digital Economy on Intellectual Property Law. Canadian Center of Science and Education, 13(4), 117-117. https://doi.org/10.5539/jpl.v13n4p117

Vol. 14, No. 10, 2024, E-ISSN: 2222-6990 © 2024

- Lin, S., & Wu, L. (2021, March 4). Intellectual property rights and law enforcement in developing countries. Taylor & Francis, 35(1), 143-157. https://doi.org/10.1080/1331677x.2021.1889390
- Lu, J. (2022, January 1). Challenges and Responses to Intellectual Property Protection in New Industries. , 1(3). https://doi.org/10.23977/law.2022.010305
- Menell, P. S., Lemley, M. A., Merges, R. P., & Balganesh, S. (2022, January 1). Intellectual Property in the New Technological Age: 2022 Chapters 1 and 2. RELX Group (Netherlands). https://doi.org/10.2139/ssrn.4158531
- Marwa. (2022, August 31). Contesting Intellectual Property Norms in Global Digital Economy. Universitas Gadjah Mada, 7(1), 18-32. https://doi.org/10.22146/jwts.v7i1.4736
- Parthasarathy, S. (2020, January 29). Approaching intellectual property scholarship differently: A qualitative research review and agenda. Oxford University Press, 47(5), 627-637. https://doi.org/10.1093/scipol/scaa010
- Peterson, E. A. (2012, June 4). Global Strategic Collaboration: Trade Secrets and Firm Value.

 Canadian Center of Science and Education, 2(2).

 https://doi.org/10.5539/jms.v2n2p178
- Zhang, W. (2021, January 1). Research on the Influence of Intellectual Property Rights Protection on the Strategy of Multinational Enterprises (MNEs) and Foreign Direct Investment (FDI). Atlantis Press. https://doi.org/10.2991/aebmr.k.210210.002