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EXPLORING TRENDS IN SOCIAL SECURITY MANAGEMENT: A BIBLIOMETRIC REVIEW

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ABSTRACT

Social security systems worldwide encounter a range of challenges including poverty, inequality, pandemic-induced impacts, non-traditional employment, aging populations, and threats posed by the collaborative economy. These challenges call for various reforms that encompass private sector engagement, expenditure reduction, expanded coverage, improved management practices, decoupling benefits from employment, inclusion of local stakeholders, and support for self-employed workers. Implementing these reforms is imperative for safeguarding the well-being of vulnerable populations. The current bibliometric review aims to analyse research trends related to social security management. This review utilised ScientoPy and VOSviewer to comprehend the nature of collected datasets from Scopus and Web of Science (WoS) databases. The findings of this review revealed that the number of publications in both databases peaked in 2019, suggesting that previous studies continue to be interested in the current topic. The scholarly publication "Social Security Bulletin" is renowned for its extensive coverage of social security management research for empowering employees welfare. The keyword "social security" has significantly impacted the thematic content of scholarly social security management for the past three decades, from 1990 to 2023, as previous researchers have used it most frequently. Based on overlay visualisation mapping, the current review demonstrates that the terms "coverage," "social security legislation," and "atypical work," have been accorded greater significance since 2018. This study provides a thorough and worldwide perspective on the crucial subjects of social security management in order to empowerment of employees welfare. It is aimed at potential readers and researchers interested in better understanding these concepts and conducting more rigorous research on social security management.

Keywords: Social security, vulnerable populations, social security managements, empowerment of employees welfare, bibliometrics.

INTRODUCTION

The current challenges faced by social security management systems worldwide involve the need for significant reforms in welfare state policies to address poverty and inequality (Ray, 2022). The COVID-19 pandemic and conflicts have resulted in increased risks in the labor market, reduced employment opportunities, and a growing trend of poverty and poor health (Poplavska, 2022). Non-traditional forms of employment, informality, unemployment, and the aging population present challenges to access and expansion of protective coverage and its financing (Morales, 2019). Moreover, the rise of the collaborative economy poses a threat to social security and social inclusion, necessitating the identification of solutions to safeguard individuals and the social fabric (Lehoczká, 2020). The development of social management is crucial for enhancing the quality and efficiency of social services.

The primary concerns related to social security include inadequate and unfair protection, the economic and political environment, demographic and labor trends, administrative inefficiencies, financial management, and the increase in benefits (Lebedeva, 2023). According to Ugargol and Parvathy (2023 (2023) and Chakrabarty & Singh (2022), the traditional joint family system, which used to provide socioeconomic support for older adults, is weakening due to rapid economic and social changes. The current growth of elderly programs presents challenges in budget allocation, labor force participation, and meeting the needs of elderly individuals. Several empirical studies have shown that despite the introduction of various programs and schemes for older people, there has been little improvement in their quality of life (Bailey et al., 2022). Proposed reforms include promoting the involvement of the private sector and non-governmental organizations (Lifshits & Shatalova, 2023), reducing expenditures (Chakrabarty, 2019), expanding coverage and financing (Kenzhetayeva & Aliyeva, 2022), and improving portfolio management (Nutu, 2023). The concerns of the population regarding the future of social security and the demand for reform are also significant issues (Piachaud, 2020).

Social security management holds great significance due to its pivotal role in offering monetary assistance to individuals afflicted with severe mental illness and co-occurring substance dependence, along with retired workers, survivors of deceased workers, and disabled workers and their dependents (Kravchenko, 2023; Metcalfe & Drake, 2023). The proficient administration of social security benefits can yield positive outcomes such as diminished substance utilization, enhanced fiscal control, and improved adherence to treatment for patients with mental illness and substance dependence (Niedzwiecki & Pribble, 2023). Furthermore, social security benefits, encompassing disability insurance, have proven effective in mitigating poverty rates among elderly Americans and contributing a substantial proportion of income for senior citizens (Lu et al., 2021). The capacity to oversee social security benefits and comply with treatment regimens is also correlated with improved health outcomes for individuals grappling with chronic ailments like diabetes and HIV (Niedzwiecki & Pribble, 2023). Hence, guaranteeing streamlined and efficacious social security management is imperative for fostering the well-being and financial stability of vulnerable populations.

Improving the management of social security necessitates the implementation of various pivotal measures. In the first instance, it is imperative to dissociate statutory social protection programs from the benefits bestowed by employers, and instead introduce an all-encompassing scheme that compensates or safeguards low-income individuals regardless of their employment status (Khan et al., 2023). Moreover, due consideration must be given to the contextualized nature of the claims-making process and the involvement of local state and third sector actors in furnishing assistance and navigating social security systems. These

actors possess the capacity to either exacerbate inequalities or ensure the sufficiency of income, accessibility, and universality across social security systems (Edmiston et al., 2022). Additionally, according due attention to the health and well-being of self-employed laborers is of paramount importance, as insufficient government-provided formal supports can negatively impact their welfare. It is imperative to establish a comprehensive program that safeguards self-employed workers in the event of illness, injury, or a reduction or loss of income (Lindenauer & Williams, 2022).

The current investigation seeks to conduct a bibliometric analysis to scrutinize the trends in publication and advancements in research pertaining to the management of social security. The need to carry out a bibliometric study in the realm of social security management emerges from the imperative to obtain a comprehensive understanding of this research domain. Furthermore, this analysis facilitates the identification of indispensable works, enhances our comprehension, fosters collaboration, and provides guidance for future research endeavors in the realm of advancing social security management and fostering environmental consciousness.

The ensuing research inquiries are vital in furthering the current study's comprehension of previous research regarding the environments of social security management:

1. What trends and patterns have been detected in the quantity and nature of publications concerning research on social security management?
2. Which sources have shown the greatest productivity in publishing research on social security management?
3. What are the predominant research themes or topics that have emerged in the investigation of social security management?
4. Which scholarly publications have had the most notable influence on social security management?
5. Which research institutions have made noteworthy contributions to the study of social security management?

METHODOLOGY

Materials and Methods

This study aims to examine and analyze existing research on the applications, capabilities, roles, and impacts of social security management. To achieve this objective, various methodologies were utilized, including mapping analysis using VOSviewer and research trend evaluation using ScientoPy. The Scopus and Web of Science (WoS) databases were consulted to retrieve relevant datasets on social security management. The inclusion of specific keywords, as displayed in Table 1, was crucial in populating these datasets. The search for datasets was conducted without any temporal restrictions until February 5, 2024. The decision to use the Scopus and WoS databases for this investigation was based on their widespread adoption in academic and research institutions for bibliometric analysis (Abdullah & Sofyan, 2023). These databases are well-known for their comprehensive coverage, high-quality data, detailed metadata, advanced analytical tools, and global accessibility (Hafiar et al., 2024).

ScientoPy and VOSviewer were employed in this study for analysis and visualization purposes. ScientoPy is a scholarly-bibliometric analysis software platform used to measure the prominence of essential subjects, authors, countries, and associated publications in given study (Abdullah & Sofyan, 2023). It is widely recognized as a Python-based program for bibliometric analysis, publicly available and open-source. One notable feature of this system is its pre-processing component, which effectively eliminates biases inherent in individual articles (Ruiz-Rosero et al., 2019). This pre-processing phase enhances the readability, accuracy, organization, comprehensiveness, and representativeness of the findings derived from a substantial corpus of Scopus and WoS data. In this study, VOSviewer was used to construct a co-occurrence

map of authors' terms related to social security management. Providing precise information on various themes or topics that have been previously investigated and have influenced research on social security management globally is crucial (Abdullah, 2022b).

Table 1

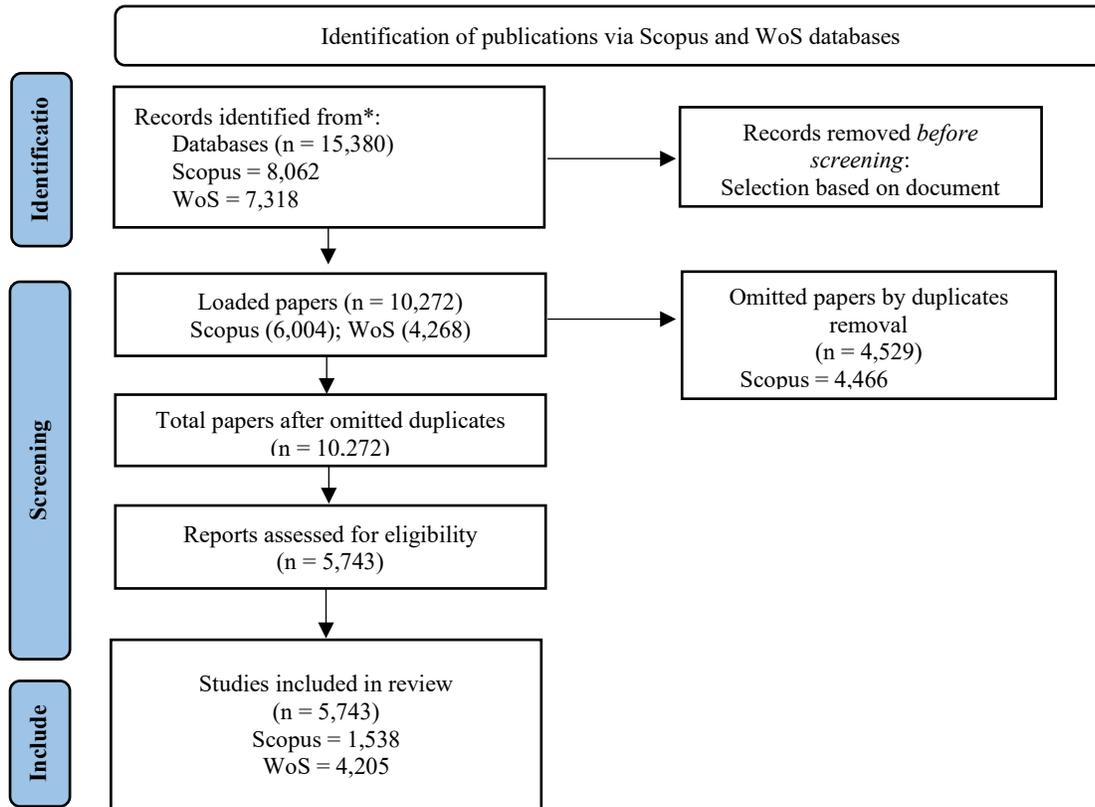
Search Strategy for Extracting Data from the Web of Science and Scopus databases.

Database	Search Strategy	Records
Web of Science	Title: "Social Security Management" OR "Social welfare administration" OR "Social insurance administration" OR "Retirement benefits management" OR "Old-age benefits administration" OR "Public pension management" OR "Social safety net administration" OR "Retirement security oversight" OR "Pension program management" OR "Government benefit administration" OR "Elderly assistance management" OR "Social Security"	8,062
Scopus	Article Title: "Social Security Management" OR "Social welfare administration" OR "Social insurance administration" OR "Retirement benefits management" OR "Old-age benefits administration" OR "Public pension management" OR "Social safety net administration" OR "Retirement security oversight" OR "Pension program management" OR "Government benefit administration" OR "Elderly assistance management" OR "Social Security"	7,318

Pre-processing of Retrieved Datasets

The dataset underwent an initial pre-processing phase in which duplicate entries were eliminated and significant data was consolidated. These tasks were conducted using the ScientoPy software. Diagram 1 presents the preliminary findings of the data collection process, which indicate a total of 15,380 unprocessed data items obtained from publications in Scopus and WoS. Based on the findings, 5,108 articles, accounting for 33.2% of the datasets, were excluded due to the utilization of the automatic document-type filtering technique. Initially, 10,272 papers were identified, but duplicate datasets were subsequently removed. The analysis revealed 4,529 cases of duplication, representing 44.10% of the dataset, within the Scopus database. A total of 5,743 papers were considered suitable for inclusion in the present study. Among them, 4,205 papers (73.2%) were sourced from the WoS, while the remaining 1,538 publications (26.8%) were sourced from Scopus. Including datasets with more than 100 components facilitated the execution of bibliometric analysis.

Diagram 1
Flow Diagram of Research of Databases and Registers



RESULTS

The findings of the current study encompass all the research questions specified in the methodological section. The obtained results are elucidated through graphical illustrations generated by ScientoPy and VOSviewer.

Publication Patterns and Trends

This study endeavors to examine the trends and patterns in research publications that concentrate on the convergence of social security management from an academic standpoint. More specifically, this section delves into the quantity of publications and the specific categories of papers that have been disseminated within this specific field. Figure 1 presents the data depicting the evolution of social security management as documented in recent publications. It is important to highlight that the subject matter being discussed is relatively novel, as evidenced by the earliest article found in the WoS database, which dated back to 1990. Prior to 2004, no publications were documented in the Scopus database. However, there has been a substantial increase in the number of publications, with a total of 93 publications identified by 2023. According to statistics from the WoS database, the number of articles published in 1990 was 43, but this number has experienced a noticeable growth, reaching 130 by 2023.

Figure 1 illustrates a timeline graph showing that the number of publications in both databases was below 63 from 1990 to 1996. However, data from 2004 onwards indicates an increasing trend in the WoS and Scopus databases. The peak of publication occurrences in both databases was reached in 2018. In contrast,

during the COVID-19 pandemic from 2019 onwards, there is a slight decline in publications, particularly in the Scopus database. On the other hand, the WoS database has surpassed the Scopus database and continues to experience a growth in publication frequency. This phenomenon may be closely related to changes in societal norms, and the observed behavior may be associated with situational anxiety during the COVID-19 outbreak. Additionally, there is a significant increase in the field of social security management, aiming to enhance awareness of the environmental situation and foster public consciousness in dealing with this challenging situation.

Figure 1

The Evolution of Publication Growth (Source: Author, using ScientoPy 2.1.3)

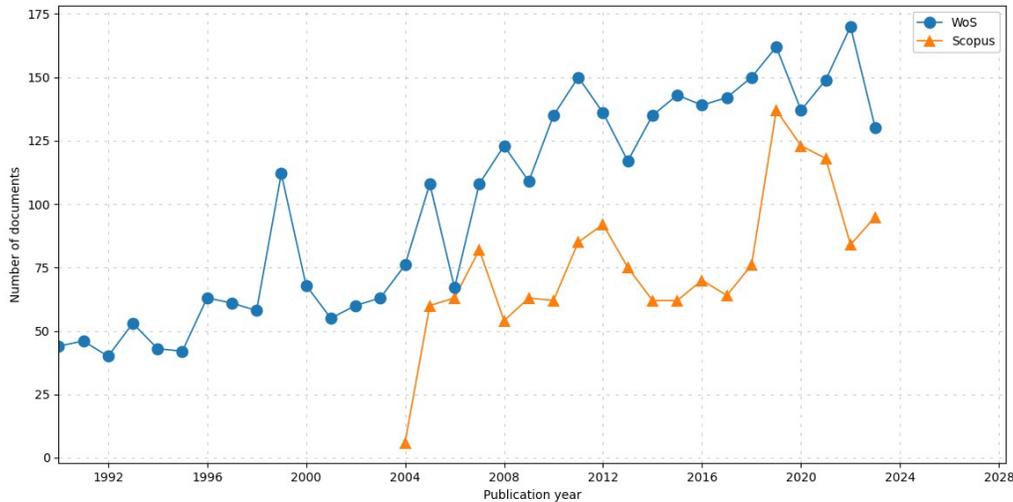
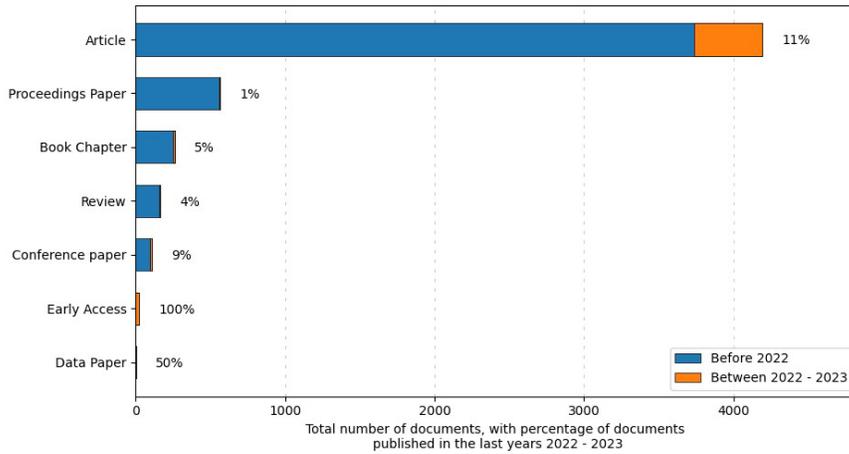


Figure 2 provides a comprehensive overview of the extensively studied document categories, with the aim of identifying the most relevant research on the management of social security, as examined in Scopus and WoS. According to the data depicted in Figure 2, the category of articles shows a significantly higher number of documents, totalling 4,192. This corresponds to 11% of the total documents published between 2022 and 2023. In contrast, proceedings paper account for 545 documents. Both document categories encompass over 500 sources each, surpassing the combined number of sources from book chapters, reviews, conference paper, early access and data paper. The available evidence strongly suggests that a considerable amount of primary research has been conducted in this field, as indicated by the increasing number of academic journals dedicated to it. Furthermore, papers presented in the proceedings related to the management of social security hold significant importance in the dissemination of research findings, policy implications, optimal methodologies, multidisciplinary perspectives, cross-national assessments, and the advancement of skill development and collaboration within this field.

Figure 2

Bar-trend Graph of Document Types (Source: Author, using SciencToPy 2.1.3)

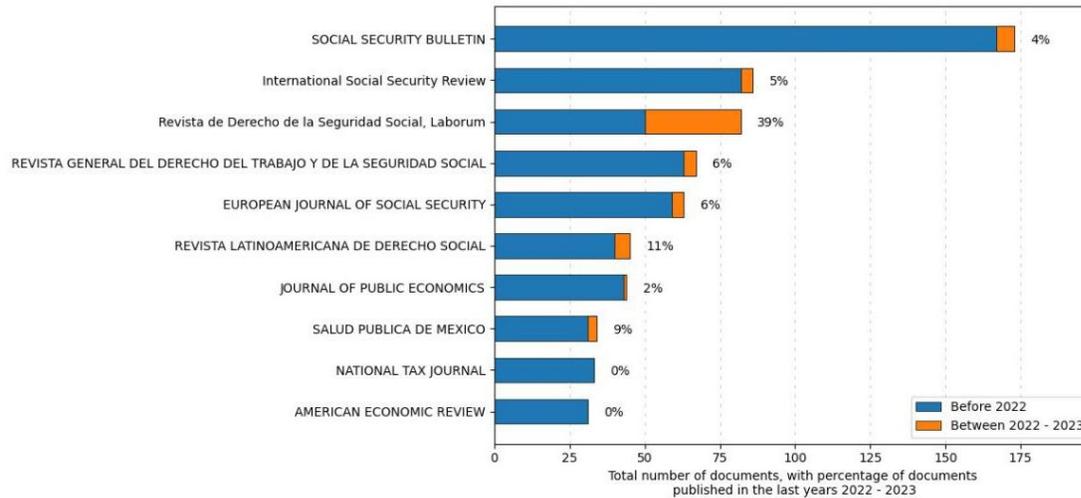


Prolific Source Titles

This investigation comprised a compilation of source titles that were recognized for their remarkable productivity in terms of publishing research on the topic of social security management. These titles were identified as the most productive among various sources of publication in this specific field. Figure 3 illustrates the top ten source titles that were uncovered in this inquiry. The data presented in Figure 3 indicates that a substantial proportion of scholarly publications focused on the convergence of social security management are disseminated through reputable academic journals and conference proceedings. The source titles with a document count surpassing 75 include "SOCIAL SECURITY BULLETIN," "International Social Security Review," and "Revista de Derecho de la Seguridad Social, Laborum." The publication "SOCIAL SECURITY BULLETIN" primarily concentrates on disseminating research on Social Security Management. The journals "International Social Security Review" and "Revista de Derecho de la Seguridad Social, Laborum" are the second and third most prominent sources of research on social security management, respectively. Notably, the publication titled "Revista de Derecho de la Seguridad Social, Laborum" has achieved a 39% dissemination rate, establishing it as one of the most widely published works in the field from 2022 to 2023. These three academic publications and conference proceedings are highly regarded and possess significant impact factors, indicating the presence of research of exceptional quality. These publications and conference proceedings disseminate the most comprehensive research on social security management, thereby demonstrating a growing interest among researchers and practitioners.

Figure 3

The Prolific Source Titles (Source: Author, using ScientoPy 2.1.3)



Research Themes or Topics Emerging

This investigation employs ScientoPy and VOSviewer to analyze the authors' keywords and examine the current research trends and important topics in the field of social security management. Figure 4 presents the top 10 keywords associated with social security management. The selection of terms in the compilation is based on their frequency of occurrence in the papers, as represented by the blue bars. Additionally, the orange color represents the proportion of articles published in the past two years (PDLY), specifically in 2022 and 2023.

According to the data presented in Figure 4, the term "social security" has the highest frequency, appearing in 1,106 papers with a PDLY of only 14%. This finding emphasizes the importance of understanding and promoting increased awareness of social security issues and challenges in the field of managements. Recent studies have highlighted the need to enhance environmental awareness through various means, such as exposing social security to employee self-awareness with government emphasis, between 2022 and 2023.

The term "disability" is the second most frequently used term, appearing in 72 papers. This observation underscores the recognition of social security management as an effective tool in examining the well-being of workers affected by workplace accidents. The PDLY of 12% indicates a significant amount of research conducted in the past two years, focusing on the growing importance of social security management in promoting environmental awareness and education for employees and organizations, within the framework of empowering employee welfare.

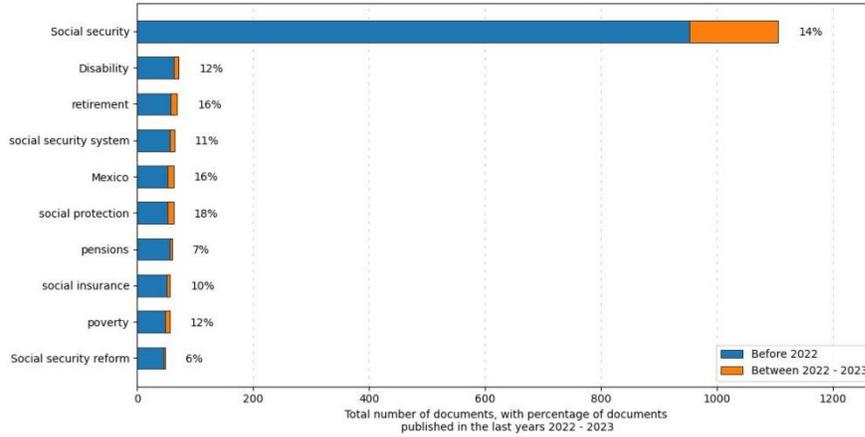
The term "retirements" appears in 69 papers, highlighting the significance of integrating sustainable practices and principles into efforts aimed at enhancing social security management. A PDLY of 16% emphasizes the increasing prominence associated with incorporating social security management principles specifically for the employee environment after the completion of their tenure or employment. This is directly linked to the remuneration or pension provided to employees, in effort to improve the system and safeguard employee welfare.

The inclusion of terms such as "social security system," "Mexico," "social protection," "pensions," "social insurance," "poverty," and "social security reform" contributes to a more comprehensive understanding of the subject area. The varying numbers of papers and PDLY (personnel-driven learning activities) identified

in this study indicate diverse research focuses and the continuously evolving nature of social security management studies.

Figure 4

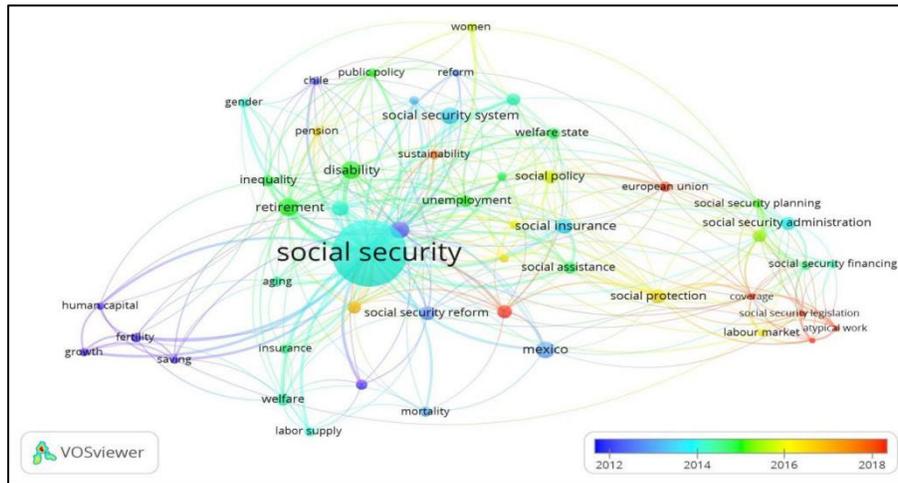
The Bar-trend Graph of Research Themes and Topics Emerging (Source: Author, using ScientoPy 2.1.3)



The present study utilized the VOSviewer platform to gain understanding of the interrelationships among the keywords used in previous research endeavors. It is important to analyze the various correlations among the main terms examined since 2012, as illustrated in Figure 5. The analysis of authors' co-occurrence of keywords was conducted with a minimum threshold of 5 instances for each term. Out of the 5,123 terms, only 209 met this criterion. Researchers seeking to identify research trends should give significance consideration to the examination of author keywords. Furthermore, it is crucial to acknowledge the importance of author keyword analysis in evaluating the progression of research topics. Within the framework of keyword analysis, the research employed VOSviewer to conduct mapping analysis. The VOSviewer software visually represents the simultaneous occurrence of these terms, as illustrated in Figure 5. The arrangement of nodes in this visual network represents the level of interconnectedness between words or concepts. Each node represents a distinct phrase or idea. The overlay visualization, as demonstrated in Figure 5, highlights the prominence of the terms "coverage," "social security legislation," and "atypical work," starting from 2018. These keywords reflect the current emphasis on social security management.

Figure 5

The Overlay Visualisation of the Co-occurrence of Authors' Keywords (Source: Author, using VOSviewer 1.6.19)



The Most Influential Academic Works

Traditionally, assessing the impact of a publication on a specific discipline involved evaluating its citations per publication. Citations function as an indicator of how many times an article is referenced in all the documents within a given database. In the pre-processing phase, ScientoPy was utilized to collect the citation counts from both the Scopus and WoS databases. Table 2 presents the top ten papers on the topic of social security management, each with a minimum of 220 citations. Among these papers, the work titled "Social Security, Induced Retirement, And Aggregate Capital Accumulation" by Feldstein (1974) received the highest number of citations, totalling 717.

Following closely, the second-highest number of citations was achieved by Angrist (1990), authors of the paper "Lifetime Earnings and The Vietnam Era Draft Lottery - Evidence From Social-Security Administrative Records," which garnered 589 citations. Not far behind, the article "How Social Security and Medicare affect retirement behavior in a world of incomplete markets" by Rust & Phelan (1997) accumulated 423 citations, making it the third most frequently referenced publication.

Table 2
The Top Ten Most Cited Papers

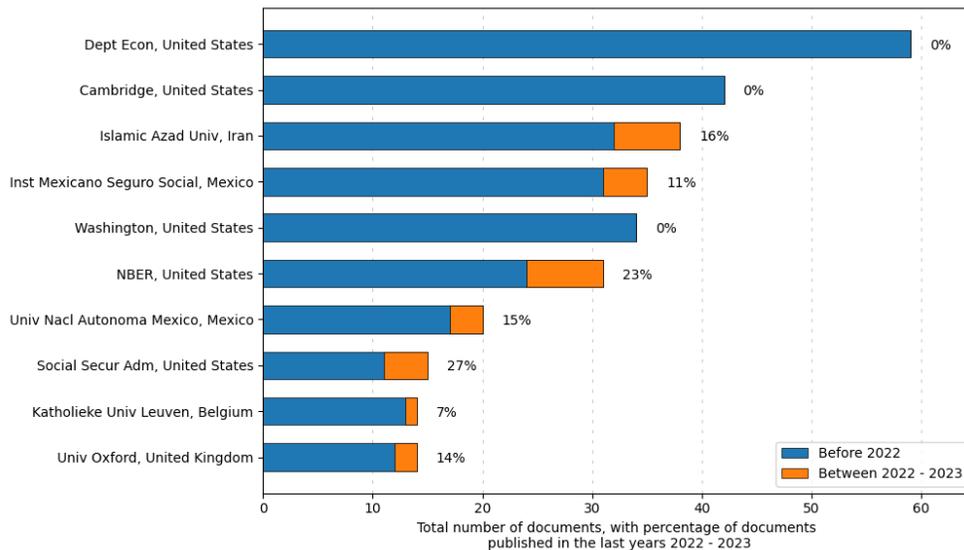
No.	Source	Title	Citation count	Document type
1.	(Feldstein, 1974)	“Social Security, Induced Retirement, And Aggregate Capital Accumulation”	717	Articles
2.	(Angrist, 1990)	“Lifetime Earnings And The Vietnam Era Draft Lottery - Evidence From Social-Security Administrative Records”	589	Articles
3.	(Rust & Phelan, 1997)	“How Social Security and Medicare affect retirement behavior in a world of incomplete markets”	423	Articles
4.	(Mazumder, 2005)	“Fortunate sons: New estimates of intergenerational mobility in the United States using Social Security earnings data”	346	Articles
5.	(Angrist, 1998)	“Estimating the labor market impact of voluntary military service using social security data on military applicants”	343	Articles
6.	(Turra & Elo, 2008)	“The impact of salmon bias on the Hispanic mortality advantage: New evidence from social security data”	273	Articles
7.	(Collier & Messick, 1975)	“Prerequisites Versus Diffusion - Testing Alternative Explanations Of Social-Security Adoption”	253	Articles
8.	(Kopczuk et al., 2010)	“Earnings Inequality And Mobility In The United States: Evidence From Social Security Data Since 1937”	252	Articles
9.	(Parker, 1999)	“The reaction of household consumption to predictable changes in social security taxes”	250	Articles
10.	(Béland, 2007)	“Ideas and institutional change in social security:: Conversion, layering, and policy drift”	229	Articles

Productive Institutions

The data analysis depicted in Figure 6 offers valuable insights into the integration of a substantial number of highly esteemed colleges. It is noteworthy that the Department of Economy in the United States emerges as the premier institution, with a remarkable publication count of 59 articles, surpassing its counterparts. By comparison, Cambridge in the United States closely follows with the second highest publication count, amounting to 42 articles. Islamic Azad in the University of Iran also makes significant contributions, generating a total of 38 scholarly articles, which account for PDLY 16% of the aggregate. Conversely, the remaining institutions have published fewer than 35 publications. These achievements serve as compelling evidence of the outstanding quality and efficacy of these institutions within their respective academic spheres. Furthermore, this phenomenon underscores the global nature of academic collaboration, as educational establishments from diverse countries have contributed equally to the advancement of research and the dissemination of knowledge.

Figure 6

The Top Ten Most Productive Institutions (Source: Authors, using ScientoPy 2.1.3)



DISCUSSION

Given the limited amount of scholarly research on the evaluation of social security management using bibliometric methodologies, conducting a comprehensive analysis of recent studies using analytical techniques would be a significant contribution to the field. The aim of this study is to examine the current state of scholarship on global social security management, while also offering valuable insights into academic collaboration through a visualization approach that illustrates the relationships between important studies and scholars in the field. This is achieved by examining the most frequently cited scholarly papers.

Bibliometric investigations, utilizing analytical methodologies, hold significant importance in achieving a comprehensive understanding of specific areas of study. Scholars had the ability to analyze trends in scientific research related to a particular topic or field. This process involves evaluating the growth of published scholarly works, identifying prevailing subjects, critically examining the origins of these works, and categorizing different types of articles. Additionally, they can offer guidance to fellow researchers in the field by identifying esteemed research institutions and individuals who have demonstrated expertise in their respective research endeavors. The application of management-related social security components plays a crucial role in enhancing the working environment for employees and promoting the dissemination of information on environmental consciousness and related issues, which are currently widespread. These phenomena can be identified through an analysis of the dominant research subjects and themes within this study. As a result, scholars are capable of scrutinizing the current state of the field to identify potential contributions and innovative approaches for future research.

The investigation's findings regarding the concentration of management in the realm of social security offer valuable insights into the prevailing publishing trends and observed patterns in this specific industry. The graphical representation in Figure 1 exhibits the proliferation of published works, thereby unveiling an enduring upward trajectory in research endeavors pertaining to this subject matter since 2004. It is noteworthy to underscore the substantial upsurge in publications since 2019. This growth can be ascribed to the escalated emphasis on environmental concerns, particularly in the backdrop of the COVID-19

pandemic. The epoch of the COVID-19 pandemic has indubitably exerted a profound influence on the management of social security.

According to Nguyen (2023), the epidemic has led to an increase in the demand for social security assistance, thereby straining social security systems that were already facing challenges related to financial sustainability. Governments have implemented various social relief measures to alleviate the socio-economic hardships caused by the pandemic, but these measures have been hindered by issues such as fund mismanagement and fraud (Ncamane, 2023). In addition, the pandemic has exposed existing inequalities in social security systems, particularly for vulnerable groups such as larger families who have previously experienced austerity measures (Ryan & Nanda, 2022). The challenges faced during the COVID-19 epidemic have highlighted the importance of an independent social security adjudication system to address social security issues and ensure access to justice (Sevim et al., 2022). The sustainability of social security systems has become even more crucial in light of the economic and social problems caused by the pandemic (Uwakonye et al., 2022). Therefore, the increase in publications since 2019 indicates a significant impact of the COVID-19 pandemic on social security management. This phenomenon has also received considerable attention in the field of social security over the past two years.

Figure 2 depicts the prevalence of journal articles as the primary medium for disseminating knowledge in this particular domain. This observation suggests that the advancement of social security management is heavily dependent on original research and academic discourse. The abundance of published papers indicates the considerable attention and discussion devoted to this topic within educational and conference settings. According to Abdullah (2023), citing Garousi and Fernandes (2017), journal publications receive an average of 12.6 citations, whereas conference papers receive an average of 3.6 citations. This finding supports the commonly held belief that scholarly journal publications generally have a more significant impact than conference proceedings. Journal papers offer several advantages as sources of research findings. They confer recognition and prestige upon their authors and their work (Vadhera et al., 2022). Moreover, journal papers undergo a rigorous evaluation process to ensure the high quality of the research (Gustafsson, 2022).

Figure 3 demonstrates that scholarly publications from reputable sources serve as an effective means of disseminating research on social security management. Esteemed journals such as "SOCIAL SECURITY BULLETIN" and "International Social Security Review" are notable examples. The substantial impact and publication volume of these sources confirm the increasing significance and relevance of research in this field, attracting the attention of both researchers and practitioners. This can be partly attributed to the fact that articles published in influential and renowned journals tend to receive more citations. Therefore, it is advisable for researchers to submit their rigorously conducted work to these journals, as doing so enhances the impact and visibility of their studies (Achugbue & Tella, 2023; Bahadoran et al., 2020). The use of policy tools within national research assessment systems, academic promotion processes, and competitive funding schemes may also influence the quantity of published articles. Policy tools, such as interest registries, can contribute to identifying and addressing conflicts of interest that may impact publication practices (Kianersi et al., 2023). Importantly, it should be acknowledged that the increase in publication numbers has not led to a decline in publishing quality, as evidenced by bibliometric indicators.

Figure 4 depicts the primary research areas and concerns that arise in the context of managing social security. The term "social security" emerges as the most frequently used keyword, emphasizing the significance of creating awareness regarding the key issues and challenges confronting workers' well-being in the current global economic era. The prevalent utilization of the term "social security" in contemporary research on social security management indicates that scholars and professionals acknowledge the importance of employing social security to raise awareness within organizations or industries and empower employee welfare. As stated by Khan et al. (2023), the transition from traditional full-time employment to more precarious working arrangements, such as self-employment, has resulted in a lack of comprehensive social

security coverage for numerous workers. This absence of protection can have detrimental impacts on the health and well-being of self-employed individuals (Nykiforuk et al., 2023). Moreover, financial strain and inadequate financial well-being can adversely affect physical, mental, and social health (Yashadhana et al., 2023). Hence, it is imperative for organizations and governments to develop and implement initiatives targeting financial strain and promoting financial well-being, as these initiatives can contribute to enhanced financial circumstances and overall health (Yashadhana et al., 2023). Furthermore, the size of the welfare state and the expenditure on social security do not necessarily correlate with the level of well-being or equality within a nation (Yehuala, 2020). Consequently, it is crucial to critically evaluate and shape social welfare policies to ensure that they foster social justice and inclusive financial regulation.

Furthermore, the exploration of keyword co-occurrence through the utilization of VOSviewer in Figure 5 unveils the interrelation between different research topics and concepts. The growing importance of terms such as "coverage," "social security legislation," and "atypical work" in recent times highlights the changing research focuses and the significance of safety expertise in promoting ecological consciousness and learning. The effectiveness of social security programs is significantly influenced by the concept of "coverage". Numerous social security programs around the world have limited coverage, which excludes certain groups, such as housewives, transient workers, agricultural laborers, new immigrants, and part-time workers (Jannati et al., 2018). This limited coverage hampers the receipt of benefits for millions of individuals and contributes to the perpetuation of poverty (Alcañiz-Colomer et al., 2022). Moreover, access to social security benefits is further impeded by administrative regulations and requirements (Exley & Marchant, 2022). The provision that welfare programs should not provide more assistance than the potential earnings from wages or salaries results in payments below the poverty line (Hamilton, 2022). These combined factors contribute to the inefficacy of social security programs in poverty reduction, necessitating the implementation of transformative solutions to address these challenges (Asri et al., 2022).

The term "coverage" within the framework of social security has undergone changes since 2018. At first, the focus was on the diversification of risks, the macroeconomic implications, and the involvement of the private sector in managing social security (Naczyk & Hassel, 2019). Nevertheless, it has now shifted towards the matter of coverage itself, with an emphasis on the proportion of individuals covered by compulsory pension schemes (OECD, 2022). This percentage of coverage functions as an indicator of how effectively a pension system is being utilized and can aid in the prediction of future trends (Parks, 2016). The concept of coverage has also expanded to encompass the expansion of social security to previously marginalized populations, for instance, through decentralized systems and micro-insurance (Mpedi & Millard, 2021).

The significant presence of terms such as "coverage," "social security legislation," and "atypical work" provides support for the results depicted in Figures 4 and 5. These results serve as evidence for the shifting interest in research and highlight the significance of managing social security to empower employees within welfare settings.

Table 2 exhibits a compilation of influential scholarly publications, ordered by the number of citations received per publication. These highly cited works offer valuable insights into the underpinnings of social security management. The publication entitled "Social Security, Induced Retirement, And Aggregate Capital Accumulation" by Feldstein (1974) has garnered the highest number of citations, thereby signifying its significant impact in the field. Publications that receive a substantial number of citations provide evidence of their widespread use and recognition within the academic community. As a result, these prominent articles serve as valuable resources for researchers who aim to comprehend Social Security in the context of employee welfare. They contribute to shaping research directions and advancing the existing knowledge base.

The examination of productive establishments, as illustrated in Figure 6, sheds light on the noteworthy contributions made by diverse establishments across various nations. The Department of Economics and Cambridge, United States have consistently exhibited their devotion to investigating the management of social security, as demonstrated by the publication of more than 40 articles. However, according to PDLY, NBER, and the Social Security Administration, United States is actively conducting research on social security management, with over 20% of articles published during this period. This consistent productivity serves as a testament to their unwavering dedication and exceptional performance in these fields.

CONCLUSION

This investigation has significantly enhanced our understanding and methodologies regarding the management of social security using bibliometric analysis. By analyzing publication patterns, research topics, influential articles, and productive institutions, this study has provided valuable insights into the current state of research in this field. The findings of this investigation underscore the increasing focus on social security management, as evidenced by the consistent growth in research efforts over time. The identification of key research topics, such as "social security," and the recognition of the significance of social security legislation as effective means of promoting environmental awareness, highlight the crucial importance of social security management in addressing employee welfare scenarios. Moreover, the evaluation of noteworthy scholarly articles, based on their citation count, has revealed a collection of seminal publications that have profoundly influenced the discipline. These publications serve as indispensable resources for scholars and practitioners seeking to comprehend and contribute to the field of social security management.

Although this investigation holds promise in making a substantial scholarly contribution to the comprehension and application of social security management, it is essential to acknowledge the inherent limitations of this research endeavor. The utilization of the WoS and Scopus databases may inadvertently lead to the exclusion of pertinent literature pertaining to the subject matter. Moreover, the bibliometric methodology employed in this investigation predominantly emphasizes quantitative data, specifically the quantitative evaluation of publications and citations. However, it is crucial to recognize that qualitative aspects of the articles, such as the overall research quality or the significance of the findings, are not entirely encompassed within this theoretical framework.

Future research should aim to address these limitations by incorporating a wider range of datasets and conducting a more comprehensive evaluation of the quality and impact of the articles. Furthermore, it is recommended that future studies focus on exploring specific subcategories of social security management contexts. For example, research could concentrate on assessing the effectiveness of various strategies for promoting environmental awareness through social security or examining the influence of the government or private sector on the adoption of environmentally-friendly practices. The utilization of bibliometric analysis in the field of social security management presents a valuable approach for understanding publication patterns, research trends, and noteworthy works in this area. This information can be utilized to inform future research endeavors, provide guidance to practitioners in implementing effective solutions, and contribute to the advancement of social security and environmental sustainability for the well-being of employees.

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Ethical considerations

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Conflict of Interest

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