

Bibliometric Analysis on Child Labor Using VoS Viewer and Biblioshiny: A Study on Scopus Database from 1902-2025

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Abstract

Child labor continues to be one of the most urgent global issues, highlighting ongoing social, economic, and ethical dilemmas that cross national and disciplinary lines. In spite of numerous international policy efforts and advocacy over the years, millions of children around the globe still endure exploitation in different types of labor, which has significant consequences for their rights, education, health, and future development. Grasping the progression of academic focus on this matter is essential, not only to chart current understanding but also to pinpoint gaps and emerging avenues for research that can guide effective interventions. This study presents a comprehensive bibliometric analysis of global scholarly publications on child labor from 1902 to 2025. Drawing on a Scopus dataset of 1,831 documents extracted from 815 publication sources, this research employs Biblioshiny and VOSviewer to analyze trends, authorship, institutional contributions, country participation, and thematic evolution within the literature. The findings reveal a steady yet accelerated growth in academic interest, particularly from the 1990s onward, coinciding with rising global awareness of children's rights, poverty, and education. Despite a moderate average annual growth rate of 1.53%, the field has diversified significantly, encompassing themes such as economic development, social policy, gender, and child welfare. The most influential publications are rooted in development economics and social studies, with increasing contributions from journals focused on sustainability, ethics, and education. Prominent scholars and institutions, mainly from the United States and the United Kingdom, have dominated the field, though contributions from the Global South remain underrepresented. Emerging thematic trends include the intersection of child labor with technological change, digitization, and climate vulnerability. However, several research gaps persist, particularly in gender-disaggregated analysis, sector-specific studies, localized and longitudinal impact assessments, and theoretical integration across disciplines. The study highlights the need for future research to adopt interdisciplinary, inclusive, and forward-looking approaches that engage with the evolving realities of child labor, especially in light of digital economies, global crises, and systemic inequalities. These insights aim to inform more equitable and effective policy responses to the persistent global challenge of child labor.

Keywords: Bibliometric Analysis, Child Labor, Future Research Gap, Global Research Trend, Interdisciplinary Studies

Abstrak

Pekerja anak masih menjadi salah satu isu global paling penting, yang menyoroti dilema sosial, ekonomi, dan etika dengan lintas batas negara dan disiplin ilmu. Upaya kebijakan internasional dan advokasi telah dilakukan selama bertahun-tahun, namun jutaan anak di dunia masih mengalami eksploitasi di berbagai pekerjaan, dengan dampak yang sangat signifikan terhadap hak-hak, pendidikan, kesehatan, dan perkembangan masa depan. Dengan memahami perkembangan akademik terhadap isu ini akan sangat bermanfaat untuk memetakan pemahaman saat ini dan kesenjangan yang ada serta arah baru penelitian dapat membantu dalam intervensi yang lebih efektif. Studi ini menyajikan analisis bibliometrik yang komprehensif terhadap publikasi ilmiah global mengenai isu pekerja anak dari tahun 1902 hingga 2025. Berdasarkan dataset Scopus yang terdiri dari 1.831 dokumen dari 815 sumber publikasi, penelitian ini menggunakan Biblioshiny dan VOSviewer untuk menganalisis tren publikasi, kepenulisan, kontribusi institusi, partisipasi negara, serta evolusi tematik dalam literatur. Temuan menunjukkan adanya pertumbuhan minat akademik yang stabil namun semakin meningkat, terutama sejak tahun 1990-an, seiring dengan meningkatnya kesadaran global akan hak anak, kemiskinan, dan pendidikan. Meskipun laju pertumbuhan tahunan

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rata-rata tergolong moderat (1,53%), bidang ini telah mengalami diversifikasi yang signifikan dengan mencakup tema-tema seperti pembangunan ekonomi, kebijakan sosial, gender, dan kesejahteraan anak. Publikasi paling berpengaruh berasal dari bidang ekonomi pembangunan dan studi sosial, dengan kontribusi yang terus meningkat dari jurnal-jurnal yang berfokus pada keberlanjutan, etika, dan pendidikan. Para ilmuwan dan institusi terkemuka, terutama dari Amerika Serikat dan Inggris, mendominasi bidang ini, meskipun kontribusi dari negara-negara Global Selatan masih belum cukup terwakili. Tren tematik yang muncul mencakup hubungan antara pekerja anak dengan perubahan teknologi, digitalisasi, dan kerentanan terhadap iklim. Namun, masih terdapat sejumlah celah penelitian, khususnya dalam analisis berdasarkan gender, studi sektor spesifik, penilaian dampak yang bersifat lokal dan longitudinal, serta integrasi teori lintas disiplin. Studi ini menekankan pentingnya agenda riset masa depan yang bersifat interdisipliner, inklusif, dan berorientasi ke masa depan, merespons dinamika pekerja anak yang terus berkembang, terutama dalam konteks ekonomi digital, krisis global, dan ketimpangan sistemik. Temuan ini diharapkan dapat memberikan wawasan yang lebih adil dan efektif dalam merumuskan kebijakan untuk mengatasi tantangan pekerja anak yang terus berlanjut secara global.

Kata kunci: Analisis Bibliometrik, Kesenjangan Penelitian,

Pekerja Anak, Analisis Bibliometrik, Tren Riset Global, Studi Interdisipliner, Kesenjangan Penelitian

INTRODUCTION

The problem of child labour presents a complex and multifaceted global challenge, as it intersects with numerous aspects of life, such as economic conditions, social structures, access to education, and human rights. According to the most recent estimates published by the International Labour Organization (ILO) and UNICEF on 11 June 2025, around 138 million children were involved in child labour in 2024, with approximately 54 million participating in hazardous forms of work that jeopardize their health, safety, or development. These statistics reflect a decrease of over 22 million children since 2020, effectively reversing the concerning increase noted between 2016 and 2020. However, despite this encouraging trend, the global objective of eliminating child labour by 2025 has not yet been achieved. The agricultural sector continues to account for the largest proportion of child labour, representing 61% of all documented cases. This is followed by the services sector, including domestic work and informal street trading, making up 27%, and the industrial sector including mining and manufacturing which comprises 13%.

Regionally, Asia and the Pacific exhibited the most significant advancement, with the prevalence of child labour decreasing from 5.6% to 3.1%, which translates to a reduction from 49 million to 28 million children. In Latin America and the Caribbean, the incidence of child labour declined by 8%, accompanied by an 11% drop in absolute figures. In contrast, Sub-Saharan Africa continues to be disproportionately impacted, representing nearly two-thirds of all children engaged in child labour, approximately 87 million. Although the prevalence in this area has reduced from 23.9% to 21.5%, the overall number of affected children has remained stagnant due to ongoing population growth. The report also highlights enduring gender disparities, indicating that boys are more likely than girls to engage in child labour across all age categories. However, when considering unpaid household work that exceeds 21 hours per week, the trend reverses, with girls shouldering a heavier load.

The issue of child labour has increasingly attracted scholarly attention across a wide range of academic disciplines, such as law (Ansong, 2020) (Masterson, 2021), education (Sununianti et

al., 2025)(Tang et al., 2020), economics (Greenbaum, 2020a), and health (Schwartz et al., 2021) (Meyer et al., 2020). Child labour is not merely as a social phenomenon, but as a structural inequality indicator that necessitates cross-sectoral analysis. In the legal domain, concerns have been raised regarding the weak enforcement of child protection regulations in various countries. In the field of education, child labour is frequently associated with limited access to and participation in formal schooling (Boutin & Jouvin, 2022) and a consistent negative association between child labor and reading and numeracy foundational skills (Chudgar et al., 2022). From an economic perspective, studies have emphasized the strong link between structural poverty and household decisions to involve children in productive labour (Bansah & Adonteng-Kissi, 2025a). Meanwhile, research in public health highlights the adverse impacts of child labour on the physical and mental development of children (Schwartz et al., 2021)

As academic interest in child labour continues to grow, bibliometric mapping has become a vital tool for assessing the scope and direction of research in this field. This approach enables the identification of research gaps, tracks prevailing trends, examines dominant themes and methodologies, and highlights geographic contributions to the literature (Aria & Cuccurullo, 2017) (Montazeri et al., 2023). Moreover, bibliometric Click or tap here to enter text.analysis reveals collaboration patterns among authors, institutions, and countries—factors essential to enhancing the reach and impact of scholarly work. Beyond contributing to academic discourse, such insights support the formulation of more targeted and sustainable evidence-based policies.

The study specifically aims to identify annual publication trends, leading authors and institutions, countries with the highest contributions, as well as the most frequent keywords and research themes. It also explores patterns of scholarly collaboration and thematic shifts over time, offering a global perspective on the development of child labour research. Ultimately, the findings are expected to inform future academic inquiries and serve as a foundation for more effective policy-making.

RESEARCH METHOD

This study adopts a quantitative-descriptive bibliometric research design to map and analyze the scientific literature on child labour published between 2015 and 2025. Bibliometric research focuses on quantitatively measuring patterns and structures within academic publications to identify trends, relationships, and research gaps (Velasco-Muñoz et al., 2018). The descriptive nature of this study allows for the systematic examination of publication volume, authorship patterns, keyword usage, and thematic evolution over time (Zupic & Čater, 2015).

This study employs two complementary tools: VOSviewer and Biblioshiny. VOSviewer, a Java-based software, specializes in the intuitive visualization of bibliometric networks such as co-authorship, co-citation, and keyword co-occurrence (Helmi et al., 2025). In parallel, Biblioshiny—a user-friendly web interface for the Bibliometrix R package—facilitates comprehensive bibliometric, allowing researchers to explore publication trends, international collaboration, and thematic evolution through interactive graphics. The combined use of these tools provides a robust framework: while VOSviewer excels in mapping scientific networks (Helmi et al., 2025) (Cote et al., 1994) (Cote et al., 1994), Biblioshiny simplifies data filtering, analysis, and presentation (Abafe et al., 2022). These capabilities make them ideal for constructing a comprehensive bibliometric overview of child labour research published between 2015 and 2025.

The data source for this study is the Scopus database, one of the largest and most reputable abstract and citation databases for peer-reviewed literature across disciplines. Scopus was selected due to its extensive coverage, metadata quality, and compatibility with bibliometric tools such as VOSviewer and Biblioshiny. The search was limited to articles published from 2015 to 2025 that contain the term “child labour” OR “child labor” in titles, abstracts, or keywords, ensuring relevance and specificity to the research topic. The consideration of taking those two terms in order to get wide range of published articles from various fields.

The data collection process was conducted by exporting bibliographic metadata from Scopus in formats compatible with bibliometric software, particularly CSV and RIS. The metadata included information such as author names, affiliations, publication titles, publication years, keywords, abstracts, and citation counts. No full texts were used in the analysis, as the study focused on bibliographic data only. Duplicates and irrelevant entries were manually reviewed and removed to ensure data accuracy and consistency.

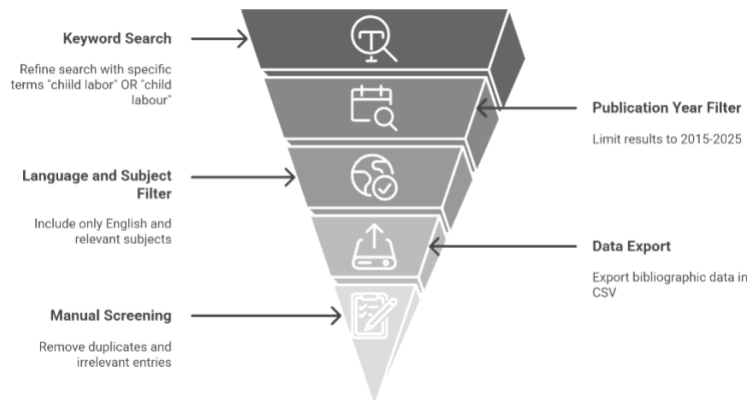


Figure 1. Data Collection and Data Refinement Process on Child Labor

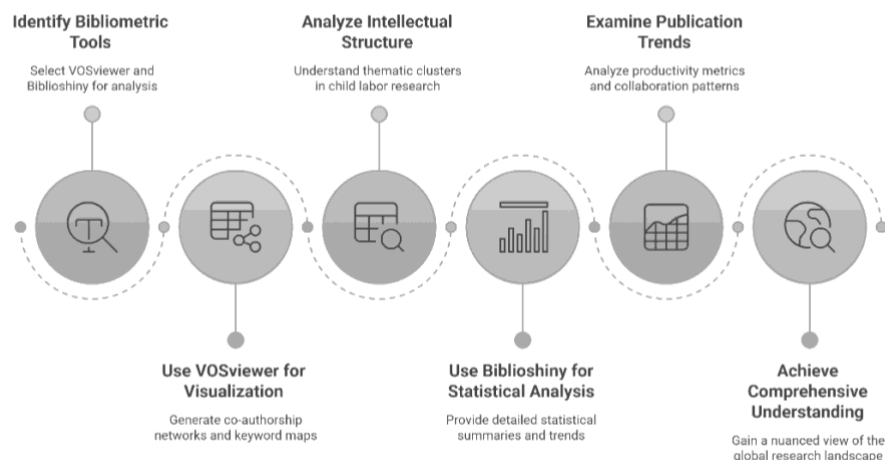


Figure 2. Bibliometric Analysis Process on Child Labor

The data analysis was carried out using two bibliometric tools: VOSviewer and Biblioshiny (an interface of the Bibliometrix R package). VOSviewer was used to generate visualizations of co-authorship networks, keyword co-occurrence maps, and citation linkages, enabling a clear understanding of the intellectual structure and thematic clusters in child labour research. Biblioshiny complemented this analysis by providing detailed statistical summaries, publication trends, productivity metrics, and collaboration patterns. Together, these tools allowed for a comprehensive and nuanced examination of the global research landscape on child labour.

RESULTS AND DISCUSSION

Overview of the Findings

The bibliometric dataset used in this study spans publications from 1902 to 2025, with a total of 1,831 documents sourced from 815 different publication outlets, including journals, books, and other scholarly media. The annual growth rate of publications in this field is relatively moderate, standing at 1.53%, suggesting a steady but gradual increase in scholarly attention to the topic over time. The average age of documents is 14.5 years, indicating that the dataset includes a substantial number of historical publications. On average, each document receives approximately 16.52 citations, reflecting a moderate level of scholarly impact. The dataset contains a total of 71,996 references, which indicates extensive citation activity within the literature. In terms of content, the database includes 2,397 Keywords Plus (ID) and 3,743 Author’s Keywords (DE), highlighting the thematic diversity and evolving vocabulary in the field. Authorship data show contributions from 3,440 individual authors, with 691 authors having produced single-authored documents. There are 772 single-authored papers in total. Collaboration is evident in the field, with an average of 2.16 co-authors per document, and 19.5% of all publications involving international co-authorship, underscoring the global dimension of research on this topic.

Description	Results
MAIN INFORMATION ABOUT DATA	
Timespan	1902:2025
Sources (Journals, Books, etc)	815
Documents	1831
Annual Growth Rate %	1.53
Document Average Age	14.5
Average citations per doc	16.52
References	71996
DOCUMENT CONTENTS	
Keywords Plus (ID)	2397
Author’s Keywords (DE)	3743
AUTHORS	
Authors	3440
Authors of single-authored docs	691
AUTHORS COLLABORATION	
Single-authored docs	772
Co-Authors per Doc	2.16
International co-authorships %	19.5
DOCUMENT TYPES	
article	1831

Figure 3. Data Overview of the Findings

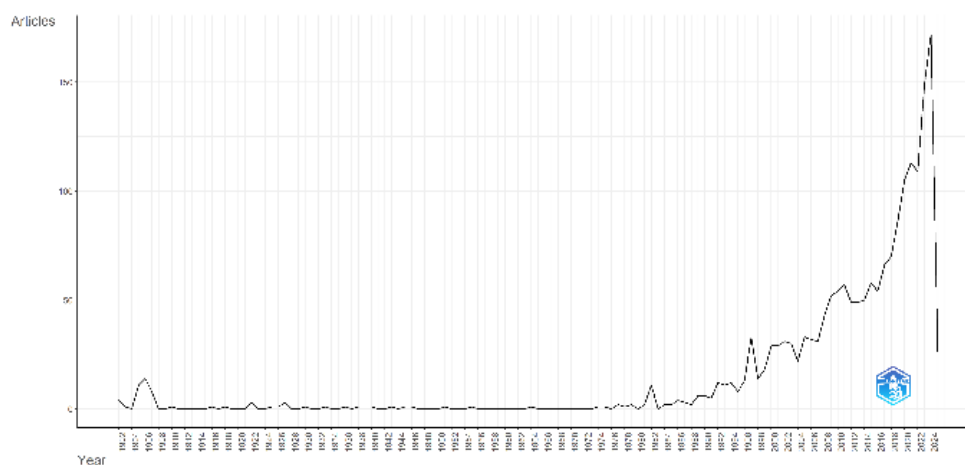


Figure 4. Annual Scientific Production on Child Labor Publication

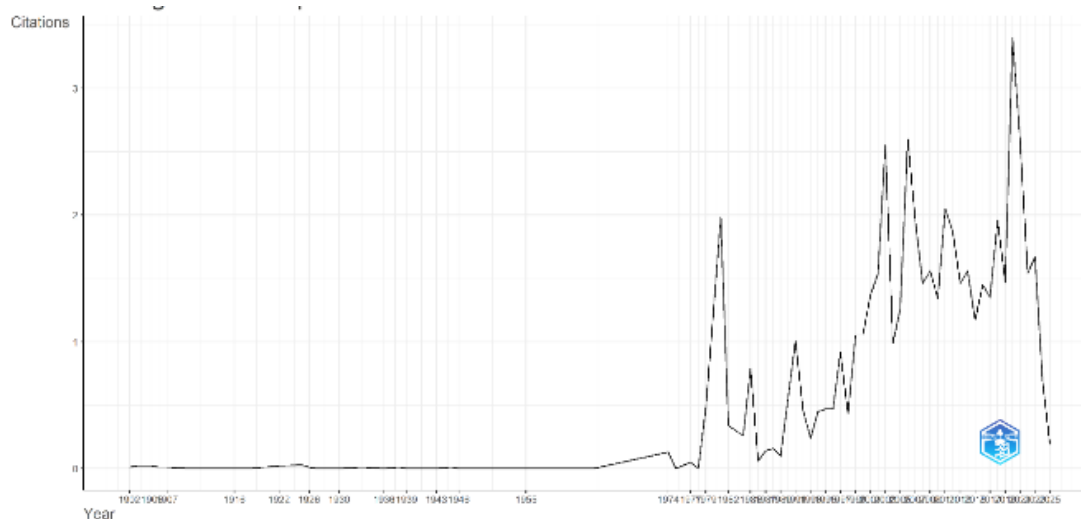


Figure 5. Average Citation per Year on Child Labor Publication

Figure 4 shows the annual scientific production on child labour reveals a dynamic and evolving scholarly interest over more than a century. Between 1902 and the early 1980s, research output was sporadic and relatively low, with most years yielding between 0 to 3 articles. Early peaks appeared in 1905 (11 articles) and 1906 (14 articles), but these were followed by decades of minimal activity, indicating limited scholarly attention to the topic during the first half of the 20th century. A noticeable growth in publication began in the 1980s, with 1982 marking a significant increase (11 articles), potentially reflecting growing global awareness of human rights and development issues. This upward trend became more stable in the 1990s, where annual outputs ranged between 5 to 14 articles, and notably rose to 33 articles in 1997, a peak year that likely correlates with intensified international policy discourse on child labour, including ILO conventions and the UN's child rights agenda. The early 2000s witnessed consistent growth, with production

remaining above 20 articles annually. The number of publications continued to climb steadily, reaching over 50 articles per year starting in 2009, and accelerating significantly in the 2010s. Notable milestones include 2015 (58 articles), 2017 (66), and 2019 (86). This upward trajectory reflects the increased academic and institutional prioritization of child labour as a multifaceted research concern across disciplines. The most dramatic surge occurred during the COVID-19 pandemic and post-pandemic era, with 2020 reaching 105 articles, followed by 113 in 2021, 109 in 2022, and peaking at 149 in 2023 and 172 in 2024. This spike suggests heightened concern over child labour exacerbated by global crises, economic instability, and disruptions in education and social protection systems. As of 2025, 26 articles had already been published, indicating sustained scholarly engagement. The data demonstrate a substantial increase in academic interest and output, particularly in the past two decades, highlighting the growing urgency to address child labour from interdisciplinary and evidence-based perspectives.

Figure 5 indicates the annual citation performance of scholarly publications on child labour demonstrates a shifting landscape of impact over time. In the early decades of the 20th century (1902–1950s), citation rates remained very low, with most years registering a MeanTCperArt below 3.00 and MeanTCperYear consistently below 0.05. This trend reflects the limited academic dissemination and influence of earlier works within the modern scholarly community, despite some notable entries in 1905 (2.09 citations/article) and 1925 (3.00 citations/article). A significant increase in citation impact began in the late 1970s and 1980s. Particularly noteworthy is the year 1981, which recorded a MeanTCperArt of 89.00 and MeanTCperYear of 1.98, based on only two highly cited articles—indicating the presence of seminal works in that year. Similarly, 1985 and 1991 saw spikes in average citations per article (32.50 and 35.40 respectively), showing that certain publications during this period became cornerstone references for later research.

The early 2000s mark the onset of a consistent period of high citation performance. For example, 2003 and 2006 stand out with MeanTCperArt values of 58.63 and 51.94, and MeanTCperYear peaking at 2.55 and 2.60, respectively. This suggests a surge in both the quality and visibility of child labour scholarship during this period, likely driven by increased international focus and cross-disciplinary engagement. In recent years, from 2020 onwards, the volume of publications has surged, yet the average citation impact has become more diluted. For instance, while 2020 recorded a high MeanTCperYear of 3.40, this number decreased in subsequent years, such as 2022 (1.54) and 2024 (0.69), likely due to the shorter citable window and the recency of publications. The data for 2025 is particularly low, with a MeanTCperArt of 0.19, which is expected given its proximity to the present and minimal time for citation accumulation. The analysis shows that while the quantity of child labour research has dramatically increased in the last two decades, citation impact tends to peak in slightly older publications (5–10 years old), suggesting a maturation period is needed for articles to reach full academic influence. The highest average annual citation rates cluster between 2001 and 2011, indicating this as a core intellectual period in the evolution of child labour scholarship.

The Most Relevant Sources on Child Labor

The analysis of scholarly publications reveals that the discourse surrounding child labor is predominantly shaped by journals focused on development economics and social studies. Several key publications stand out due to their substantial contributions to the field. Leading the pack is *World Development*, which has published a remarkable 53 articles,

underscoring its pivotal role in addressing global development issues, including child labor. Closely following are The Annals Of The American Academy Of Political And Social Science And Sustainability (Switzerland), with significant contributions of 51 and 50 articles respectively. The strong presence of Sustainability (Switzerland) highlights an increasing focus on the long-term, systemic implications of child labor within broader sustainability frameworks.

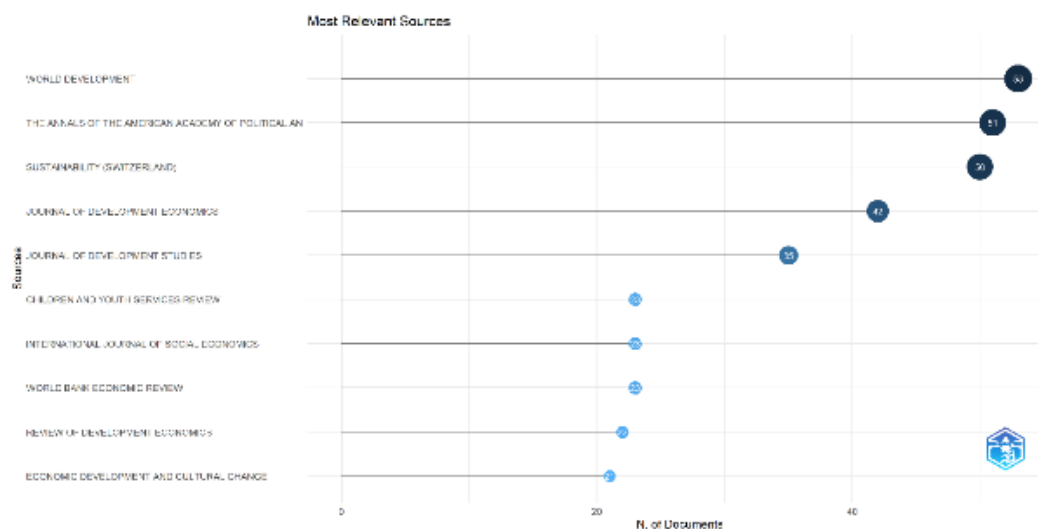


Figure 6. The Most Relevant Source on Child Labor

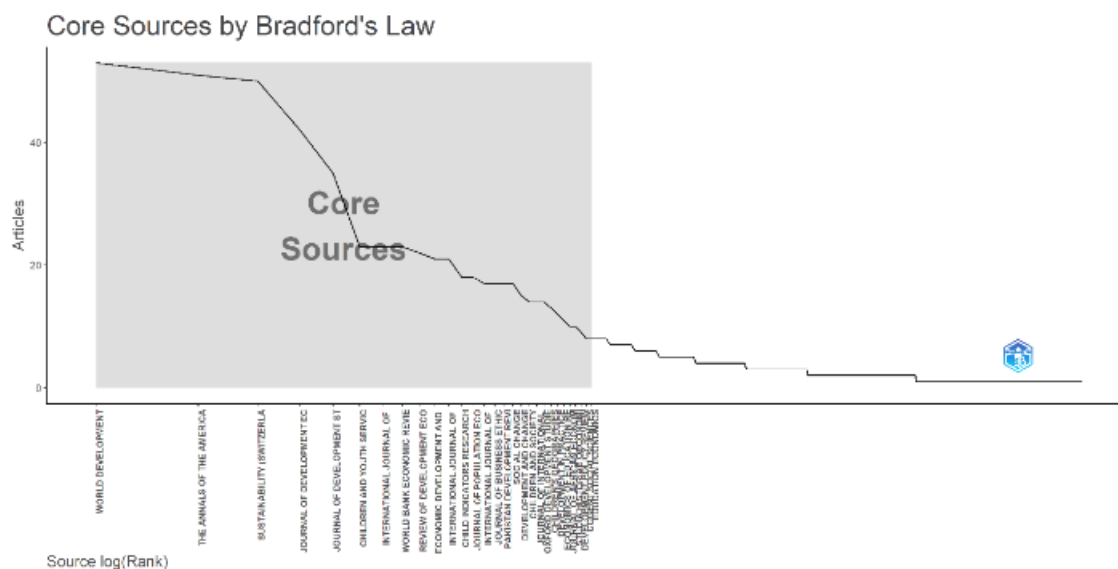


Figure 7. Core Sources by Bradford's Law

A consistent pattern emerges with journals specializing in development economics, which serve as crucial conduits for research on child labor. These include the JOURNAL OF Development Economics (42 articles), the Journal of Development Studies (35 Articles), the World Bank Economic Review (23 articles), the Review of Development Economics (22 articles), and Economic Development and Cultural Change (21 articles). This strong emphasis indicates that a substantial portion of the research on child labor delves into its economic underpinnings, exploring causative factors, socio-economic impacts, and the effectiveness of various policy interventions.

Beyond economic perspectives, the field also sees significant contributions from journals dedicated to social studies and children's welfare. Publications like Children and Youth Services Review (23 articles), the International Journal of Social Economics (23 articles), Child Indicators Research (18 articles), the International Journal of Children's Rights (17 articles), and Children and Society (14 articles) provide a crucial counter-balance. These journals highlight a multidisciplinary approach to understanding child labor, encompassing critical aspects such as child welfare, human rights, and broader societal implications. Furthermore, the inclusion of titles like the Journal Of Business Ethics (17 articles) points to an evolving awareness of corporate responsibility and supply chain ethics in relation to child labor practices, while the International Journal Of Educational Development (21 articles) and the Economics Of Education Review (11 articles) underscore the intricate connection between educational access, deprivation, and child labor. Collectively, this data paints a picture of a rich and diverse research landscape on child labor, largely anchored in development economics and social studies, with growing attention to sustainability, ethical considerations, and the vital role of education.

Table 1. Bradford's Law Bibliomatrix

SO	Rank	Freq	cumFreq	Zone
World Development	1	53	53	Zone 1
The Annals Of The American Academy Of Political And Social Science	2	51	104	Zone 1
Sustainability (Switzerland)	3	50	154	Zone 1
Journal Of Development Economics	4	42	196	Zone 1
Journal Of Development Studies	5	35	231	Zone 1
Children And Youth Services Review	6	23	254	Zone 1
International Journal Of Social Economics	7	23	277	Zone 1
World Bank Economic Review	8	23	300	Zone 1
Review Of Development Economics	9	22	322	Zone 1
Economic Development And Cultural Change	10	21	343	Zone 1
International Journal Of Educational Development	11	21	364	Zone 1
Child Indicators Research	12	18	382	Zone 1
Journal Of Population Economics	13	18	400	Zone 1
International Journal Of Children's Rights	14	17	417	Zone 1
Journal Of Business Ethics	15	17	434	Zone 1
Pakistan Development Review	16	17	451	Zone 1
Social Change	17	17	468	Zone 1
Development And Change	18	15	483	Zone 1

SO	Rank	Freq	cumFreq	Zone
Children And Society	19	14	497	Zone 1
Journal Of International Development	20	14	511	Zone 1

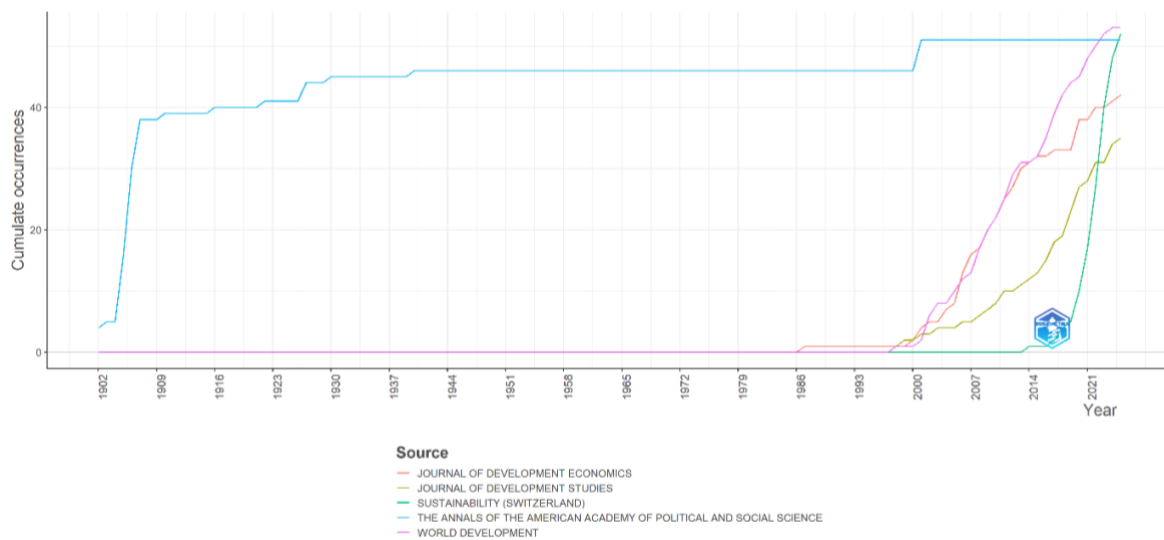


Figure 8. The Source Production Overtime on Child Labor Publication

The Most Relevant Authors, Affiliations, and Countries on Child Labor

Based on the bibliometric data, several authors stand out as the most influential contributors to research on child labor. Levison D emerges as the most prolific author with a total of ten publications. However, his fractionalized article score of 4.33 suggests that many of these works were co-authored, with a shared contribution across multiple collaborators. In contrast, Adonteng-Kissi O, who authored eight articles, has a remarkably high fractionalized score of 7.50, indicating a dominant role in the development of nearly all his publications. Bhukuth A and Souza AP, each with seven articles, also demonstrate significant contributions, particularly Bhukuth A with a fractionalized score of 4.08. Other notable authors include Mukherjee D, Dumas C, and White B, who, despite having fewer total publications, show relatively high fractionalized scores, reflecting consistent and substantial contributions to each article. Authors such as Ray R, Hilson G, Kelley F, Lovejoy OR, and Rahikainen M each possess fractionalized scores of 4.00, highlighting a strong individual presence in their respective scholarly outputs. In contrast, some authors with four articles, such as Ali A and Handa S, have lower fractionalized scores, implying a smaller share of authorship or extensive collaboration in multi-authored works. Overall, the data reveal that Adonteng-Kissi O and Levison D are the most central figures in child labor research, with Adonteng-Kissi O leading in terms of both quantity and individual scholarly impact. This analysis provides valuable insight into the intellectual landscape of child labor studies and highlights key scholars whose work has significantly shaped the field.

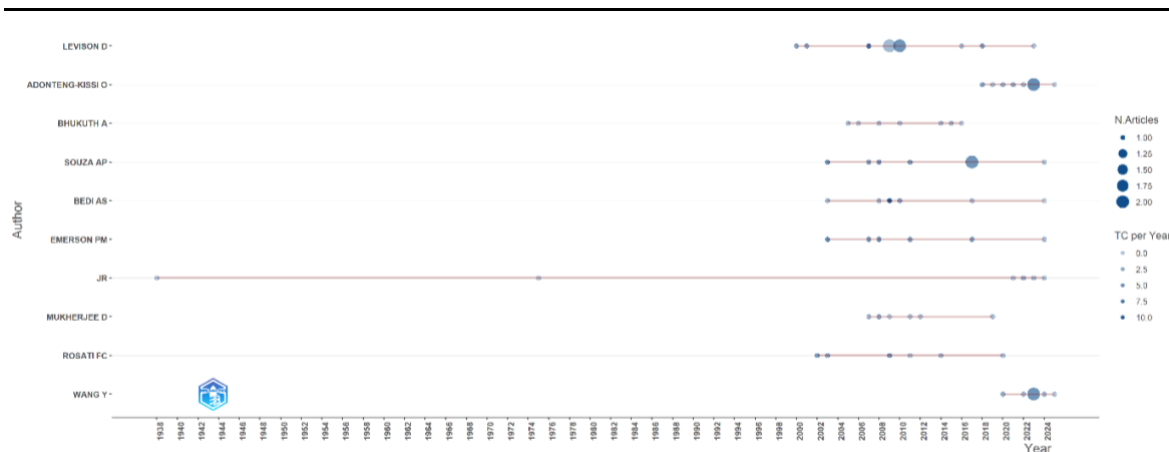


Figure 9. Author's Production Overtime on Child Labor Scopus Publication

Then, based on the data, the most influential affiliations in child labor research are concentrated in a few prominent universities and global institutions. The American University of Beirut leads with the highest number of publications (25 articles), indicating a strong institutional focus on this topic. Following closely are the University of Sussex (21 articles), King's College London, the University of Ghana, and the University of Nottingham, each contributing 19 articles. These institutions reflect a geographically diverse engagement, including universities from the Global North and South, signaling that child labor is a globally recognized and studied issue. Several other institutions also demonstrate notable scholarly engagement, including the University of California and the University of Johannesburg (15 articles each), as well as the University of Manchester and the University of Social Welfare and Rehabilitation Sciences (14 articles). International development institutions such as The World Bank and UNICEF Office of Research-Innocenti also appear prominently, underscoring the policy relevance of academic research on child labor. The diversity of universities—ranging from those in high-income countries (e.g., University of Oxford, Yale University) to those in low- and middle-income countries (e.g., Addis Ababa University, Universitas Indonesia, University of Ibadan)—highlights a broad-based academic concern over child labor. Institutions like RMIT University, Victoria University of Wellington, and Vrije Universiteit Brussel also contribute significantly, reinforcing the collaborative and cross-regional nature of the discourse.

Table 2. Publication Data on the Most Influential Authors on Child Labor

Author	TI	SO	DOI	TC	TCpY
LEVISON D	CHILDREN'S WORK IN ENVIRONMENTAL CHORES: 'SAYS WHO?' (DeGraff et al., 2023)	OXFORD DEVELOPMENT STUDIES	10.1080/13600818.2022.2092609	1	0,333
LEVISON D	IMPLICATIONS OF ENVIRONMENTAL CHORES FOR SCHOOLING: CHILDREN'S TIME FETCHING WATER AND FIREWOOD IN TANZANIA (Levison et al., 2018)	EUROPEAN JOURNAL OF DEVELOPMENT RESEARCH	10.1057/s41287-017-0079-2	27	3,375
LEVISON D	IN HARM'S WAY: CHILDREN'S WORK IN RISKY OCCUPATIONS IN BRAZIL (DeGraff et al., 2008)	JOURNAL OF INTERNATIONAL DEVELOPMENT	10.1002/jid.3111	7	0,7
LEVISON D	THE EFFECT OF DOMESTIC WORK ON GIRLS' SCHOOLING: EVIDENCE FROM EGYPT (DeGraff et al., 2008)	FEMINIST ECONOMICS	10.1080/13545700903382729	62	3,875
LEVISON D	COUNTING CHILD DOMESTIC SERVANTS IN LATIN AMERICA (Levison & Langer, 2010)	POPULATION AND DEVELOPMENT REVIEW	10.1111/j.1728-4457.2010.00321.x	11	0,688
LEVISON D	CHILDREN'S WORK AND MOTHERS' WORK--WHAT IS THE CONNECTION? (DeGraff & Levison, 2009)	WORLD DEVELOPMENT	10.1016/j.worlddev.2009.01.006	15	0,882
LEVISON D	CHILD LABOR AND MOTHERS' WORK IN BRAZIL (Degraff et al., 2009)	INTERNATIONAL JOURNAL OF SOCIOLOGY AND SOCIAL POLICY	10.1108/01443330910947525	6	0,353
LEVISON D	EFFECTS OF ECONOMIC SHOCKS ON CHILDREN'S EMPLOYMENT AND SCHOOLING IN BRAZIL (Duryea et al., 2007)	JOURNAL OF DEVELOPMENT ECONOMICS	10.1016/j.jdeveco.2006.11.004	14	7,737
LEVISON D	YOUTH EDUCATION AND WORK IN MEXICO (Levison et al., 2001)	WORLD DEVELOPMENT	10.1016/S0305-750X(00)00090-5	73	2,92
LEVISON D	CHILDREN AS ECONOMIC AGENTS (Levison, 2000)	FEMINIST ECONOMICS	10.1080/135457000337732	72	2,769
ADONTENG-KISSI O	CHILD LABOR IN ARTISANAL AND SMALL-SCALE MINING: IMPLICATIONS FOR HEALTH, DEVELOPMENT AND POVERTY (Bansah & Adonteng-Kissi, 2025b)	EXTRACTIVE INDUSTRIES AND SOCIETY	10.1016/j.exis.2024.101577	0	0
ADONTENG-KISSI O	PARENTAL PERCEPTIONS OF THE NATURE OF CHILD LABOUR IN RURAL AND URBAN GHANA: CULTURAL VERSUS ECONOMIC NECESSITY (Adonteng-Kissi, 2023b)	CHILD CARE IN PRACTICE	10.1080/13575279.2020.1868407	13	4,333
ADONTENG-KISSI O	CULTURAL RESPONSIVENESS IN CHILD PROTECTION: STAKEHOLDERS AND PARENTAL PERCEPTIONS OF WORKING CHILDREN AND CULTURE-APPROPRIATE ASSESSMENT IN GHANA (Adonteng-Kissi, 2023a)	BRITISH JOURNAL OF SOCIAL WORK	10.1093/bjsw/bcac123	3	1
ADONTENG-KISSI O	POTENTIAL TENSION BETWEEN CHILDREN'S ENGAGEMENT IN WORK AND THE RIGHTS OF THE CHILD: RESOLVING THE CONFLICT USING MARGIN OF APPRECIATION DOCTRINE (Adonteng-Kissi, 2022)	INTERNATIONAL JOURNAL OF HUMAN RIGHTS	10.1080/13642987.2021.1994401	4	1
ADONTENG-KISSI O	CHILD LABOUR VERSUS REALISING CHILDREN'S RIGHT TO PROVISION, PROTECTION, AND PARTICIPATION IN GHANA (Adonteng-Kissi, 2021)	AUSTRALIAN SOCIAL WORK	10.1080/0312407X.2020.1742363	10	2
ADONTENG-KISSI O	POTENTIAL CONFLICT BETWEEN THE RIGHTS OF THE CHILD AND PARENTAL EXPECTATIONS IN TRADITIONAL CHILD-REARING PATTERNS: RESOLVING THE TENSION (Adonteng-Kissi, 2020)	CHILDREN AND YOUTH SERVICES REVIEW	10.1016/j.chilyouth.2020.104752	9	1,5
ADONTENG-KISSI O	PARENTAL EVIDENCE OF IMPACT OF POLICY ON WORST FORMS OF CHILD LABOUR IN RURAL AND URBAN GHANA (Adonteng-Kissi, 2019)	JOURNAL OF INTERNATIONAL AND COMPARATIVE SOCIAL POLICY	10.1080/21699763.2018.1535996	3	0,429
ADONTENG-KISSI O	CAUSES OF CHILD LABOUR: PERCEPTIONS OF RURAL AND URBAN PARENTS IN GHANA (Adonteng-Kissi, 2018)	CHILDREN AND YOUTH SERVICES REVIEW	10.1016/j.chilyouth.2018.05.034	26	3,25
SOUZA AP	THE SHORT- AND LONGER-TERM EFFECTS OF A CHILD LABOR BAN (Piza et al., 2024)	WORLD BANK ECONOMIC REVIEW	10.1093/wber/lhad036	2	1

Author	TI	SO	DOI	TC	TCpY
SOUZA AP	THE CAUSAL IMPACTS OF CHILD LABOR LAW IN BRAZIL: SOME PRELIMINARY FINDINGS (Piza & Souza, 2017)	WORLD BANK ECONOMIC REVIEW	10.1093/wber/lhw024	8	0,889
SOUZA AP	CHILD LABOR AND LEARNING (Emerson et al., 2017)	ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	10.1086/688895	33	3,667
BHUKUTH A	RECRUITMENT PATTERNS OF CHILD TRAFFICKING IN MADAGASCAR: AN ANALYSIS BASED ON MISSING AND RECOVERED CHILDREN (Ballet & Bhukuth, 2016)	JOURNAL OF HUMAN TRAFFICKING	10.1080/23322705.2015.1111709	4	0,4
BHUKUTH A	CHILDREN OF THE STREET: WHY ARE THEY IN THE STREET? HOW DO THEY LIVE? (Bhukuth & Ballet, 2015)	ECONOMICS AND SOCIOLOGY	10.14254/2071-789X.2015/8-4/10	16	1,455
BHUKUTH A	CHILD LABOR AND RESPONSIBLE CONSUMERS: FROM BOYCOTTS TO SOCIAL LABELS, ILLUSTRATED BY THE INDIAN HAND-KNOTTED CARPET INDUSTRY (Ballet et al., 2014)	BUSINESS AND SOCIETY	10.1177/0007650311416070	12	1
SOUZA AP	IS CHILD LABOR HARMFUL? THE IMPACT OF WORKING EARLIER IN LIFE ON ADULT EARNINGS (Ballet et al., 2014)	ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	10.1086/657125	58	3,867
BHUKUTH A	FAMILY RATIONALES BEHIND CHILD BEGGING IN ANTANANARIVO (Ballet et al., 2018)	POPULATION	10.3917/pope.1004.0695	7	0,438
BHUKUTH A	DEFINING CHILD LABOUR: A CONTROVERSIAL DEBATE (Bhukuth, 2008)	DEVELOPMENT IN PRACTICE	10.1080/09614520802030466	21	1,167
SOUZA AP	BIRTH ORDER, CHILD LABOR, AND SCHOOL ATTENDANCE IN BRAZIL (Emerson & Souza, 2008)	WORLD DEVELOPMENT	10.1016/j.worlddev.2007.09.004	91	5,056
SOUZA AP	CHILD LABOR, SCHOOL ATTENDANCE, AND INTRAHOUSEHOLD GENDER BIAS IN BRAZIL (Emerson & Souza, 2007)	WORLD BANK ECONOMIC REVIEW	10.1093/wber/lhm001	79	4,158
BHUKUTH A	IS CHILD LABOUR A SUBSTITUTE FOR ADULT LABOUR? (Bhukuth & Ballet, 2006)	INTERNATIONAL JOURNAL OF SOCIAL ECONOMICS	10.1108/03068290610678734	14	0,7
BHUKUTH A	CHILD LABOUR AND DEBT BONDAGE: A CASE STUDY OF BRICK KILN WORKERS IN SOUTHEAST INDIA (Bhukuth, 2005)	JOURNAL OF ASIAN AND AFRICAN STUDIES	10.1177/0021909605055776	25	1,19
SOUZA AP	IS THERE A CHILD LABOR TRAP? INTERGENERATIONAL PERSISTENCE OF CHILD LABOR IN BRAZIL (Emerson & Souza, 2003)	ECONOMIC DEVELOPMENT AND CULTURAL CHANGE	10.1086/346003	12	5,391
BEDI AS	WHAT LED TO THE DECLINE OF CHILD LABOUR IN THE EUROPEAN PERIPHERY? A COINTEGRATION APPROACH WITH LONG HISTORICAL DATA (Goulart et al., 2024)	SOCIAL INDICATORS RESEARCH	10.1007/s11205-024-03315-w	0	0
JR	OIL PALM PRODUCTION AND EDUCATIONAL OUTCOMES: GENDER-DIFFERENTIATED EVIDENCE FROM CAMEROON (Tabe-Ojong Jr. & Molua, 2024)	JOURNAL OF DEVELOPMENT STUDIES	10.1080/00220388.2023.2273801	2	1
JR	WELL-BEING OF ARTISANAL FISHING COMMUNITIES AND CHILDREN'S ENGAGEMENT IN FISHERIES AMIDST THE COVID-19 PANDEMIC: A CASE IN AKLAN, PHILIPPINES (Maliao et al., 2023)	HUMANITIES AND SOCIAL SCIENCES COMMUNICATIONS	10.1057/s41599-023-01716-9	3	1
JR	A MULTI-COUNTRY STUDY ON CONSUMERS' VALUATION FOR CHILD-LABOR-FREE CHOCOLATE: IMPLICATIONS FOR CHILD LABOR IN COCOA PRODUCTION (Luckstead et al., 2022a)	APPLIED ECONOMIC PERSPECTIVES AND POLICY	10.1002/aep.13165	9	2,25
WANG Y	RETURNS TO WORK, CHILD LABOR AND SCHOOLING: THE INCOME VS. PRICE EFFECTS (Bai & Wang, 2020)	JOURNAL OF DEVELOPMENT ECONOMICS	10.1016/j.jdeveco.2020.102466	13	2,167
ROSATI FC	INCOME ELASTICITY OF CHILD LABOR: DO CASH TRANSFERS HAVE AN IMPACT ON THE POOREST CHILDREN? (Pellerano et al., 2020)	IZA JOURNAL OF DEVELOPMENT AND MIGRATION	10.2478/izajodm-2020-0011	4	0,667

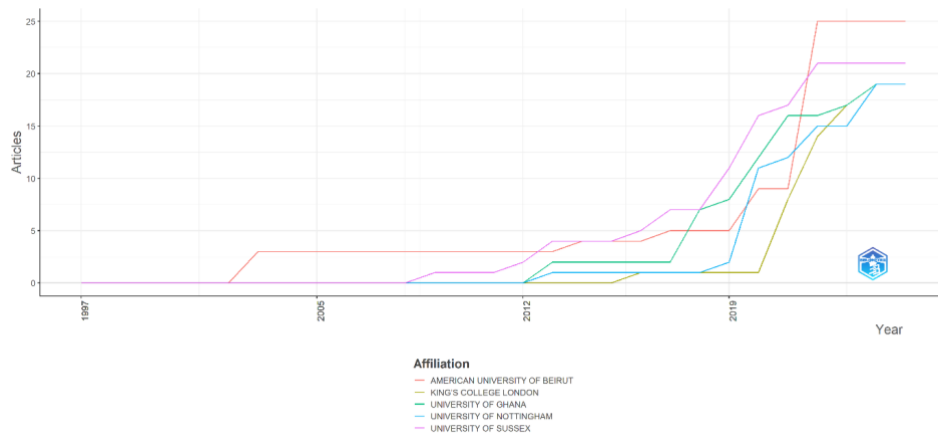


Figure 10. Affiliation Production overtime on Child Labor

The data on country contributions to child labor research reveals a notable geographical distribution, with a strong dominance from high-income countries. The United States emerges as the most prolific contributor, accounting for 218 articles or 11.9% of the total publications. A substantial portion of these (166 articles) are single-country publications (SCP), while 23.9% involve international collaborations, indicated by multiple-country publications (MCP). Following closely is the United Kingdom, contributing 175 articles (9.6%), with a comparable international collaboration rate of 24%. Australia, although contributing fewer total articles (73), demonstrates a relatively high degree of international engagement, with 23.3% of its publications being MCPs. Similar patterns can be observed in Germany and Italy, where 33.3% of publications are internationally co-authored, and in Canada, where this proportion reaches a significant 38.5%. This suggests that European and Anglophone countries tend to participate more frequently in cross-national research on child labor. Among emerging economies, India, China, and Indonesia show meaningful contributions (53, 48, and 24 articles respectively), yet with lower rates of international collaboration, especially in India (13.2% MCP) and China (16.7% MCP). In contrast, countries like France (39.1% MCP) and the Netherlands (26.7% MCP) display stronger engagement in collaborative research. Interestingly, some countries such as South Africa and Nigeria present high SCP dominance, with South Africa producing 25 out of 26 articles independently, and Nigeria having no MCPs at all. This indicates a more localized approach to child labor research in these contexts.

Table 3. Country Contributions To Child Labor Research

Country	Articles	Articles %	SCP	MCP	MCP %
USA	218	11,9	166	52	23,9
UNITED KINGDOM	175	9,6	133	42	24
AUSTRALIA	73	4	56	17	23,3
INDIA	53	2,9	46	7	13,2
CHINA	48	2,6	40	8	16,7
GERMANY	36	2	24	12	33,3
ITALY	33	1,8	22	11	33,3
CANADA	26	1,4	16	10	38,5
SOUTH AFRICA	26	1,4	25	1	3,8
TURKEY	25	1,4	17	8	32

Country	Articles	Articles %	SCP	MCP	MCP %
INDONESIA	24	1,3	18	6	25
SPAIN	24	1,3	18	6	25
FRANCE	23	1,3	14	9	39,1
PAKISTAN	21	1,1	16	5	23,8
SWITZERLAND	18	1	16	2	11,1
BRAZIL	17	0,9	14	3	17,6
GHANA	15	0,8	13	2	13,3
NETHERLANDS	15	0,8	11	4	26,7
NIGERIA	15	0,8	15	0	0
BANGLADESH	13	0,7	10	3	23,1

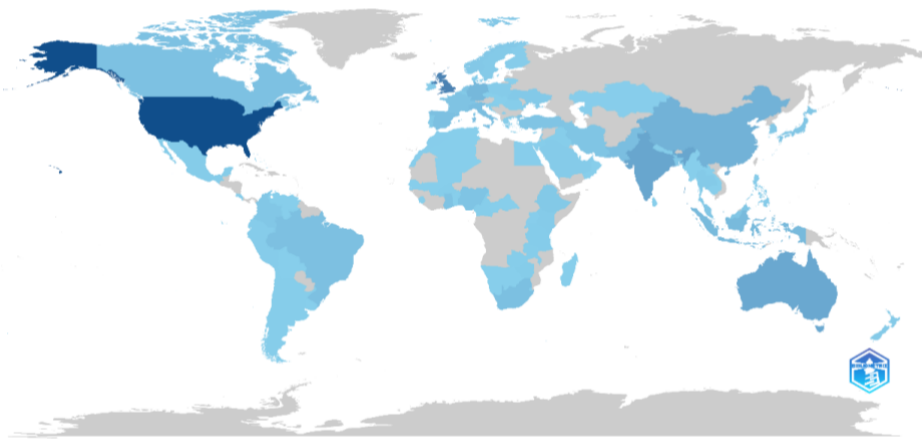


Figure 11. The Most Relevant Countries as References on Child Labor Publications

The Evolution of Topics on Child Labor Overtime 1964 - 2025

The data reflects a comprehensive longitudinal overview of scholarly engagement with key themes related to child labor and associated socio-economic indicators from 1964 to 2025. The trajectory clearly shows that research interest in child labor has undergone a dramatic increase, particularly from the early 1990s onward. From virtually no recorded publications prior to 1987, the volume of child labor-focused studies began to escalate, reaching 571 articles by 2025. This expansion mirrors growing global recognition of child labor as a critical development issue. Similarly, education, employment, and child welfare emerge as thematically significant co-occurrences with child labor. For example, publications addressing education rose from marginal attention in the 1980s to 156 articles by 2025. This suggests a scholarly consensus around the inverse relationship between education and child labor, where poor access to education often correlates with higher incidence of child labor. Employment, which includes informal, hazardous, or exploitative work, is another recurring theme, increasing to 117 publications by 2025, indicating sustained academic focus on the nature and conditions of children’s work. The theme labeled child—likely encompassing general child-related rights, conditions, and development—also shows a marked increase, with 154 publications by 2025. This suggests a broadening of the scholarly lens, beyond labor, to address children’s welfare holistically. Similarly, the human category (possibly encompassing human rights or human development frameworks) has gained traction since the early 2000s, with 110 articles in 2025, reflecting the alignment of child labor discourse with global human rights agendas.

In terms of gender and poverty dimensions, the data indicates an increasing attention to female and male experiences of child labor. The gap between gender-based articles was minimal by 2025, with 94 articles focused on females and 85 on males. This indicates a relatively balanced academic approach toward gender disaggregation, acknowledging that child labor manifests differently for girls and boys. The steady rise in poverty-related publications (from virtually zero until the 1990s to 92 articles in 2025) affirms poverty as a principal driver and contextual backdrop of child labor. This trend is not only quantitative but thematic: the alignment of research themes such as education, employment, welfare, and poverty with child labor suggests a growing tendency toward interdisciplinary and systems-oriented approaches. The rapid rise in total article counts—from just 1 in 1964 to 100 in 2025—further underscores the growing institutional and scholarly prioritization of child labor as a research agenda.

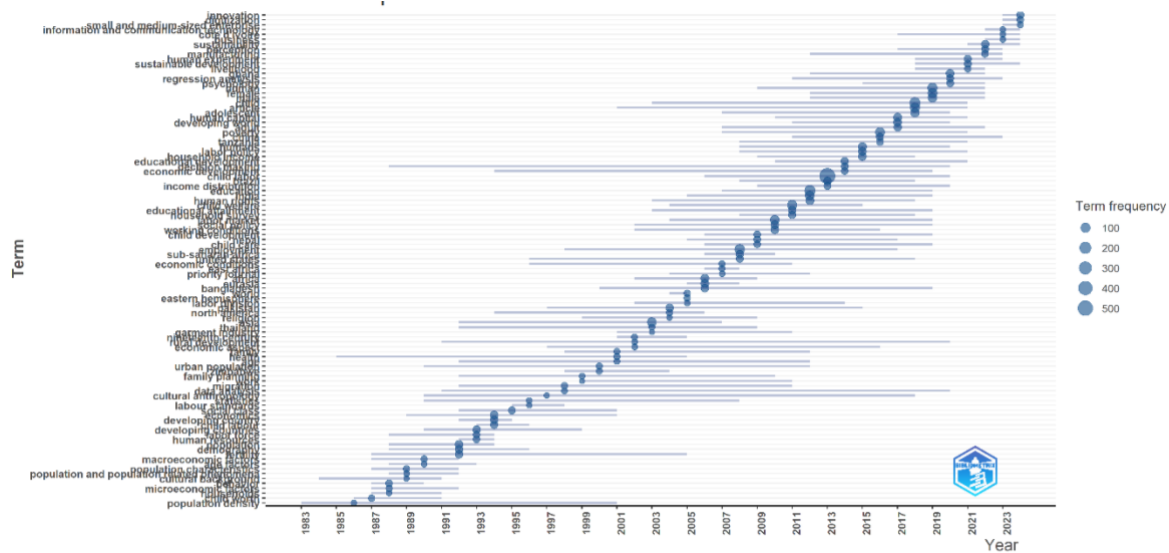


Figure 12. Trend Topics on Child Labor

The dataset presents a bibliometric analysis of key research terms related to child labor, illustrating the evolution of scholarly focus from 1983 to 2024. In the early phase (1980s to mid-1990s), dominant terms such as population density, child worth, microeconomic factors, households, and fertility reflect a foundational focus on demographic and economic determinants of child labor. This period is characterized by analyses rooted in population studies, household structures, and economic vulnerabilities, especially in developing countries. Terms like economics, developing countries, and labor force also gained prominence during this era, indicating the framing of child labor within macroeconomic and labor market dynamics.

Moving into the 2000s, the focus expanded toward development and rights-based approaches. Terms such as employment, child welfare, social policy, labor market, and working conditions suggest a shift in attention toward structural factors, institutional responses, and the integration of child labor issues into broader social development and policy frameworks. This period also saw the rise of region-specific research, with terms like South Asia, Sub-Saharan Africa, Pakistan, and Bangladesh indicating an increasing focus on geographical contexts where child labor is most prevalent. Simultaneously, social and educational

dimensions—such as education, child development, and educational attainment—became central, reflecting a growing concern for long-term human development outcomes.

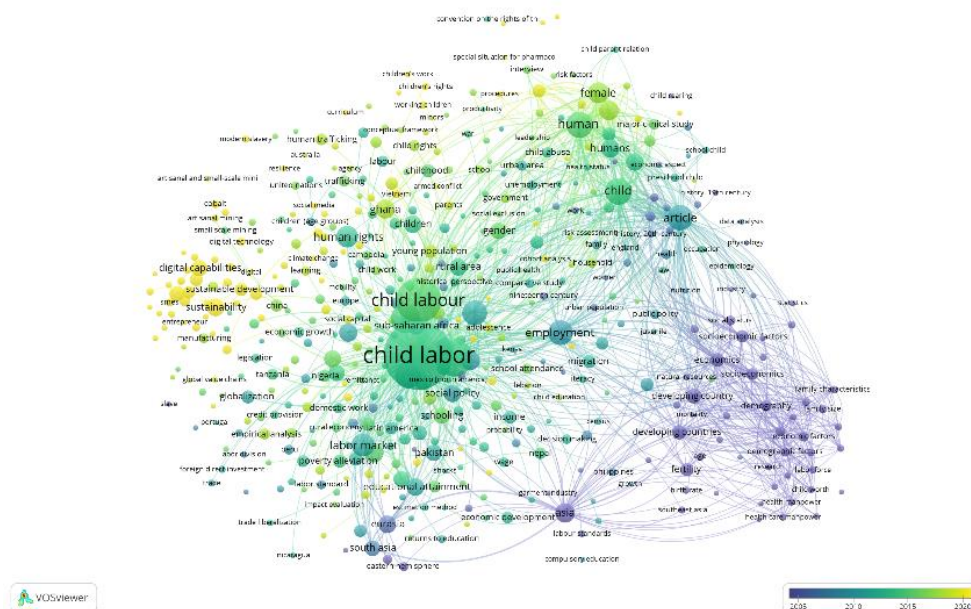


Figure 13. Overlay Visualization on Child Labor

In the most recent period (2010–2024), there is a clear emergence of contemporary themes that intersect with global development goals and technological changes. The term child labor itself reached its peak median frequency in 2013, reaffirming its continued importance in academic discourse. Research has increasingly engaged with gender-disaggregated terms like female and male, as well as concepts such as human rights (Amon et al., 2012) (Silk & Makonnen, 2003) (Geovani et al., 2021) (Hennessy, 2023) (Luckstead et al., 2022b), sustainable development (Ansong, 2020) (Cindikya et al., 2025; Elsayed, 2024) (Sovacool, 2021) (El Wali et al., 2021), and poverty (Chowdhury, 2021) (Edmonds & Theoharides, 2020) (Miller et al., 2024) (Adonteng-Kissi, 2023c) (Baker et al., 2021), indicating a stronger focus on social justice and equity. Notably, newer terms such as innovation, digitization, information and communication technology, and small and medium-sized enterprises—all of which appear with median years around 2023–2024—highlight a shifting interest toward the impact of digital economies, entrepreneurship, and modernization on child labor. These trends suggest that contemporary scholarship is not only addressing persistent structural issues but is also forward-looking, anticipating future challenges and opportunities related to child labor in a globalized and technologically evolving world.

Table 4. Topic Clustering on Child Labor Publications

Cluster	Key Terms
Economic and Labor	Employment, labor force, labor market, income distribution, economic development, poverty, social class
Demographic and Social	Population, demography, fertility, households, migration, family planning
Regional	Africa, South Asia (India, Pakistan, Bangladesh), Sub-Saharan Africa, North America, East Africa, Thailand

Cluster	Key Terms
Child-Focused	Child labor, child welfare, child development, educational development, adolescent
Policy and Rights	Social policy, human rights, labor standards, education, working conditions
Emerging/Modern	Digitization, innovation, ICT, sustainability, small and medium-sized enterprises

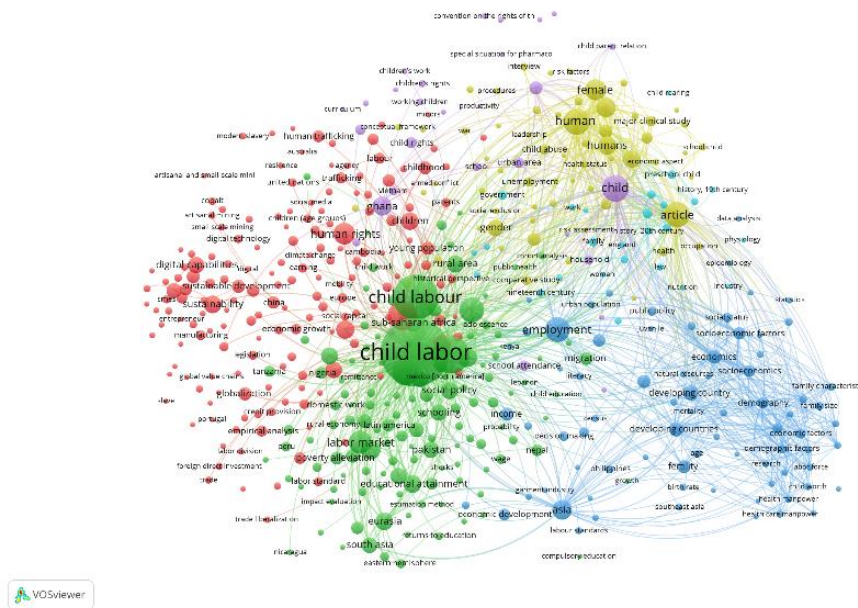


Figure 14. Network Visualization on Child Labor Using VOSviewer

Figure 14 shows that at the center of the map lies the dominant term “child labor” (and its British variant “child labour”), represented with large green nodes, indicating its centrality and high frequency within the dataset. The green cluster surrounding this term includes closely related concepts such as labor market, social policy, poverty alleviation, educational attainment, and human rights. This cluster primarily focuses on structural and policy-related issues, emphasizing the socio-economic and institutional dimensions of child labor. It also includes regional terms like sub-Saharan Africa, South Asia, Pakistan, and Nigeria, signifying geographical hotspots of research concern and policy intervention. The visualized bibliometric map generated using VOSviewer presents a comprehensive co-occurrence network of keywords associated with child labor research. The network is structured into several distinct but interconnected clusters, each representing specific thematic domains in the scholarly discourse. The visualization draws on keyword frequency and co-occurrence strength, revealing patterns in research focus, interdisciplinary linkages, and emerging areas of inquiry.

The red cluster on the left side of the map reflects a thematic orientation toward sustainability, sustainable development, digital capabilities, globalization, and entrepreneurship. These terms suggest an emerging body of literature that intersects child labor with broader global development paradigms, particularly within the context of technological change, economic globalization, and value chain governance. The presence of terms such as modern slavery, climate change, and digital technology also points to new discursive directions, particularly those focused on future risks and systemic inequalities. In

contrast, the blue cluster located to the right focuses on demographic, economic, and developmental factors. Key terms in this area include developing countries, economics, fertility, migration, employment, and socioeconomic factors. This cluster represents a more traditional and quantitatively oriented research stream that explores the causal links between poverty, family characteristics, and child labor through demographic and econometric analysis. The emphasis on census, data analysis, and statistics further illustrates this methodological tendency.

The yellow cluster at the top of the map is primarily concerned with health, human, gender, and education-related issues. It includes keywords such as child, female, human rights, child abuse, health status, and gender. This cluster reflects a biomedical, psychological, and rights-based framing of child labor, focusing on the effects of labor on children's physical and emotional well-being, gendered vulnerabilities, and educational outcomes. It connects closely with themes from clinical studies, social exclusion, and public health. A smaller purple cluster also appears, centering on children's rights, curriculum, conceptual framework, and normative aspects such as convention on the rights of the child. This cluster may represent more theoretical or legal explorations, emphasizing child labor from the standpoint of rights-based frameworks and educational policy.

Research Gap on Child Labor Publication

Based on a bibliometric analysis of child labor research spanning from 1902 to 2025, several critical research gaps have been identified that require attention in future investigations. One notable gap is the insufficient representation of technological and digital aspects within the discourse on child labor. Despite the emergence of terms such as digitization, innovation, and ICT in recent years (Sukma & Ruslan, 2025) (Mastersow, 2021) (Clark & Jno-Charles, 2025), their representation is still minimal when compared to traditional themes related to economics and policy. This situation necessitates a more in-depth examination of how digital platforms, the gig economy, and emerging technologies affect new forms of child labor (Clark & Jno-Charles, 2025), including online exploitation and the production of digital content (Belay, 2022) (Gonzalez, 2025). Another major gap pertains to the geographic disparity in research output. While countries from the Global North predominantly shape the academic landscape, contributions from the Global South especially Sub-Saharan Africa, Southeast Asia, and Latin America are limited and frequently disconnected from international collaborations. There is a pressing need for more locally driven, context-specific research and South-South partnerships that accurately reflect the diverse cultural, economic, and political contexts.

The experiences of child labor that are specific to gender continue to be insufficiently examined. Despite an increase in the amount of gender-disaggregated research, there are still relatively few studies that concentrate solely on the distinct experiences, vulnerabilities, and labor roles of boys and girls (Greenbaum, 2020b) (Laborda Castillo et al., 2014) (Abang Ali & Arabsheibani, 2020) (Zapata et al., 2011). Future research ought to adopt intersectional methodologies that investigate how gender interacts with other elements such as disability, ethnicity, or socioeconomic status. Furthermore, there is a notable absence of sector-specific analyses, especially in high-risk industries like agriculture, mining, manufacturing, and informal urban employment. Comprehensive fieldwork and ethnographic research in these sectors could yield essential insights into the concealed and informal aspects of child labor, as well as the contributions of corporate entities and labor intermediaries.

Another issue is the lack of longitudinal and impact evaluation studies. Despite a rapid increase in the number of publications, particularly since the 1990s, few studies thoroughly

evaluate the long-term effects of interventions such as cash transfer programs, educational policies, or legal reforms. There is a need for research that utilizes mixed methods to assess both the quantitative and qualitative impacts on children's lives, education, and overall well-being. Additionally, environmental and climate factors remain insufficiently examined in the context of child labor. Considering the growing significance of climate-induced migration, food insecurity, and ecological degradation, future studies should investigate how environmental vulnerabilities contribute to the risks of child labor, especially within resource-extractive industries.

The field is also plagued by theoretical fragmentation, with research frequently limited to particular disciplines such as economics, sociology, or human rights, lacking adequate integration across these areas. Future research would greatly benefit from interdisciplinary and critical theoretical frameworks, including feminist, postcolonial, and decolonial viewpoints, that take into account the structural, historical, and systemic aspects of child labor. Additionally, consumer behavior and ethical consumption are still marginal in existing research. Despite the growing awareness of supply chain ethics and corporate accountability, there are few studies that explore how consumer decisions, certification programs, or awareness initiatives influence labor practices. A more thorough investigation of the relationship between demand in affluent countries and exploitative labor in impoverished regions is crucial.

Table 5. Research Gap and Suggested Future Research on Child Labor

Gap Area	Suggested Focus
Digital Economy	Online child labor, gig work, algorithmic exploitation
Global South Representation	Local voices, regional comparisons
Gendered Labor	Intersectionality, sector-specific analysis
Sector-Specific Data	Mining, agriculture, informal economies
Longitudinal Evaluations	Policy outcomes, lived experiences
Environmental Factors	Climate displacement, eco-labor risks
Theoretical Integration	Interdisciplinary and critical frameworks
Ethical Consumption	Consumer behavior, certifications, supply chains

Practical Implications for Policymakers, Practitioners, and Future Research

The results of this bibliometric study have important consequences for policymakers, practitioners, and researchers by emphasizing both existing global research landscapes and ongoing knowledge deficiencies. This study, by mapping scholarly trajectories with Biblioshiny and VOSviewer, uncovers prevalent themes while also highlighting areas needing immediate academic and policy focus. Policymakers should note the thematic gaps highlighted in Table 4, like the exploitation of the digital economy, underrepresentation of the Global South, and environmental risks, which indicate the necessity for evidence-based measures that are attuned to new types of child labor. Recent bibliometric studies on worldwide labor governance illustrate how recognizing overlooked thematic clusters can steer policymaking towards inclusive and forward-thinking frameworks (Veera et al., 2024). Likewise, research in climate governance indicates that bibliometric mapping aids policymakers in forecasting risks that overwhelmingly impact marginalized groups, such as children (Normawati et al., 2024). As a result, governments and global organizations can leverage this evidence to create flexible

regulatory frameworks for online gig work, algorithmic manipulation, and eco-labor hazards linked to climate-related displacement.

For practitioners, particularly NGOs, labor unions, and educators, the analysis offers practical insights on connecting interventions with research disparities. For example, the absence of studies that are sector-specific and gender-focused highlights the necessity for advocacy initiatives that emphasize intersectionality and the contextual realities of child labor in agriculture, mining, and informal sectors. Studies on translating bibliometric findings into practice indicate that stronger partnerships between researchers and practitioners increase the legitimacy of advocacy and improve the prominence of overlooked topics in global policy discussions (Hasan, Daryanto, & Suwarno, 2025). In this context, professionals can strategically leverage bibliometric insights to promote enhanced labor protections, ethical certification systems, and localized measures that integrate perspectives from the Global South.

For researchers, the recognized gaps offer a promising opportunity to enhance both theory and practice. Longitudinal assessments are still uncommon, but these studies are essential for evaluating policy success and understanding children's experiences throughout time. According to Manuel et al. (2020), bibliometric research that overlooks theoretical integration and policy significance may turn into descriptive analyses instead of being transformative. This research highlights this issue: upcoming investigations into child labor should adopt interdisciplinary approaches, integrating critical political economy, gender theory, and sustainability studies, to address the complex dimensions of child labor in various contexts. Additionally, combining ethical consumption research with studies on child labor could link consumer behavior, supply chain management, and labor exploitation, thereby enhancing discussions on corporate responsibility and fair trade (Bostrom, 2021)

CONCLUSION

The bibliometric examination of child labor research spanning from 1902 to 2025 indicates a notable increase in academic focus, underscoring the growing significance of this topic in both scholarly and policy discussions. Originally based on economic and demographic issues, the trajectory of research has progressively evolved towards more intricate and interdisciplinary perspectives, incorporating aspects of human rights, education, sustainability, and social justice. This evolution demonstrates the development of child labor studies as a scientific discipline that not only records the phenomenon but also critically analyzes its structural, cultural, and global aspects.

Nevertheless, the analysis reveals a number of significant gaps that need to be addressed in order to enhance and diversify the field. One of the most pressing issues is the lack of representation of digital and technological aspects in existing research. In a time characterized by the emergence of the gig economy, remote work platforms, and digital surveillance, the potential for child labor to transition into new, less visible forms such as online exploitation and content creation remains inadequately understood. Additionally, the geographic disparity in knowledge production continues to favor institutions in the Global North, while viewpoints and experiences from the Global South are frequently marginalized or disconnected from wider academic discussions. This imbalance underscores the necessity for more inclusive and contextually aware research conducted by scholars from the affected regions.

Gender continues to be a relatively underexplored aspect, with a limited number of studies systematically examining the distinct experiences, risks, and agency of boys and girls across various labor environments. The same holds true for research specific to sectors, which

is particularly lacking in informal and high-risk industries such as agriculture, mining, and home-based labor. These gaps restrict the ability of research to guide targeted interventions. Furthermore, the field has not yet established a strong foundation of longitudinal and evaluative research capable of effectively assessing the long-term impacts of policies and programs designed to mitigate child labor. This absence of empirical evidence obstructs evidence-based policymaking and the development of sustainable solutions.

Environmental and climate-related factors continue to be marginal in the existing literature, even though there is an increasing acknowledgment of their effects on vulnerable groups, particularly children. Displacement caused by climate change, food insecurity, and ecological deterioration are progressively intensifying the pressures of child labor, particularly in disadvantaged communities. Furthermore, the theoretical framework surrounding child labor research remains disjointed. Numerous studies function within isolated disciplinary boundaries, failing to utilize critical, intersectional, or decolonial viewpoints that could shed light on the underlying structural forces that sustain child exploitation. Additionally, the influence of consumers in either perpetuating or challenging exploitative labor practices is seldom discussed, despite the ethical and economic ramifications of global supply chains and market demand.

In view of these observations, future research needs to adopt a more comprehensive, interdisciplinary approach that is rooted in justice-oriented frameworks. It should prioritize the voices and experiences of impacted communities, particularly those from the Global South; integrate technological and environmental factors; and encourage theoretical advancements that connect economics, ethics, and human rights. Only through such thorough methodologies can academic inquiry genuinely aid in dismantling the systemic conditions that sustain child labor and promote the establishment of a world where all children can flourish with dignity and freedom.

The practical ramifications of this bibliometric analysis highlight the significance of converting descriptive mapping into usable insights. Policymakers may leverage the thematic clusters to create proactive regulations, practitioners can use evidence to strengthen advocacy and community actions, and researchers are encouraged to advance beyond mapping towards critical, interdisciplinary, and impact-focused research. Tackling the noted gaps, digital exploitation, representation of the Global South, gendered labor, sector-specific issues, longitudinal insights, environmental risks, theoretical integration, and ethical consumption, will make certain that child labor research mirrors academic trends while also driving transformative changes in policy and practice.

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