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Human Trafficking and Legal Responses in Asia: A Bibliometric Analysis of Tindak Pidana Perdagangan Orang (TPPO) Research

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ABSTRACT

Human trafficking remains a pervasive transnational crime and a serious human rights violation, with Asia functioning simultaneously as a major source, transit, and destination region. Although scholarly attention to trafficking and its legal responses often framed as Tindak Pidana Perdagangan Orang (TPPO) has increased, a systematic understanding of how this research has evolved within the Asian context remains limited. This study conducts a comprehensive bibliometric analysis of 447 Scopus-indexed journal articles published between 2016 and 2026 to map publication trends, disciplinary orientations, leading authors and institutions, geographical contributions, and thematic structures of TPPO research in Asia. Using performance analysis and science-mapping techniques, including keyword co-occurrence and overlay visualisation, the study identifies dominant research clusters encompassing socioeconomic development, human rights and gender, governance and regulation, and region-specific legal–political contexts. The findings reveal a gradual growth in TPPO-related publications, a strong dominance of Western institutions in knowledge production, and persistent fragmentation across disciplines and journals. Notably, the thematic evolution shows a shift from early emphases on legal frameworks and institutional capacity toward more human-centred, rights-based, and preventive perspectives. The novelty of this study lies in its explicit Asia-focused and legal-response-oriented bibliometric mapping, providing the first comprehensive overview of TPPO scholarship in the region. The results highlight critical gaps in regional research capacity and underscore the need for stronger integration between legal, governance, and socioeconomic approaches to inform more effective anti-trafficking policies in Asia.

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KEYWORDS
Human Trafficking; Tindak Pidana Perdagangan Orang (TPPO); legal responses; bibliometric analysis; Asia

1. Introduction

Human trafficking remains one of the most pervasive transnational crimes and a severe violation of human rights, affecting millions of individuals worldwide (Abaunza, 2022; Juyal & Chakravarthi, 2023). Characterized by exploitation through forced labour, sexual exploitation, and other forms of coercion, human trafficking poses complex challenges that intersect law (Strating et al., 2024), governance, migration, and socioeconomic development. Asia, encompassing South, Southeast, and East Asian regions (Kaur, 2025), is widely recognized as both a source and destination of trafficking flows, driven by factors such as labour migration, economic inequality, weak regulatory oversight, and transnational criminal networks (Aniche et al., 2025; Ullah & Uddin, 2025). In many Asian jurisdictions, these practices are legally framed as Tindak Pidana Perdagangan Orang (TPPO), underscoring the centrality of legal responses in addressing trafficking-related harms.

In this study, the term Tindak Pidana Perdagangan Orang (TPPO) is used as a legal reference originating from Indonesian statutory terminology, particularly Law No. 21/ 2007 on the Eradication of the Criminal Act of Trafficking in Persons. However, the analytical scope of this research extends beyond Indonesia and encompasses broader human trafficking scholarship across Asia, consistent with internationally recognized definitions such as those articulated in the Protocol to Prevent, Suppress and Punish Trafficking

in Persons (Human Rights Instruments, 2026). Thus, TPPO is employed as a conceptual entry point rather than as a geographically restrictive category. The dataset includes publications addressing trafficking in persons, modern slavery, forced labour, sexual exploitation, and related legal frameworks within Asian contexts.

In response to the growing scale of trafficking, states have developed a range of legal and institutional mechanisms, including the adoption of international instruments such as the United Nations Protocol to Prevent, Suppress and Punish Trafficking in Persons (Palermo Protocol), as well as domestic legislation targeting prevention, prosecution, and victim protection (Anyiwe & Ekhator, 2025). Consequently, scholarly attention to human trafficking has expanded significantly over the past decade, with research addressing criminal law enforcement, human rights protection, migration governance, and policy effectiveness (Han, 2024). Existing studies have contributed valuable insights into victim vulnerability, gendered exploitation, and the role of legal institutions in combating trafficking.

Despite this expanding body of literature, TPPO research remains unevenly distributed in both thematic focus and geographic representation (Angelina et al., 2025). The state of the art reveals a strong concentration of publications originating from Western countries with well-established research infrastructures (Nursyahidah Utami et al., 2024) while Asian regions despite being disproportionately affected by trafficking exhibit comparatively lower scholarly output and international visibility. Moreover, although TPPO scholarship has become increasingly interdisciplinary, it remains fragmented across domains such as social sciences, law (Eykens et al., 2022; Murphy et al., 2023), development studies, and public health, limiting the ability to capture the broader intellectual structure and evolution of the field.

Several bibliometric studies have examined human trafficking at a global level; however, systematic, region-specific analyses focusing on legal responses in Asia remain limited. Existing research often relies on narrative reviews or case-based approaches, which, while valuable, do not comprehensively map publication trends, collaboration networks, thematic clusters, or temporal shifts in scholarly attention. As a result, gaps persist in understanding how TPPO research in Asia has evolved, which actors and institutions dominate knowledge production, and how legal and policy debates are interconnected across disciplines and regions.

To address these limitations, this study aims to conduct a comprehensive bibliometric analysis of Scopus-indexed journal articles on human trafficking and legal responses (TPPO) in Asia published between 2016 and 2026. By employing quantitative bibliometric techniques and network visualization tools, this research systematically examines publication trends, leading authors and affiliations, country-level contributions, subject-area distributions, and keyword co-occurrence patterns. This approach enables the identification of dominant research themes, emerging topics, and structural gaps within the TPPO literature.

This study provides a comprehensive bibliometric analysis of TPPO research in Asia, contributing to the growing body of literature on human trafficking and legal responses in the region. This study uncovers emerging trends in TPPO research, providing valuable insights into the evolving nature of the field.

The novelty of this study lies in its explicit focus on Asia and its integration of legal-response-oriented analysis with bibliometric mapping.

This study provides a comprehensive bibliometric analysis of TPPO research in Asia, contributing to the growing body of literature on human trafficking and legal responses in the region. This study uncovers emerging trends in TPPO research, providing valuable insights into the evolving nature of the field. The existing literature on human trafficking and legal responses in Asia lacks a comprehensive bibliometric approach to analyse trends, themes, and collaboration networks. This study provides a comprehensive bibliometric analysis of TPPO research in Asia, contributing to the growing body of literature on human trafficking and legal responses in the region.

To address these objectives, the study is guided by the following research questions:

RQ1: How has the volume, distribution, and disciplinary orientation of Scopus-indexed research on human trafficking and legal responses (TPPO) in Asia evolved during the period 2016–2026?

RQ2: What are the dominant actors, institutional affiliations, and countries shaping the production of TPPO research in Asia, and what geographical imbalances are evident in the existing literature?

RQ3: What are the major thematic structures and temporal shifts in TPPO research in Asia as revealed by keyword co-occurrence and overlay analyses?

By combining PRISMA-guided systematic selection with performance analysis and science mapping techniques, this study advances methodological integration within socio-legal research on human trafficking in Asia.

2. Literature Review

Human Trafficking as a Transnational and Structural Phenomenon

Human trafficking has been widely conceptualized in the literature as a transnational crime embedded in global economic, social, and political structures rather than as an isolated criminal act. Early legal and criminological studies framed trafficking primarily as a matter of criminal law enforcement and border control, emphasizing prosecution, deterrence, and compliance with international legal instruments

such as the Palermo Protocol (Pinto, 2023; Senewe et al., 2025). However, subsequent scholarship has increasingly highlighted the structural drivers of trafficking, including economic inequality, labour market segmentation, migration regimes, and uneven development between and within regions.

From a grand theoretical perspective, this shift aligns with structural inequality theory and world-systems theory, which situate trafficking within global production chains and asymmetrical power relations between core and peripheral economies (Frame, 2022). In the Asian context, scholars have emphasized how rapid economic growth, labour mobility, and informal employment systems interact with weak regulatory oversight to create conditions conducive to exploitation. This body of work positions trafficking not merely as a legal violation but as a manifestation of broader development and governance failures.

Legal Responses and the TPPO Framework in Asia

Legal scholarship on human trafficking in Asia has largely focused on the formulation, harmonization, and implementation of anti-trafficking laws, commonly referred to in several jurisdictions as Tindak Pidana Perdagangan Orang (TPPO) (Huse et al., 2022; Mugiono et al., 2024; Pinatih & Purwanti, 2023). Existing studies examine national legislative frameworks, judicial practices, and law enforcement capacity, often assessing compliance with international norms and regional agreements. Comparative legal analyses reveal significant variation across Asian countries in terms of statutory definitions, victim protection mechanisms, and prosecutorial effectiveness (Khan & Ahmed, 2025).

The dominant theoretical lens in this stream is legal institutionalism, which assumes that stronger legal frameworks and enforcement institutions lead to improved anti-trafficking outcomes. However, critical legal scholars challenge this assumption by demonstrating gaps between formal law and practice, particularly in contexts marked by corruption, limited state capacity, or competing political priorities. In South and Southeast Asia, research frequently highlights tensions between sovereignty, migration control, and human rights obligations, suggesting that legal responses alone are insufficient without broader governance reforms.

Governance, Regulation, and Environmental Dimensions

More recent scholarship expands TPPO analysis beyond criminal and human rights law to include governance and regulatory theory. Studies in this stream examine how weak institutional oversight, corruption, and fragmented regulatory regimes facilitate trafficking across sectors such as agriculture, fisheries, construction, and extractive industries (Garcia, 2024). Some scholars further link trafficking to environmental degradation and resource exploitation, arguing that illegal economies and weak environmental governance often coexist with labour exploitation.

This perspective draws on regulatory governance theory, which emphasizes the role of institutions, accountability mechanisms, and cross-sector coordination in addressing complex social harms (Fernández-Sánchez et al., 2025). In the Asian context, governance-focused studies highlight challenges related to decentralization, enforcement gaps, and limited inter-agency cooperation, reinforcing arguments that TPPO is a systemic governance issue rather than solely a criminal justice problem.

3. Methods

Research Design

This study adopts a hybrid research design that integrates a systematic literature review (SLR) with bibliometric analysis to examine scholarly research on human trafficking and legal responses (Tindak Pidana Perdagangan Orang / TPPO) in Asia. The combined approach enables a comprehensive and structured assessment of publication trends, thematic structures, and the evolution of knowledge within TPPO scholarship over the period 2016–2026.

All stages of article identification, screening, and selection were conducted in accordance with the PRISMA 2021 guidelines (Zakaria et al., 2021). Within bibliometric research, PRISMA serves not only as an SLR protocol but also as a methodological framework that ensures transparency, systematic documentation, and replicability in constructing the bibliometric dataset. The PRISMA framework was applied to clearly document the processes of record identification, duplicate removal, eligibility assessment, and final inclusion.

The bibliometric procedures were designed to support both performance analysis and science mapping, allowing the study to capture quantitative publication characteristics as well as the intellectual structure of TPPO research. This design is particularly appropriate given the interdisciplinary and fragmented nature of TPPO scholarship across legal, social, and governance domains.

Data Source and Search Strategy

The dataset was compiled exclusively from the Scopus database, selected for its extensive coverage of peer-reviewed journals across the social sciences, law, economics, and interdisciplinary policy studies. Scopus is widely recognized for the consistency, reliability,

and completeness of its bibliographic metadata, making it particularly suitable for bibliometric and science-mapping research. Prior bibliometric studies have demonstrated that Scopus offers broader coverage and greater representativeness for socio-legal and policy-oriented research compared to alternative databases, while also reducing search bias and improving data stability.

The selection of specific Scopus subject areas was guided by the interdisciplinary nature of human trafficking research, which spans socio-legal, criminological, governance, and policy-oriented domains. Subject filters were applied to ensure thematic relevance and to exclude unrelated fields where similar terminology might generate retrieval noise (e.g., biological or medical trafficking metaphors). Legal scholarship was captured primarily within Social Sciences and related categories, as many law-oriented publications in Scopus are indexed under these broader classifications. While subject-area restriction may limit coverage of certain niche legal publications, this approach enhances thematic precision and reduces retrieval bias, thereby strengthening the reliability of the bibliometric mapping. It is acknowledged that some law-specific journals categorized exclusively under “Law” not have been fully represented.

Although TPPO is used in the title to reflect the Indonesian legal terminology, the bibliometric search strategy employed broader keywords including “human trafficking,” “trafficking in persons,” and related variants to ensure comprehensive coverage of Asian scholarship. Therefore, the analytical boundaries are defined by thematic relevance to human trafficking and legal responses in Asia rather than by jurisdiction-specific terminology.

The literature search was conducted on 11 January 2026. A structured Boolean search strategy was applied to the Title, Abstract, and Author Keywords fields to ensure topical relevance and consistency. To enhance transparency and replicability, the finalized Boolean search string applied in Scopus was as follows:

(TITLE-ABS-KEY ("Human Trafficking") OR TITLE-ABS-KEY ("Tindak Pidana Perdagangan Orang") OR TITLE-ABS-KEY ("TPPO") OR TITLE-ABS-KEY ("Legal Responses") OR TITLE-ABS-KEY (LAW) OR TITLE-ABS-KEY ("Legal Framework") OR TITLE-ABS-KEY ("Legislation") AND TITLE-ABS-KEY ("Asia") OR TITLE-ABS-KEY ("Southeast Asia") OR TITLE-ABS-KEY ("East Asia") OR TITLE-ABS-KEY ("South Asia")) AND PUBYEAR > 2015 AND PUBYEAR < 2027 AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS") OR LIMIT-TO (SUBJAREA , "ECON") OR LIMIT-TO (SUBJAREA , "AGRI") OR LIMIT-TO (SUBJAREA , "BUSI")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND LIMIT-TO (EXACTKEYWORD , "Southeast Asia") OR LIMIT-TO (EXACTKEYWORD , "South Asia"))

Parentheses were used to group synonymous terms through the OR operator, while the AND operator was applied to intersect thematic domains (trafficking phenomenon, legal response, and regional scope). This structured logic ensured comprehensive retrieval while minimizing irrelevant records and potential retrieval bias. The search was conducted on [insert date], and all results were exported in CSV format for bibliometric processing.

The search strategy did not rely solely on the keyword “Asia.” In addition to regional descriptors, the Boolean string incorporated country-specific terms representing Asian jurisdictions (e.g., Indonesia, Thailand, Philippines, India, Malaysia, and others). Furthermore, during the PRISMA screening stage, articles were manually reviewed to ensure substantive focus on Asian contexts, even where “Asia” was not explicitly stated in the title, abstract, or keywords. This dual approach minimized systematic exclusion of country-specific studies and enhanced the comprehensiveness of regional coverage. Regional relevance was determined during the screening process by examining the study context, case location, and jurisdictional focus rather than relying exclusively on keyword occurrence.

The publication period was restricted to 2016–2026 to capture contemporary developments in TPPO research following major international and regional legal reforms. Only journal articles published in English were considered. All retrieved records were exported in standard Scopus-compatible formats and prepared for subsequent bibliometric analysis.

Exclusion and Inclusion Criteria

The article selection process followed the four principal stages of the PRISMA framework: identification, screening, eligibility, and inclusion. Each retrieved record was evaluated based on topical relevance, document type, language, and metadata completeness.

To be eligible for inclusion, studies were required to meet the following criteria:

1. Be indexed in the Scopus database.
2. Be published between 2016 and 2026.
3. Be peer-reviewed journal articles.
4. Be written in English.
5. Explicitly address human trafficking or TPPO in relation to law, legal frameworks, governance, legislation, or policy within an Asian context.

Studies were excluded if they:

1. Were duplicate records.
2. Were categorized as editorials, conference papers, book chapters, reviews, or non-scholarly documents.
3. Focused on regions outside Asia without a clear comparative relevance.
4. Addressed trafficking-related issues without a discernible legal or governance dimension.

After completing all stages of the PRISMA selection process, a total of 447 articles met the predefined criteria and were retained as the final dataset for bibliometric analysis. The complete selection process is illustrated in the PRISMA flow diagram.

4. Data Analysis

The bibliometric analysis was conducted using established quantitative procedures for performance analysis and science mapping. The analysis was structured into two complementary components.

The first component, performance analysis, examined descriptive indicators such as annual publication trends, leading authors, institutional affiliations, country-level contributions, journal sources, and subject-area distributions. This analysis provides a quantitative overview of the productivity and geographical distribution of TPPO research in Asia and directly addresses Research Questions 1 and 2.

The second component, science mapping, focused on identifying the intellectual structure and thematic relationships within the dataset. This analysis included keyword co-occurrence networks, thematic cluster identification, and overlay visualization by average publication year. These techniques were used to reveal dominant research themes, conceptual linkages, and temporal shifts in scholarly focus, particularly the transition from legal–institutional approaches toward human-centred and rights-based perspectives. This component primarily addresses Research Question 3.

To enhance analytical clarity and robustness, low-frequency keywords were filtered prior to network construction. All analytical steps are fully replicable, as the dataset was sourced from a publicly accessible database (Scopus), and the entire selection and analysis process adhered strictly to PRISMA 2021 guidelines.

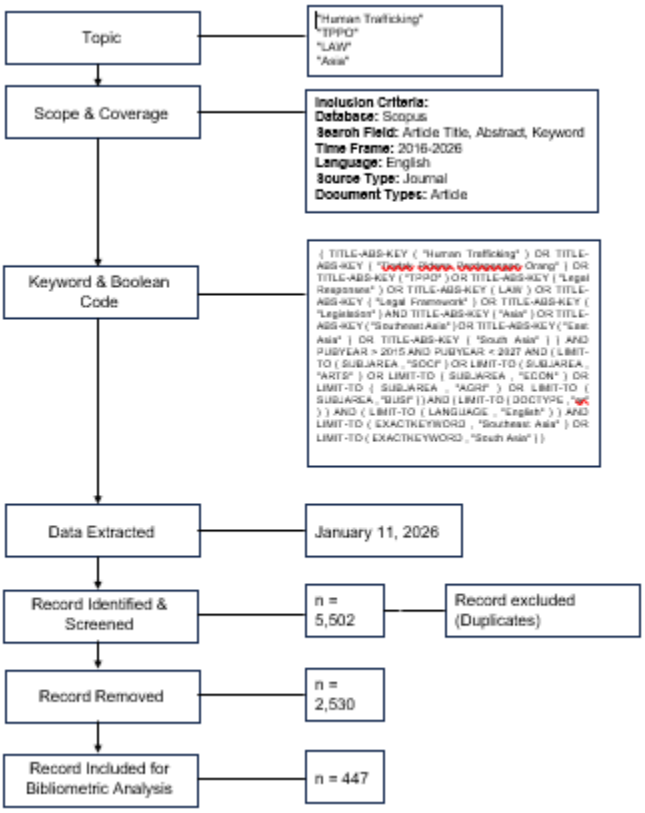


Fig 1. Flow diagram of Zakaria (Zakaria et al., 2021)

The PRISMA flow diagram illustrates the four stages of the article selection process: identification, screening, eligibility, and inclusion. A total of 447 articles were included for bibliometric analysis after the initial database search and screening stages, following the PRISMA guidelines (Zakaria et al., 2021).

5. Result and Discussion

Publication Trends and Disciplinary Orientation

The analysis of 447 Scopus-indexed articles reveals a gradual but consistent increase in TPPO-related publications in Asia between 2016 and 2026. While the overall growth trajectory remains moderate, the upward trend after 2021 indicates renewed scholarly interest, particularly in relation to governance, development, and human rights debates. This pattern suggests that TPPO research in Asia is evolving rather than stagnating, albeit without exponential expansion. The analysis of 447 Scopus-indexed articles reveals a gradual but consistent increase in TPPO-related publications in Asia between 2016 and 2026. While the overall growth trajectory remains moderate, the upward trend after 2021 indicates renewed scholarly interest, particularly in relation to governance, development, and human rights debates. This pattern suggests that TPPO research in Asia is evolving rather than stagnating, albeit without exponential expansion.

In terms of disciplinary orientation, the subject area distribution demonstrates that TPPO research is predominantly anchored in the Social Sciences, which account for the largest proportion of publications. This dominance reflects the socio-legal nature of human trafficking scholarship, where law, policy, and institutional analysis remain central. Contributions from Environmental Sciences, Agricultural and Biological Sciences, Economics, and Medicine indicate increasing interdisciplinary engagement, particularly in relation to labour exploitation, environmental crime, and public health impacts.

The thematic evolution reveals a clear shift from initial emphases on legal frameworks and institutional capacity toward more human-centred, rights-based, and preventive perspectives. This transition is evident in the clustering patterns, where earlier themes focused on law and governance, while more recent clusters prioritize human rights, gender, and victim protection. This shift indicates a growing recognition of trafficking as a complex social issue, requiring interdisciplinary approaches. The dispersion of TPPO publications across diverse journals further highlights the fragmented nature of the field. This pattern reflects the complex, interdisciplinary character of human trafficking research, which spans law, social sciences, and governance, with no single outlet emerging as a dominant hub.

Table 1. Document Counts by Author on Tindak Pidana Perdagangan Orang (TPPO) Research

Author	Documents
Schonthal, B.	4
Idrus, Z.	2.5
Kanrak, M.	2.5
Phillips, C.J.C.	2
Prayuda, R.	2
Silvee, S.S.	2
Sinclair, M.	1.5
Akhtar, M.Z.	1.5
Alibudbud, R.	1
Bachani, A.M.	1

Fractional author counts are used in this analysis, meaning that the number of documents per author is adjusted based on the total number of authors in the publication. For example, a document with multiple authors contributes a fractional value (e.g., 1/3 for three authors). This method provides a more accurate representation of each author's contribution to TPPO research. The document count per author reflects fractional contributions, where multi-author publications contribute a portion of the total count based on the number of authors involved.

Table 2. Document Counts by Affiliation in Tindak Pidana Perdagangan Orang (TPPO) Research

Affiliation	Documents
National University of Singapore	20
University of Oxford	13
The Australian National University	8
The University of Queensland	7
Griffith University	6
Universiti Putra Malaysia	5
University of Melbourne	5
University of Otago	4
Universiti Kebangsaan Malaysia	3
Nanyang Technological University	3

The document count per author reflects fractional contributions, where multi-author publications contribute a portion of the total count based on the number of authors involved.

Table 3. Number of Scopus-indexed documents on Tindak Pidana Perdagangan Orang (TPPO) by country or territory

No.	Country/Territory	Number of Documents
1	United States	82
2	Australia	58
3	United Kingdom	56
4	India	39
5	China	32
6	Indonesia	31
7	Malaysia	26
8	Singapore	26
9	Thailand	24
10	Canada	21

The distribution of TPPO-related publications indicates a strong dominance of Western countries, particularly the United States, Australia, and the United Kingdom, which together account for the highest volume of Scopus-indexed documents. This reflects their well-established research infrastructures and sustained academic attention to human trafficking as a legal and policy issue. Asian countries such as India, China, and Indonesia show moderate but growing research output, suggesting increasing regional engagement with TPPO in response to its prevalence in Asia (Pinatih & Purwanti, 2023). Southeast Asian countries including Malaysia, Singapore, Thailand, and Indonesia are represented with relatively comparable publication counts, highlighting a shared regional concern but also pointing to potential gaps in research capacity and international visibility. Overall, the pattern suggests an imbalance between regions most affected by human trafficking and those producing the largest volume of scholarly output, underscoring the need for stronger research collaboration and capacity building in Asia.

Geographical and Institutional Distribution of TPPO Research

The results reveal a pronounced geographical imbalance in the production of TPPO-related scholarship. Western countries particularly the United States, Australia, and the United Kingdom dominate Scopus-indexed publications, despite Asia being one of the regions most affected by human trafficking. Leading institutions such as the National University of Singapore and the University of Oxford play a central role in shaping academic discourse, while many Asian institutions contribute at comparatively lower levels.

This imbalance reflects broader patterns of epistemic dominance and research capacity asymmetry, as discussed in the sociology of knowledge and global academic inequality literature. Although countries such as India, China, Indonesia, Malaysia, and Thailand demonstrate growing research output (Pinatih & Purwanti, 2023), their contributions remain uneven and often underrepresented in high-impact international journals.

From a theoretical perspective, these findings align with world-systems theory, which suggests that knowledge production is concentrated in core countries, while peripheral regions despite experiencing the most severe impacts of social problems remain underrepresented. The results underscore the need for stronger regional research collaboration, capacity building, and greater visibility of Asia-based scholarship within global TPPO debates.

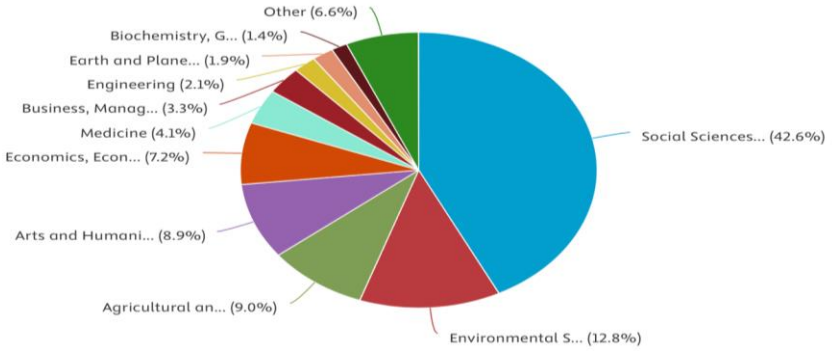


Figure 1. Subject area distribution of Scopus-indexed publications on Tindak Pidana Perdagangan Orang (TPPO).

The subject area distribution demonstrates that TPPO research is predominantly anchored in the Social Sciences, which account for 42.6% of the total publications, underscoring the centrality of legal, sociological, and policy-oriented perspectives in the study of human trafficking. Environmental Sciences (12.8%), Agricultural and Biological Sciences (9.0%), and Arts and Humanities (8.9%) also contribute substantially, reflecting the multidisciplinary expansion of TPPO research into areas such as environmental vulnerability, rural labour exploitation, and ethical or human rights discourses. Contributions from Economics, Econometrics and Finance (7.2%) and Medicine (4.1%) indicate growing attention to the economic drivers and public health impacts of trafficking. In contrast, Engineering, Earth and Planetary Sciences, and Biochemistry-related fields account for relatively minor shares, suggesting that technical and natural science approaches remain peripheral. Overall, the distribution highlights TPPO as a fundamentally socio-legal research domain with increasing, though still uneven, interdisciplinary engagement.

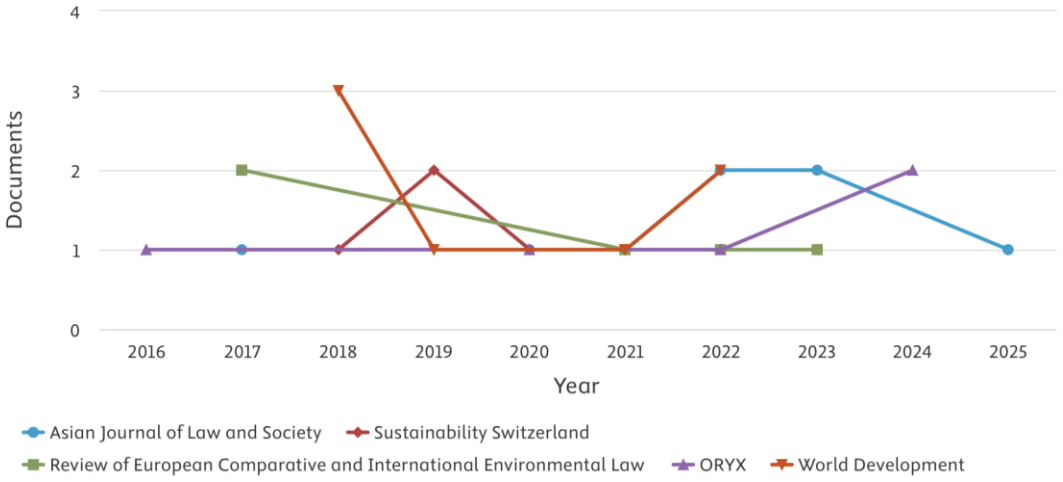


Figure 2. Annual publication trends of TPPO-related documents by leading Scopus-indexed journal sources.

The annual distribution of documents by source reveals a low but steady pattern of TPPO-related publications across key journals, indicating that research on human trafficking and legal responses remains dispersed rather than concentrated in a single outlet. Journals such as the Asian Journal of Law and Society and World Development show intermittent increases after 2021, suggesting renewed scholarly interest aligned with broader debates on development, governance, and transnational crime. Sustainability (Switzerland) exhibits a short peak around 2019, reflecting a temporary alignment of TPPO research with sustainability and policy discourse. Meanwhile, specialized outlets such as ORYX and the Review of European Comparative and International Environmental Law contribute consistently but at low annual volumes, underscoring the niche positioning of TPPO within broader thematic scopes. Overall, the trend highlights gradual diversification of publication venues rather than sustained growth within a dominant core journal, pointing to the interdisciplinary yet fragmented nature of TPPO scholarship.

Thematic Structure of TPPO Research in Asia

The keyword co-occurrence analysis identifies four dominant thematic clusters, revealing the intellectual structure of TPPO research in Asia (Pinatih & Purwanti, 2023). The first cluster focuses on socioeconomic development and comparative regional analysis, framing TPPO as a structural outcome of economic inequality, labour markets, and uneven development. This cluster resonates with structural inequality and development theories that conceptualize trafficking as embedded in global production systems.

The second cluster emphasizes human rights, gender, and migration, reflecting a strong victim-centred orientation. Research in this cluster aligns with feminist theory and intersectionality, highlighting how gender, age, and migration status shape vulnerability to trafficking and inform legal protection mechanisms.

The third cluster centres on governance, regulation, and environmental dimensions, linking TPPO to weak institutional oversight, sustainability challenges, and regulatory failure. This perspective is consistent with regulatory governance theory, which emphasizes institutional capacity and accountability as critical to effective anti-trafficking responses.

The fourth cluster captures South Asian legal–political contexts, focusing on democracy, corruption, religion, and legal pluralism. This cluster reflects critical legal scholarship questioning state capacity and political will in implementing TPPO legislation. Collectively, these clusters confirm that TPPO research in Asia is highly interdisciplinary but thematically fragmented, with limited integration across analytical lenses.

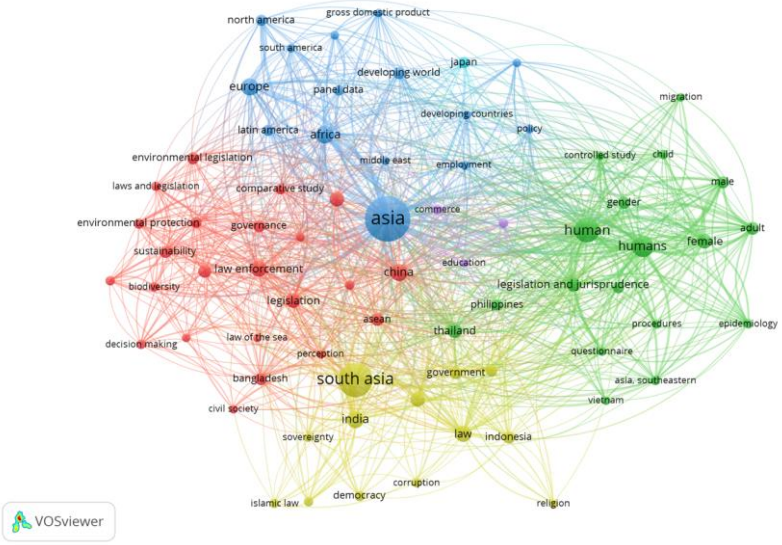


Figure 3. Keyword co-occurrence network of TPPO-related research in Asia based on Scopus data (VOS viewer visualization).

Cluster 1 – Socioeconomic development and comparative regions (Blue cluster)

This cluster, cantered on "Asia," links strongly with terms such as developing world, gross domestic product, employment, policy, and regional references (Africa, Europe, Latin America). Consistent with prior comparative trafficking studies, this body of research frames TPPO within macro-structural conditions economic inequality, labour markets, and development trajectories (Babalola et al., 2025). Scholars in this stream emphasize that trafficking is embedded in global production systems and uneven development, aligning with development economics and comparative policy literature that treats TPPO as a transnational governance challenge rather than a purely criminal issue.

Cluster 2 – Human, gender, and migration dimensions (Green cluster)

Dominated by keywords such as human, humans, gender, female, male, child, migration, and legislation and jurisprudence, this cluster reflects a strong human-rights and victim-cantered orientation. Existing research in this area focuses on vulnerability, gendered exploitation, migration pathways, and legal protection mechanisms (Palumbo, 2023; Reilly et al., 2022). The prominence of demographic and health-related terms mirrors interdisciplinary work integrating law, sociology, and public health, reinforcing arguments that effective TPPO responses require survivor-cantered legal frameworks and gender-sensitive policies.

Cluster 3 – Governance, environmental, and regulatory perspectives (Red cluster)

This cluster connects governance, law enforcement, legislation, environmental protection, sustainability, and decision making. It resonates with scholarship that situates TPPO within broader regulatory and governance debates (Omrow et al., 2024), including environmental crime, resource exploitation, and weak institutional oversight. Researchers in this stream argue that trafficking often overlaps with environmental degradation and extractive industries, thereby expanding TPPO analysis beyond criminal law into environmental governance and regulatory compliance.

Cluster 4 – South Asian legal–political context (Yellow cluster)

Anchored by South Asia, India, law, government, democracy, corruption, religion, and Islamic law, this cluster reflects context-specific legal and political analyses. Prior studies in this area highlight how domestic legal traditions, religious norms, and governance quality shape anti-trafficking enforcement (F. Islam, 2024).The emphasis on corruption and sovereignty aligns with critical legal scholarship that questions state capacity and political will in effectively implementing TPPO legislation in South and Southeast Asia.

Table 4. Synthesis

Cluster	Dominant Themes	Representative Keywords	Main Scholarly Focus	Contribution to TPPO Literature
Blue	Development & comparative regions	Asia, developing world, GDP, employment, policy	Macro-level socioeconomic and cross-regional analysis	Frames TPPO as a structural and transnational development issue
Green	Human rights & vulnerability	Human, gender, migration, child, legislation	Victim-cantered, gendered, and rights-based approaches	Emphasizes protection, vulnerability, and legal safeguards
Red	Governance & regulation	Governance, law enforcement, sustainability, legislation	Institutional capacity and regulatory frameworks	Links TPPO to governance quality and environmental regulation
Yellow	South Asian legal–political context	South Asia, law, democracy, corruption, religion	Contextual legal and political analysis	Highlights local legal traditions and enforcement challenges

Beyond descriptive reporting of publication counts and clusters, this study also delves into deeper analytical interpretations. First, we analysed collaboration patterns within TPPO research, identifying strong connections between Western institutions and Asian scholars, particularly in human rights-oriented clusters. This collaborative framework suggests a global convergence of scholarly efforts to address human trafficking, despite regional disparities in research output as noted by Chaney & Chaney (2023).

The thematic clusters identified in the bibliometric analysis show a significant focus on human rights and victim protection, which have emerged as central themes in recent years. These clusters are consistent with empirical insights from recent studies, such as Ullah & Uddin (2025), which provide structural and survivor-cantered perspectives. By incorporating these findings, this study enhances its alignment with contemporary Asia-based research and underscores the multidimensional nature of trafficking, extending beyond legal frameworks to include socio-economic and structural constraints.

Furthermore, the study examined citation impact to identify key articles influencing the field. Notably, the most cited articles often aligned with interdisciplinary approaches, highlighting the increasing integration of law, development, and human rights perspectives. This citation trend reflects growing academic consensus on trafficking as a multifaceted global issue requiring coordinated policy and legal reforms (Bouché et al., 2025; Ramli et al., 2025).

Regionally, the analysis revealed that Southeast Asia contributes a larger volume of publications compared to South and East Asia, indicating a higher level of regional engagement with TPPO scholarship. This aligns with the proximity to trafficking hotspots, such as labour exploitation and migration issues, suggesting that research output is closely tied to the political and social context of each region (Chadha, 2025). These insights demonstrate that TPPO research in Asia is not only growing but evolving toward more holistic and interdisciplinary approaches that emphasize the role of governance, human rights, and legal frameworks in combating trafficking.

The clusters demonstrate that TPPO research in Asia is highly interdisciplinary, spanning development studies, human rights, governance, and region-specific legal analysis. The network structure confirms that while “Asia” functions as the central analytical hub, scholarly debates remain fragmented across thematic lenses, underscoring the need for integrative frameworks that connect socioeconomic drivers, human vulnerability, and legal institutional responses. The bibliometric patterns further suggest that legal-response scholarship increasingly recognizes trafficking as structurally embedded within global economic, migration, and governance systems.

Temporal Evolution of Research Themes

The overlay visualization reveals a clear temporal shift in TPPO scholarship. Earlier studies concentrated on legal frameworks, governance, democracy, and corruption, reflecting an initial emphasis on statutory development and institutional capacity. More recent publications increasingly foreground human-centred themes such as gender, migration, children, and victim protection.

This shift mirrors broader trends in the global human trafficking literature, where scholarship has moved away from purely legal institutional approaches toward rights-based and preventive frameworks. The persistence of “Asia” and “South Asia” as central analytical nodes suggests sustained regional relevance, while the emergence of employment, policy, and education-related terms indicates growing interest in structural prevention strategies.

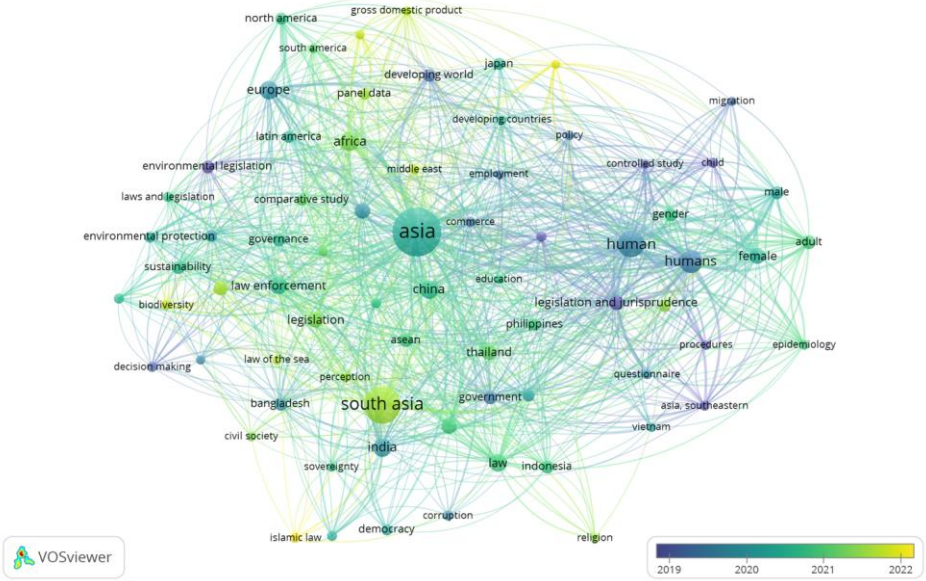


Figure 4. Overlay visualization of keyword co-occurrence in TPPO-related research in Asia by average publication year (Scopus, VOS viewer).

The overlay visualization reveals the temporal evolution of TPPO-related research in Asia, with node colours indicating shifts in thematic emphasis over time. Earlier studies (darker tones) are concentrated around macro-level concepts such as law, governance, democracy, and corruption, reflecting an initial focus on legal frameworks and state capacity. More recent contributions (lighter tones) increasingly emphasize human, gender, migration, child, and legislation and jurisprudence, signalling a transition toward human-cantered and rights-based perspectives. The persistent centrality of "Asia" and "South Asia" across time underscores their continued relevance as primary analytical units, while the emergence of terms related to employment, policy (S. Islam & Mohna, 2024), and education suggests growing interest in preventive and structural interventions alongside criminal justice responses.

This temporal shift aligns with broader trends identified in the human trafficking literature, where early scholarship prioritized statutory development and enforcement effectiveness, while more recent research integrates gender studies, migration theory, and public health approaches. Similar to findings reported in comparative bibliometric studies, the movement toward victim-cantered and intersectional analyses reflects increasing recognition of trafficking as a complex social process rather than a solely legal violation (F. Islam & Fay, 2024). Researchers focusing on Asia have likewise noted a growing engagement with transnational migration and labour exploitation frameworks, paralleling global debates on safe migration and decent work. Consequently, the overlay map supports existing scholarly arguments that TPPO research is undergoing thematic maturation, evolving from foundational legal analysis toward more holistic, interdisciplinary, and policy-relevant perspectives.

The findings have several implications. Academically, they highlight the need for greater theoretical integration between development, governance, and human rights approaches. From a policy perspective, the results suggest that legal responses to TPPO must be complemented by broader socioeconomic and institutional reforms.

This study is subject to limitations. First, it relies solely on Scopus-indexed English-language journal articles, potentially excluding relevant regional or non-English scholarship. Second, bibliometric analysis captures publication patterns rather than substantive legal effectiveness. Future research could integrate qualitative legal analysis, regional databases, or comparative case studies to deepen contextual understanding.

6. Conclusion

This study provides a comprehensive bibliometric assessment of Scopus-indexed scholarship on human trafficking and legal responses (Tindak Pidana Perdagangan Orang / TPPO) in Asia published between 2016 and 2026. By integrating a systematic literature review with bibliometric performance analysis and science mapping, the research offers a structured overview of how TPPO has been conceptualized, investigated, and debated within the Asian context over the past decade.

In response to RQ1, the findings demonstrate a gradual but consistent growth in TPPO-related publications, with research

predominantly anchored in the social sciences and law. Although interdisciplinary engagement has expanded to include development studies, environmental governance, and public health, the field remains fragmented across journals and disciplines. This pattern suggests that TPPO research in Asia is evolving but has yet to consolidate into a cohesive body of scholarship with a clearly defined epistemic centre.

Addressing RQ2, the analysis reveals pronounced geographical and institutional imbalances in knowledge production. Western countries and well-established research institutions continue to dominate Scopus-indexed TPPO publications, despite Asia being one of the regions most affected by human trafficking. While several Asian countries show increasing research output, their overall visibility and influence within high-impact international journals remain uneven. These findings reflect broader dynamics of epistemic inequality and align with world-systems perspectives on global knowledge production, underscoring the need to strengthen regional research capacity and cross-border collaboration.

With respect to RQ3, the science-mapping results identify four dominant thematic clusters encompassing socioeconomic development, human rights and gender, governance and regulation, and region-specific legal–political contexts. The overlay analysis further reveals a temporal shift from early emphases on legal frameworks and institutional capacity toward more human-centred, rights-based, and preventive perspectives. This thematic evolution indicates a maturation of TPPO scholarship, moving beyond formal legal compliance toward more holistic understandings of vulnerability, migration, and structural drivers of exploitation.

Taken together, these findings carry important implications. Theoretically, they highlight the need for greater integration between legal institutionalism, development theory, governance studies, and human rights frameworks in order to better capture the multidimensional nature of trafficking. From a policy perspective, the results suggest that legal responses to TPPO in Asia cannot operate in isolation but must be embedded within broader socioeconomic, regulatory, and migration governance reforms.

This study is not without limitations. It relies exclusively on English-language journal articles indexed in Scopus, which may exclude relevant regional scholarship, policy reports, and non-English publications. Moreover, bibliometric analysis captures patterns of knowledge production rather than the substantive effectiveness of legal interventions. As such, the findings should be interpreted as reflective of scholarly discourse rather than direct measures of policy impact.

Future research could build on this work by incorporating regional and multilingual databases, conducting comparative legal case studies, or integrating qualitative analyses of law enforcement and victim protection practices. Such approaches would deepen contextual understanding and help bridge the gap between bibliometric insights and on-the-ground anti-trafficking efforts. Overall, this study contributes to the TPPO literature by offering the first systematic, Asia-focused bibliometric mapping of legal response scholarship and by identifying critical gaps and directions for advancing both research and policy.

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Ethical Statement

The author acknowledges the use of AI tools for grammar and language assistance in the writing and proofreading process. These tools were used solely for language improvement, and the content and analysis of the research are entirely the author's own. The manuscript adheres to ethical standards of academic integrity, and no ethical issues or conflicts of interest have arisen during the research or writing process.

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