Research Map of Social Security for Employment: Bibliometric Analysis Approach

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Abstract

This study aims to examine the development of research on Social Security for Employment as published in journals focusing on this theme. This study used a qualitative method with a bibliometric analysis approach. The data used are secondary data obtained from the Scopus database comprising 201 journal articles with the theme of Social Security for Employment. Then, the data is processed and analyzed using the VOSviewer application to visualize bibliometric maps. The findings of the study reveal that in bibliometric author mapping, the author who published the most research was Drake R.E. The institution that made the most significant contribution was the Office of Retirement and Disability Policy. Additionally, the most contributing and productive country in research related to this theme is the United States. Furthermore, the most frequently used keywords were worker, benefit, employee, and health. Meanwhile, based on the bibliometric keyword mapping, four clusters can become research lines, namely (1) Social security benefits for individuals with mental disabilities, (2) Social protection and worker contributions within the social security system, (3) Job and health insurance for workers and employment social security, and (4) Government social security policies regarding unemployment and labor death.

Keywords:

Bibliometric Analysis, Social Security for Employment, VOSviewer

Introduction

Social Security for Employment is an insurance program that benefits workers who pay for the program, typically through deductions from their employers' wages. Employment Social Security carries programs providing old-age benefits for workers, benefits for victims of work-related accidents, unemployment insurance, and assistance for dependent mothers and children, the blind and disabled (Center on Budget and Policy Priorities, 2023; Connet, 2023).

The existence of Employment Social Security provides various benefits for workers. These include providing a source of income upon retirement, supporting families in the event of a worker's death or serious disability, offering financial security and benefits for disabled workers, safeguarding pensions for individuals across all income levels, serving as a stable and reliable resource for aging households, and providing valuable social insurance coverage for disabled

workers and families who lose their primary breadwinner (Dushi et al.., 2017; Connet, 2023; Center on Budget and Policy Priorities, 2023).

Even though Social Security for Employment provides many benefits, several problems exist for workers. These including the following:

1. More than half of the world's population (workers and their dependents) are not covered by any social security protection.

2. Workers with higher lifetime earnings receive more significant benefits than workers with lower lifetime earnings, so benefits increase more rapidly for those on higher incomes than for those on lower incomes.

3. Not all civil and local employees are covered by social security.

4. Social Security programs face demographic challenges as baby boomers retire and the number of workers per beneficiary declines. This has led to concerns about the long-term financial sustainability of the program (International Labor Office, 2001; Department of The Treasury, 2023).

Given the urgency of developing social security at this time, it is essential to conduct research related to the extent of research development on Social Security for Employment. Several studies relevant to this discussion include Jesse (1999), who examines entrepreneurship and social security; Anderson & Pontusson (2007), which discusses social protection and job insecurity in 15 OECD countries; Mann et al. (2014), who examined the Vocational factor in the Social Security Disability Determination Process; Marfeo et al. (2013), who examines the conceptual basis for measuring physical function and behavioral health function for evaluating social security job disability; and Söderberg & Alexanderson (2005), which describes the practice of social insurance officers.

Social Security is an insurance program providing retirement, survivorship, and disability benefits to eligible individuals. Meanwhile, social security for employment refers to benefits provided to workers who pay for the program through salary deductions or self-employment taxes. The benefits are based on income reported to the Social Security Administration (Connet, 2023; Social Security Association, 2013). Employment social security offers several benefits, including providing a source of income in retirement, providing survivor benefits and income for workers who become disabled, helping alleviate poverty among older people, providing retirement protection for people at all income levels, and replacing a percentage of income for pre-retirement workers based on their lifetime income and their families (Dushi et al.., 2017; Connet, 2023; Center on Budget and Policy Priorities, 2023; Social Security Administration, 2023).

The history of the development of Workers' Social Security can be traced to the Social Security Act of 1935, which established a system of old-age benefits for workers, benefits for

victims of industrial accidents, unemployment insurance, and assistance for dependent mothers and children, blind people, and disabled people. The act aimed to limit what were considered dangers in modern American life, including old age, poverty, unemployment, and the burdens of widows and orphans. The Social Security Program, which was finally adopted in late 1935, relied on its core principles of social insurance (National Archives, 1935).

Throughout history, humans have faced various uncertainties caused by unemployment, disease, disability, death, and old age. In the economic realm, this inevitable aspect of life is said to be a threat to one's economic security. Therefore, the need for social security can help overcome these problems for everyone. In particular, the background for creating labor social security for workers started with the Great Depression in the 1930s. During the Depression of the 1890s, unemployment was widespread, and many Americans realized that in an industrialized society, threats to economic security were ever-present. The Depression politically motivated the creation of the Social Security program, and the original Social Security Act, signed into law on August 14, 1935, grew out of the work of the Economic Security Committee. The law created several programs that, even today, form the basis of the government's role in providing income security, in particular the old-age security, unemployment benefits, and Assistance for Families with Dependent Children (AFDC) programs (Social Security Administration, 2023; National Archives, 1935).

Thus, to see how far the current development of Social Security for Employment is, it is necessary to conduct research, and one method that can be used to view research developments is bibliometrics using VOSviewer. This method can create and display an author's journal map based on co-citation data or a keyword map based on shared incident data.

Furthermore, several relevant studies include Taha et al. (2015), which discusses the mechanism of social security rights for migrant workers and finds that Northern migrants have the best access to portability. Rana et al. (2022) explained social protection in disaster risk reduction and climate change adaptation. Their research shows an increase in publications related to the topic over the last decade, with 142 texts retrieved from various disciplines. The co-occurrence of the keywords reveals that resilience, adaptation, and vulnerability are prominent in the scientific literature. Valls Martínez et al. (2021) reviewed pensions, aging, and social security research. This research is motivated by several points, including the pension system as one of the fundamental pillars of the welfare state. The results indicate research trends include sustainability, aging-related pension reform, and pension insurance.

Other relevant research includes Jesse (1999), who examines entrepreneurship and social security; Anderson & Pontusson (2007) discuss social protection and job insecurity in 15 OECD countries; Mann et al. (2014) examine the Vocational factor in the Social Security Disability Determination Process; Marfeo et al. (2013) examine the conceptual basis for measuring physical

function and behavioral health function for evaluating social security job disability; and Söderberg & Alexanderson (2005) describe the practice of social insurance officers.

Based on several studies, no research specifically addresses Social Security for Employment using bibliometric studies. Therefore, this research was conducted to complement existing research and fill in the gaps in previous research. The purpose of this research specifically looks at the development of research on Social Security for Employment around the world published by Scopus-indexed journals with this theme and explores future research opportunities by formulating a future research agenda.

Method

This study utilizes various scientific journal publications on Social Security for Employment worldwide as data sources. Data were collected by searching for journal publications indexed by the Scopus database using the keyword "Social Security for Employment". Subsequently, articles or scientific journals relevant to the research theme will be selected based on the publication data that has been collected. Journals equipped with DOIs were criteria for filtering and processing data using the software. Two hundred one published journal articles are within the Social Security for Employment research theme. The development of publication trends related to the research topic was analyzed using VOSviewer software, which can display bibliometric maps and allows for more detailed analysis.

To build maps, VOSviewer uses the abbreviation VOS which refers to Visualizing Similarity. In previous studies, the VOS mapping technique has been used to obtain bibliometric visualizations, which are then analyzed. Furthermore, VOSviewer can create and display journal author maps based on co-citation data or keyword maps based on shared incident data. Therefore, this research will analyze Social Security for Employment journals, including maps of authors, organizations, countries, and keywords.

This research uses a descriptive qualitative approach with meta-analysis and descriptive statistical literature studies based on 201 journal publications that discuss the theme of Social Security for Employment. Meta-analysis is a method that integrates previous research related to a particular topic to evaluate the results of existing studies. Furthermore, the qualitative method used in this research is also called the constructive method, in which the data collected in the research process will be constructed into themes that are easier to understand and meaningful. The sampling technique used in this study is a purposive non-probability sampling method, which aims to fulfill certain information following the desired research objectives.

Result and Discussion

This study discusses Social Security for Employment using 201 journal article publications indexed in Scopus. Bibliometrics is a method used to measure and evaluate scientific performance by considering factors such as citations, patents, publications, and other more complex indicators. Bibliometric analyzes were conducted to evaluate the activities of research, laboratories, and scientists and the performance of countries and scientific specialties. Several stages in the bibliometric analysis include identifying the research background, collecting the database, and determining the leading indicators for the research.

This section will deepen the meta-analysis results by showing a visual mapping chart depicting 201 journals related to Social Security for Employment. In this study, mapping was done by analyzing keywords and important or unique terms in journal articles. Mapping is a process to identify elements of knowledge, configuration, dynamics, dependencies, and interactions among these elements. The results of the network visualization of 201 journals with the Social Security for Employment theme will be explained in more detail in the next section.

Bibliometric Author Mapping

Using bibliometric analysis with VOSviewer software, a mapping of authors who contribute to Social Security for employment is obtained. The resulting image provides a visual representation of the mapping. The bigger and brighter the yellow-marked dot, the greater the number of journal publications related to the Social Security for Employment theme that the author has published.
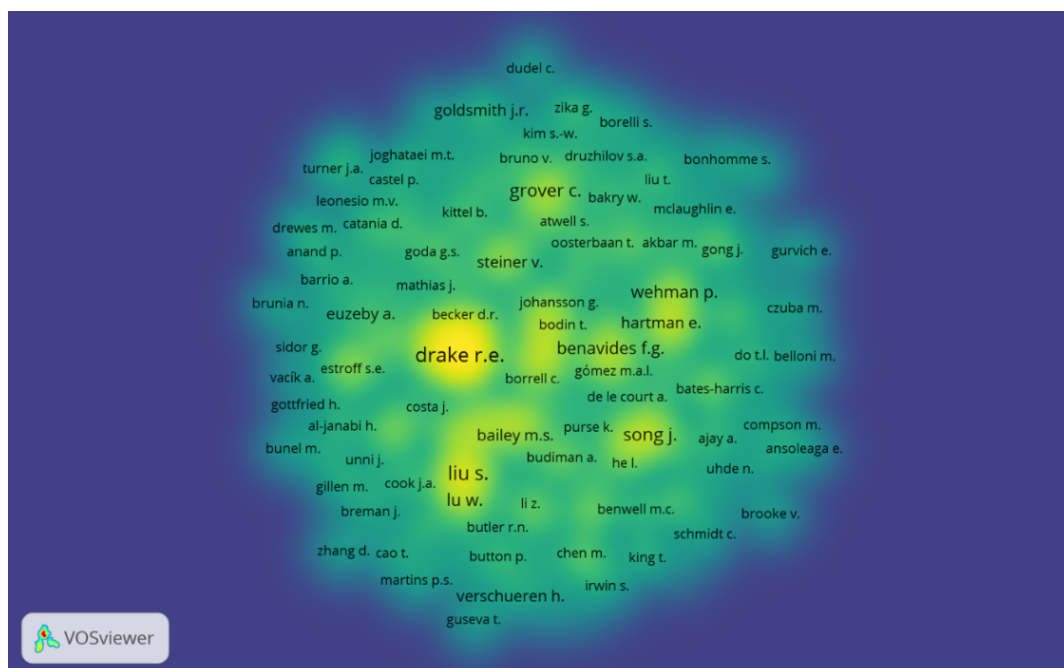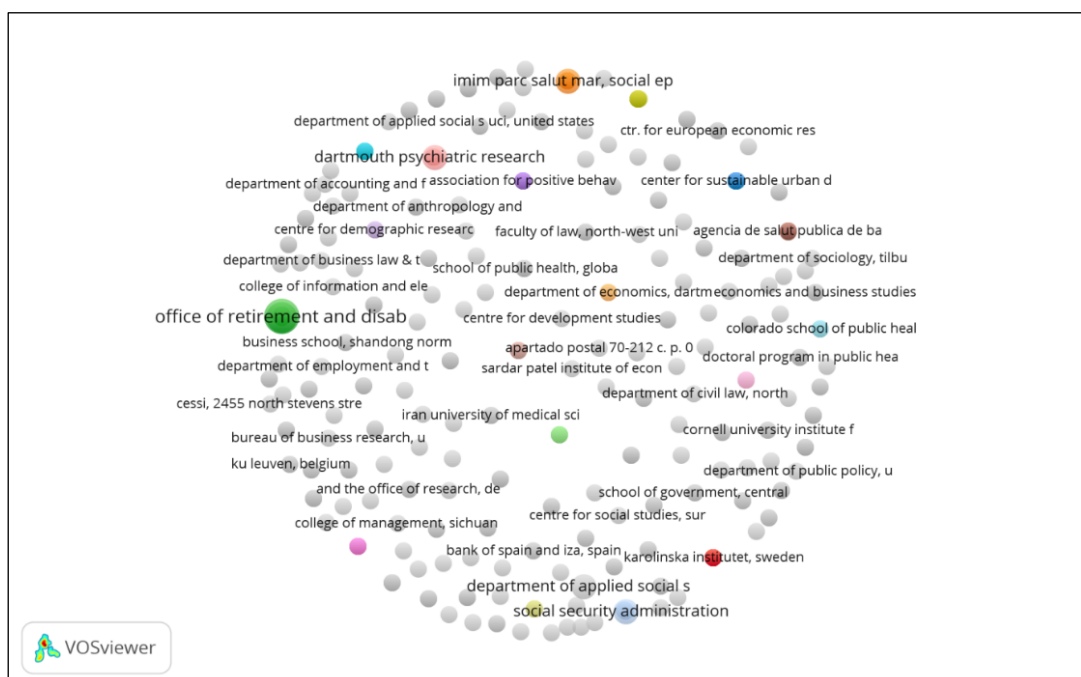
Figure 1.

Bibliometric Author Mapping

Figure 1 illustrates that the cluster density in the bibliometric map depends on the intensity of the yellow color displayed. The yellow color on the map corresponds to the degree of connection between items. Therefore, this section is crucial for gaining an overview of the general structure of bibliometric maps, which are essential for analysis. It allows identification of the author who has published the most work.

Generally, every author or researcher exhibits different tendencies in their publications. Sometimes, an author appears as a sole author, while other times, they may collaborate with other authors or researchers, affecting the cluster density and resulting in various clusters with different densities. However, authors with a relatively large cluster density identify that these authors publish the most research on Social Security for Employment, when compared to authors with a lower cluster density. This information can serve as a reference for future researchers. From the results of the analysis, it was found that authors who made the most publications related to Social Security for Employment were Drake R.E; Goldman H.H; Song J; Liu S; Lu W; Wehman P; Benach J; Muntaner C; Bailey M.S; Benavides F.G; Chan F; IanH; Steiner V; Grover C; Goldsmith J.R; and Walwei U.

Bibliometric Organization Mapping

In bibliometric analysis, it is possible to determine the organizations of the authors. These results indicate which institutions have produced the most publications related to Social Security for Employment.

Figure 2.

Bibliometric Organization Mapping

Based on Figure 2, it can be concluded that the cluster of institutions represented by large circles shows the productive level of these institutions in contributing to publishing research with the theme of Social Security for Employment. The most significant number of institutions is calculated from the number of publications and links to other institutions, as an author can write many papers in different journals. Based on this figure, institutions that have made significant contribution to Social Security for Employment research include the Office of Retirement and Disability Policy, Social Security Administration, United States; Imim Parc Salut Mar, Social Epidemiology and Occupational Health Group, Barcelona; Social Security Administration; Dartmouth Psychiatric Research Center; and the Department of Applied Social Science.

Bibliometric Country Mapping

Furthermore, in bibliometric analysis, it is possible to determine the countries of the authors. These results reveal which countries have the most publications related to Social Security for Employment
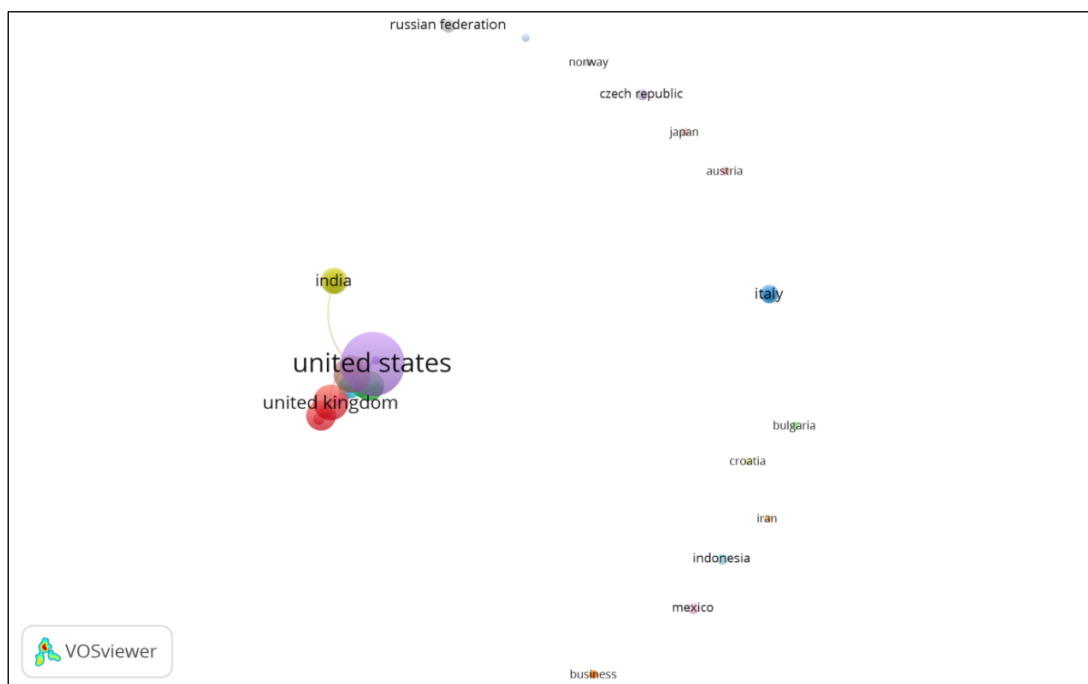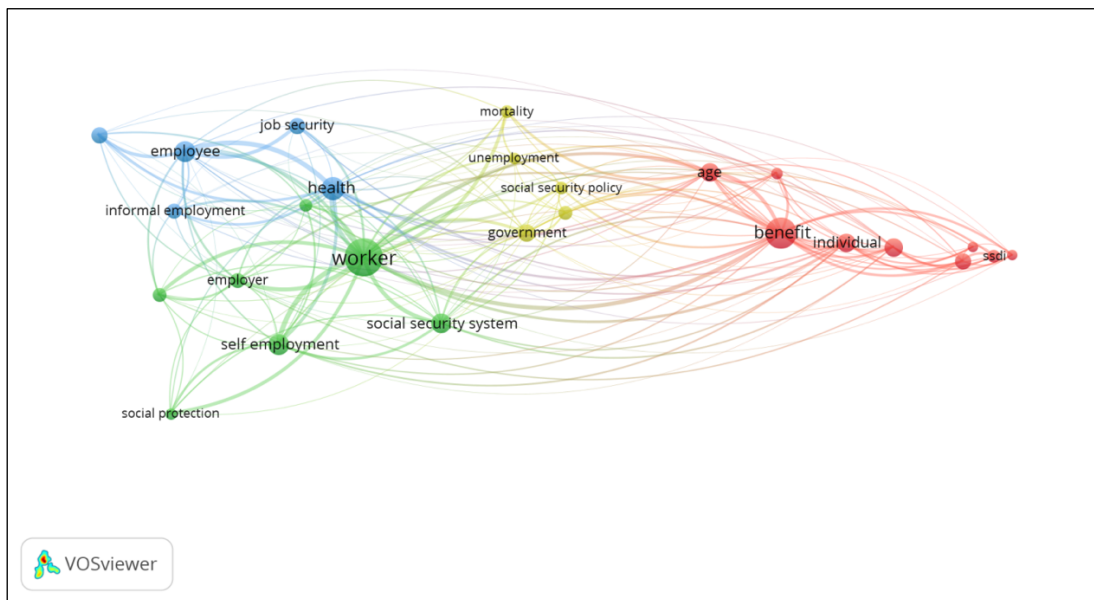
Figure 3.

Bibliometric Country Mapping

Figure 3 illustrates the country cluster. Countries represented by large circles show high productivity levels in contributing to publishing research on the theme of Social Security for Employment. The most significant number of countries is calculated from the number of publications and the number of links to other institutions, as an author can write many papers in different journals. Based on this figure, countries that contribute a lot to Social Security for

Employment research are the United States, United Kingdom, Germany, Belgium, China, Spain, Canada, India, and Italy.

Bibliometric Keyword Mapping

This section describes the most widely used keyword graphical visual mapping based on the analysis results using VOSviewer. The results of this analysis form the basis for mapping essential terms often used in Social Security for Employment publications. The figure below describes that larger keywords are the most frequently used in journal publications with the Social Security for Employment theme.

Figure 4.

Bibliometric Keyword Mapping

In terms of mapping, the keywords that appear most frequently in publications on Social Security for Employment are divided into 4 clusters, as follows:

Table 1.

Keyword Clusters

Cluster	Keyword
Cluster 1 (9 items)	Age, benefit, disability, individual, psychiatric disability, social security administration, social security benefit, social security disability insurance, ssdi
Cluster 2 (7 items)	Employer, labor, self-employment, social protection, social security contribution, social security system, worker
Cluster 3 (5 items)	Employee, employment security, health, informal employment, job security
Cluster 4 (5 items)	Government, labor, mortality, social security policy, unemployment

Based on the four keyword mapping clusters in publication on Social Security for Employment, the most frequently used words are Worker, Benefit, Employee, and Health. Furthermore, research maps that can be created based on four keyword mapping clusters, namely:

a. Cluster 1: Social Security Benefits for Individuals with Psychiatric Disabilities

In this cluster, the research map related to Social Security for Employment relates to social security benefits for individuals with psychiatric disabilities. Research related to this topic is quite common among the relevant studies, namely research from Bond et al. (2007). This study explains that individuals with psychiatric disabilities are the fastest-growing subgroup of Social Security Administration disability recipients and have a nominal rate of return for competitive work. Cook et al. (2016) examine the long-term effects of evidence-based employment services on three vocational outcomes: labor force participation, income, and achievement of Social Security Administration (SSA) non-recipient status through suspension or termination of employment disability cash payments (NSTW). O'Day & Killeen (2002) analyze US federal policies supporting employment and recovery for individuals with mental disabilities. The research explained that most people with psychiatric disabilities can recover, find jobs, develop positive relationships, and participate fully in their communities.

Other relevant studies include those by Ruiz-Quintanilla et al. (2005), which describe participation in programs designed to improve employment outcomes for individuals with psychiatric disabilities; Riley et al. (2021), who explain how these programs help individuals reject disability benefits for mental health disorders; Lazar et al. (2015), who addressed the ambiguity in determining the financial ability of SSI and SSDI beneficiaries with mental disabilities; Ferreira et al. (2018), who reviewed a retrospective study on the profiles of former workers with disabilities applying for disability pensions from Brazil's national social security institutions; and Rosenheck et al. (1995), who describe disability compensation and employment among veterans with psychiatric and nonpsychiatric disorders.

b. Cluster 2: Social Protection and Worker Contribution to the Social Security System

Much research has been conducted in the next cluster that addresses this topic. For instance, Thörnqvist (2015) discusses the Welfare States, and the social protection needs of self-employed migrant workers in the European Union. Dagsvik et al. (2011) explain subsidies for social security contributions for low-skilled workers in Belgium. Dartanto et al. (2020) explore the crucial factors influencing the compliance behavior of informal sector workers (non-wage earners members) in regularly paying their insurance premiums.

Other relevant research includes Schoukens (2020), who examines digitalization and social security in the European Union; Hurtado et al. (2017), who examines the lack of social protection and subjective well-being in Colombia; Bogliacino et al. (2019), who discuss

attempts to shape individual preferences for social protection; Porras (2021), who examines the main aspects of worker protection in the Spanish Labor Law and Social Security System; and Heniyatun et al. (2018), who discuss the protection of informal workers as participants through the Magelang regional social security system.

c.   Cluster 3: Job Security, Health for Workers, and Social Security for Employment

Several studies that are relevant to the topic in cluster three include Baquero & Pérez (2021), which examine the current situation regarding the implications of the social security model in health, established by Law 100 of 1993, on working conditions and mental health in Colombian health workers. Mutambudzi et al. (2022) studied the associations between perceived job security, chronic health conditions, and retirement among older workers in the UK and the US. Johansyah & Hosein (2022) examine the implementation of social security to guarantee workers' rights in obtaining employment social security protection in Indonesia.

Other studies include Saporta-Eksten et al. (2021), who explain social security, labor supply, and the health of elderly workers; Liukkonen et al. (2004), who explain social capital in work life and employee health; Robert et al. (2014), who examine changes in immigrant working conditions in Spain and their impact on mental health; Echeverri et al. (2017), who discuss work-related illness, work-related accidents, and lack of social security in Colombia; Johnson et al. (2007), who examine the impact of late-career and employment health shocks on social security and other wealth; and Lund (2002), who discuss social security and labor market changes in South Africa.

d.   Cluster 4: Government Social Security Policy on Unemployment and Labor Mortality

The last cluster in this study discusses the government's social security policy related to unemployment and labor death. On this topic, the research found is still limited. Among the studies relevant to this topic is Hone et al. (2019), which describe the effects of the economic recession and the impact of health and social protection spending on adult mortality in Brazil. Milligan & Wise (2011) examine social security and pensions worldwide. This research explicitly describes the five phases of the ongoing project on Worldwide Social Security and Pension Programs.

The results of this bibliometric study show that in the context of discussing Social Security for Employment, there are four interrelated clusters, namely social security benefits for individuals with mental disabilities, social protection and worker contributions in the social security system, job security and health for workers, and the government social security policies regarding unemployment and labor death.

Social security plays a fundamental role in providing benefits for individuals with mental disabilities. Through the social security system, they gain access to the mental health services they

need and receive financial support to meet their needs. Social protection provided through social security helps maintain their welfare and provides a decent guarantee of survival.

To run the social security system, worker contributions are significant. These contributions serve as a vital source of funding for social security programs, that provide protection and benefits for workers and their families. Through this contribution, social security can operate effectively and provide financial protection in various aspects of life, including health, work accidents, and job security.

Furthermore, job and health insurance for workers are essential components of the employment social security system. Job security protects against unfair job loss, while health insurance provides access to health services to maintain workers' well-being. These aspects are integral to social security, encouraging the continuity of workers' careers and preserving their health.

The government also plays a vital role in implementing social security policies related to unemployment and labor deaths. These policies aim to provide financial protection and support to the unemployed, either through financial assistance programs or training and reintegration into the labor market. In addition, in tragic situation such as the death of a worker, social security provides benefits to support the surviving family members.

In conclusion, Social Security for Employment serves various functions, including providing benefits to individuals with mental disabilities, protecting workers through social protection and contributions, providing job security and health for workers, as well as implementing government policies to address unemployment and provide protection against labor death.

Table 2.

Lesson Learned from Several Countries

Country	Lesson Learn	Recommendation	Reference
United States of America	Social security problems for employment: difficulty of access, high costs, and lack of awareness of the importance of social security.	Simplify registration procedures, reduce contribution costs, and increase awareness of the importance of social security.	Bond et al. (2007) Lazar et al. (2015) Riley et al. (2021)
Indonesia	Social security problems for employment: lack of awareness of the importance of social security, as well as limited government resources to reach informal workers.	Increasing public education about the importance of social security through public campaigns and collaborating with institutions and organizations.	Dartanto et al. (2020) Johansyah & Hoesin (2022)
Columbia	Social security for employment problems: the unavailability of adequate social protection	There needs to be changes in the social system that can have a significant impact on the welfare of the workforce.	Baquero & Pérez (2021) Echeverri et al. (2017)

	affects the welfare of the workforce.		Hurtado et al. (207)
Belgium	Social security problems for employment: subsidy policies affect the social security conditions of workers with low levels of education.	The is a need to review subsidy policies and raise awareness of the benefits of social protection.	Dagsvik et al. (2011)
Brazil	Social security challenges in employment: Economic recession and expenditures on health and social protection have an impact on mortality rates.	Increased spending on social and health protection is necessary to provide support for workers during an economic crisis	Hone et al. (2019)

Social Security for Employment is an issue that affects the well-being of workers in many countries. From the United States to Brazil, each country faces unique challenges in ensuring adequate social protection for its workforce. Here is an overview of the challenges and recommendations in some countries facing specific challenges related to Social Security for Employment.

In the United States, difficulties in access, high costs, and low awareness of the importance of social security. Many workers, especially those in the informal sectors, have difficulty in registering and paying for social security protection. To address this issue, it is necessary to simplify the registration process to make it more accessible to all workers. In addition, reducing the cost of contributions can help lower-income workers. Raising awareness of the importance of social security should also be a major focus, through public education and awareness campaigns.

In Indonesia, a major challenge lies in the lack of awareness regarding the importance of social security, especially among informal workers. Additionally, the government faces resource limitations in covering the vast number of informal workers. To address this issue, it is necessary to increase public education about the importance of social security. Public campaigns targeting informal workers and partnering with community organizations are effective ways to raise awareness.

The main problem in Colombia is the lack of adequate social protection that affects the well-being of workers. There is a significant gap in social protection access. The recommendation for Colombia is to make profound changes to their social security system that can have a significant impact on the workers well-being. This involves increasing access and availability of adequate social protection for all segments of society.

Belgium's primary challenge is the impact of subsidy policies on the social security low-educated workers. This creates inequality in social protection. The recommendation for Belgium is

to review existing subsidy policies and ensure that they do not jeopardize the social security of low-educated workers. Raising awareness of the social protection benefits is also needed to ensure that all workers understand their rights.

Brazil is facing the impact of economic recession and health and social protection spending affecting worker mortality. Sudden economic changes can threaten the workers well-being. The recommendation for Brazil is to increase spending on social protection and health, so that workers have adequate support during economic crises. Stronger social protection will help to mitigate the negative impact of unexpected economic changes.

In the global context, the challenges of social security for employment vary, but the importance of strong social protection is always relevant. Through awareness of these challenges and implementation of appropriate recommendations, each country can improve the well-being of its workforce.

Conclusion

This study aims to explore the extent of global research development on Social Security for Employment. The findings reveal 201 Scopus-indexed journal articles related to this topic. Furthermore, the bibliometric author mapping analysis indicates that Drake R.E, Goldman H.H, Song J, Liu S, Lu W, Wehman P, Benach J, Muntaner C, Bailey M.S, Benavides F.G, Chan F, IanH, Steiner V, Grover C, Goldsmith J.R, and Walwei U are the most prolific authors on Social Security for Employment research.

Then, based on the author's organization, some of the organizations that have contributed the most to the publication of Social Security for Employment journal articles are the Office of Retirement and Disability Policy, Social Security Administration, United States; Imim Parc Salut Mar, Social Epidemiology and Occupational Health Group, Barcelona; Social Security Administration; Dartmouth Psychiatric Research Center; and the Department of Applied Social Science. The most contributing and productive countries in Social Security for Employment research are the United States, United Kingdom, Germany, Belgium, China, Spain, Canada, India, and Italy.

Moreover, in developing research related to Social Security for Employment through bibliometric keyword mapping, the most frequently used terms include Worker, Benefits, Employee, and Health. These research trends are categorized into four clusters: (1) Social Security for Employment benefits individuals with mental disabilities by providing mental health services and financial support; (2) Social protection and worker contributions within the social security system are essential for maintaining workers' and their families' welfare; (3) Job and health insurance are essential in supporting career sustainability and promoting worker health; and (4)

Government social security policies regarding unemployment and labor deaths also provide financial protection and support to those who need it.

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