

# “Synthesizing social insurance research: A bibliometric analysis”

<b>AUTHORS</b>	Mosab I. Tabash  Shekhar Shekhar  Poonam Singh  Mohd Shamshad  Mujeeb Saif Mohsen Al-Absy 
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Mujeeb Saif Mohsen Al-Absy, 2023

Mosab I. Tabash, Ph.D., College of  
Business, Department of Business  
Administration, Al Ain University,  
UAE. (Corresponding author)

Shekhar Shekhar, Research Scholar,  
FMS Delhi, University of Delhi, India.

Poonam Singh, Ph.D., School  
of Commerce, Manav Rachna  
International Institute of Research and  
Studies, Haryana, India.

Mohd Shamshad, Ph.D., School of  
Finance and Commerce, Galgotias  
University, India.

Mujeeb Saif Mohsen Al-Absy, Ph.D.,  
Accounting and Financial Science  
Department, College of Administrative  
and Financial Science, Gulf University,  
Sanad, 26489, Kingdom of Bahrain.



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Mosab I. Tabash (UAE), Shekhar Shekhar (India), Poonam Singh (India),  
Mohd Shamshad (India), Mujeeb Saif Mohsen Al-Absy (Bahrain)

# SYNTHESIZING SOCIAL INSURANCE RESEARCH: A BIBLIOMETRIC ANALYSIS

## Abstract

Social insurance has been a pivotal tool in implementing social security. The purpose of the study is to analyze the existing information clusters (areas) in the field of social insurance. Clusters define related and unrelated groups in the field of social insurance. These groups will help streamline and identify areas where little or no research has been conducted to present. To achieve the objective, the study employed a precise and systematic procedure to gather 562 journal articles published in Scopus-indexed journals from 1926–2022. Subsequently, VOSviewer, Science of Science (Sci2), and Gephi were utilized to conduct bibliometric analysis (such as keyword co-occurrence and bibliographic coupling) and network analysis tests (such as citation and co-citation analysis). The results of keyword co-occurrence and co-citation analysis suggest there are three knowledge clusters: welfare provisions, benefits provided by social insurance, and social insurance operational aspects. Through analysis found top article-based Inequality, social insurance, and redistribution with 408(LC) and 1042(GC) and its page rank value is 0.010574 through prestigious analysis. Additionally, it is also observed that I. Nielsen had made the most substantial contributions as an author, with R. Smyth and C. Nyland following closely in the rankings. Also, observed maximum total link strength with 109 value on social security variable. The study also drawn attention to specific deficiencies, including regional concentration of research, insufficient research in developing and underdeveloped countries, inadequate knowledge sharing among researchers, limited methodological diversity, and a lack of research on the role of social insurance in facilitating society's recovery from the pandemic.

**Keywords** health, pension system, security, long-term care, social security

**JEL Classification** G22, J65

## INTRODUCTION

Social insurance consists of programs designed to mitigate the adverse effects of economic disruptions on individuals and families. This phenomenon of social insurance inclined to government-funded and administered programs that safeguard society from financial uncertainty arising due to old age, sickness, or any similar events. The basic premise for social insurance is that they are public funded and provide security against economic risks. Since the society comprises several middle-income people in the high population economies, their exposure to such economic risk is very high. Recognizing this potential risk, several governments, at the end of the 1990s, extended their significant involvement in social security to support individuals. For instance, in developing nations such as India, several social security initiatives are being operated, including social assistance, welfare, contributory, and promotional programs. However, the extent of diffusion of such schemes is limited in developing and underdeveloped nations. According to the ILO report (2020), 53% of the population got no income or other social support from their individual countries' national social protection systems, while only 47% of the population was

covered by just one type of social protection. Additionally, the recognized social protection deficiencies must be filled by 2030 to achieve social development goals. Recognizing the need, academicians started to address the knowledge gap by identifying and providing the need for social insurance, major concerns and pitfalls in implementation, and the framework. The interest of academia in social insurance has increased in recent years. Also, its need has shown a multi-fold increase because of the pandemic. In both developing and developed nations, a universal social security system has become an essential challenge. Lack of awareness is a primary concern, and there also have been few studies on the effect of medical insurance and social security cards on settlement intentions, even though they are an important incentive for the floating population to remain in their current domicile. Scattered studies on social insurance, security, pension system enforce upcoming researchers find it difficult to identify the research gaps due to the absence of a research integration in the existing literature over social insurance.

Consequently, a considerable amount of time is expended in identifying the voids and then determining whether they have been addressed in research. Similarly, scholars find little assistance without collaborating with eminent researchers in the discipline. It is difficult for scholars to identify patterns of collaboration and to learn from such scholars.

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## 1. LITERATURE REVIEW

Social insurance gives people a sense of security by covering all types of personal and economic risk, including healthcare, unemployment, physical disability, injury, old age, spouse or parent death, and dire family circumstances (Hill, 1997; Karagiannidou & Wittenberg, 2022). Concretely speaking, social insurance is a contributory program backed by the government; it is also sometimes referred to as contribution-based aid to individuals, as opposed to social assistance, which is non-contributory welfare provided to society. Employees obtain future security through social insurance, which also sustains their livelihood and is a potent tool for reducing people's long-term well-being. Ning et al. (2020) claim that it also plays a crucial role in national saving and wealth redistribution. People become poor throughout their lives due to severe circumstances (job loss, unemployment, illness, or other unforeseen circumstances) and never rise beyond the poverty level as a result, especially in the unorganized areas of the economy.

Social Insurance connected to long-term care (Vidal-Meliá et al., 2018) considers that the demand for long-term care (LTS) develops progressively for retiring individuals regarding health care, retirement, unemployment, and future uncertainties. This is the case in developing nations like China. Family and friend long-term care is unsure (Karagiannidou & Wittenberg, 2022) and

becomes even more difficult during the COVID-19 pandemic. As a result, the importance of social insurance phenomena has grown and is likely to provide an answer to queries about long-term care and uncertainties (Joshua, 2017; Karagiannidou & Wittenberg, 2022).

The social insurance system has gradually become more prevalent worldwide, with particular emphasis on Germany, Vietnam, and Japan (Karagiannidou & Wittenberg, 2022; Nguyen et al., 2021). The specialized funds produced for this purpose are non-transferable to other uses. This social insurance system is supported by both the employer's and employee's social contributions, considering the minimal cost an employee has to pay an organization over time to get future benefits. The social insurance system is based on the number of contributions made and benefits received; however, the ratio varies from state to state. Additionally, the financing contribution for long-term care varies by country and is organization-specific (Karagiannidou & Wittenberg, 2022). In addition, private social insurance is relatively expensive compared to social insurance provided by organizations.

Due to the diversity in people's economic risk capacities and conditions, the social insurance system's implications for society are a cause for concern. There have been attempts in the literature to analyze numerous social insurance-related elements, such as nation and year-specific data. Since

there is no pension system after retirement and a boom in individuals investing in health plans, the health and pension policies will be combined and examined. As a result, both coexist and can be evaluated jointly. Another justification for its review, according to Ning et al. (2020), is that future social security should be transformed into an investment in human capital. Consequently, a policy covering both, the pension benefit and public insurance would be considered as an optimal policy mix (Grossmann & Strulik, 2020). This must also be assessed by looking at the social insurance system from various perspectives.

Various studies reflect that there has been increasing attention in academia toward the benefits and drawbacks of social insurance. However, there has not been much attention paid to synthesizing the existing literature for the benefit of researchers and industry practitioners. Studies mention the requirement and benefits of conducting a synthesized literature review (Shekhar & Valeri, 2022). Such a literature review immensely benefits young researchers, particularly from developing and underdeveloped nations. Thus, greater efforts must be made to increase the prevalence of social insurance by fostering cross-national collaboration amongst researchers from different nations by identifying prominent contributors. Such knowledge exchange helps share concepts and methodologies across borders, which helps in the holistic development of the idea. Since no such comprehensive review exists for the social insurance theme, it is a suitable opportunity to bridge the gap.

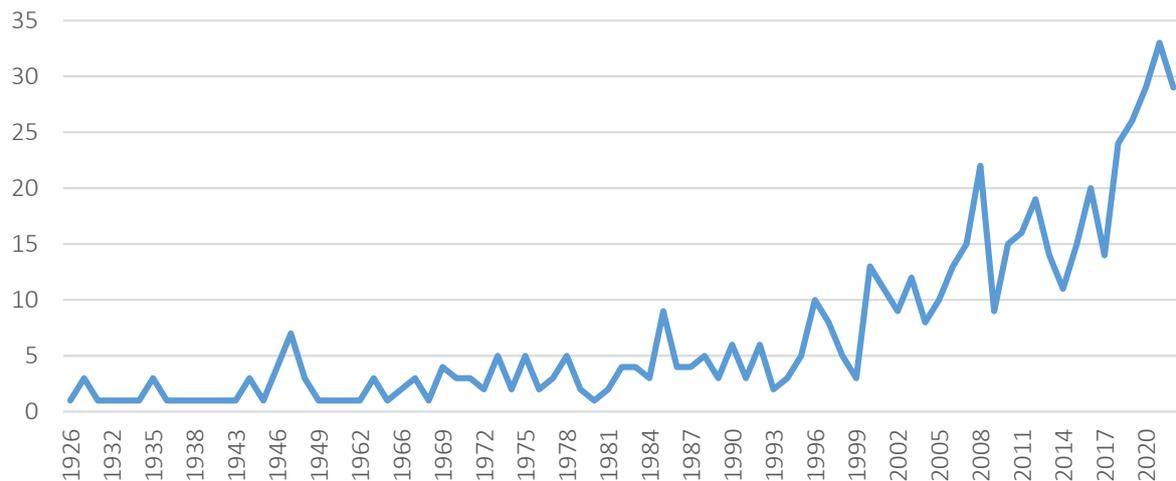
Precisely, the study aims to assess the current groupings of existing information within the domain of social insurance to extract future gaps on research landscape.

## 2. METHODOLOGY

This study conducts a bibliometric analysis to synthesize the social insurance research and provides future directions. VOSviewer (Van Eck & Waltman, 2011) and Science of Science (Sci2) tool (Sci2 Team, 2009) are used to carry out the network analysis and descriptive analysis of the literature. Network visualization is done using the Gephi (Bastian et al., 2009). Prior to

the analysis, the sample data is refined using the Open Refine software. To answer the research questions, the study adopts a bibliometric protocol developed by Khanra et al. (2020). This protocol involves three stages, *Scanning*, *Curating*, and *Analyzing*.

The scanning step involves the identification of the literature. Scopus is regarded as one of the best databases to conduct bibliometric analysis because of its peer review mechanism and quality articles (Shekhar et al., 2021). The literature search was carried out using keywords associated with the social insurance highlighted in the previous studies. It was conducted on July 31, 2022 using keywords 'social insurance', 'social security', 'social relief', and 'social assistance.' It resulted in 3,215 search results that included articles, conference proceedings, editorials, book reviews, review papers, and corrections. The curating stage involves filtering out the data to achieve the desired objectives. Some of the filters are provided by the Scopus database. It is one of the advantages of preferring it over other databases. So, only journal articles are selected as they are more rigorously peer-reviewed compared to conference proceedings, book chapters, editorials, and viewpoints. The study is limited to articles published only in English to ensure data consistency. All the unrelated articles were removed after reading the titles and abstracts of the papers. The remaining articles were double-checked to remove any subjective bias. After this stage, 562 journal articles were shortlisted for analysis. Our sample dataset thus contains 562 journal articles published between 1926 to 2022 (till search date). The presence of an article from 1926 indicates that social insurance research is almost a century old and has long been used as a means of social security. Figure 1 demonstrates the publication trends in social insurance research. The results suggest that there has been a constant increase in the literature in the last two decades. In addition, the advent of the pandemic has also increased the publication count. The sample for the study includes 562 articles, 1,008 authors, 85 countries, and 231 institutes. Table 1 lists the top contributing authors, institutions, countries, and publication titles on social insurance based on the number of publications.



**Figure 1.** Publication trends of social insurance research

**Table 1.** Top contributions based on total publications

Author	TP	Organization	TP	The Country of the author	TP	Publication Title	TP
Alexanderson, K.	8	Karolinska Institute	19	United State	134	International Social Security Review	37
Cremer, H.	6	Göteborgs Universitet	12	Sweden	67	Journal Of Public Economics	18
Nielsen, I.	6	Stockholms universitet	11	Germany	38	International Journal of Social Welfare	8
Nyland, C.	6	Toulouse school of Economics - Recherche - TSE-R	11	China	36	International Tax and Public Finance	8
Pestieau, P.	6	Universiteit van Amsterdam	10	Netherlands	27	European Journal of Social Security	6
Smyth, R.	6	Linköpings Universitet	10	United Kingdom	27	Social Policy and Administration	6
Gao, Q.	5	Université de Liège	8	Australia	20	BMC Public Health	5
Koreh, M.	5	Uppsala Universitet	8	Norway	19	Disability And Rehabilitation	5
Nelson, K.	5	Tilburg University	8	Belgium	16	Economic Inquiry	5
Bergroth, A.	4	Monash University	8	Japan	14	Health Policy	5

### 3. RESULTS

As per Bibliographic Coupling (BC), if two or more articles cite a common article, then they are related as they appear to be of a similar study field (Kessler, 1963). BC has been widely used in bibliometric studies to identify the top contributions. However, some studies also criticize its use as they suggest that this approach favors newer articles. Despite its limitation, BC provides useful insights into the studied theme. The results in Table 2 suggest that I. Nielsen is the most contributing author, followed by R. Smyth and C. Nyland. The studies of I. Nielsen focus on identifying why an employer might receive a social insurance other than its counterparts. He also identifies the difference

in the accessibility of the social insurance to the urban and rural migrants in China. In terms of organizations, Georgetown university is the top contributor, followed by Columbia University and Orebro County Council. In addition, the United States contributes the most, followed by China and Germany.

Citation analysis is another commonly used approach in bibliometrics. It helps to understand the top contributions in a field by judging its worth from the number of citations it has gained over the years (Khanra et al., 2020). Where BC is criticized for favoring newer articles, citation analysis has been criticized for supporting older articles and authors. However, it does make a useful contribu-

**Table 2.** Top contributions based on bibliographic coupling

Author	TLS	Organization	TLS	The country of the author	TLS
Nielsen I.	240.45	Georgetown University, United States	104.83	United State	1321.09
Smyth R.	240.45	Columbia University, United States	98.83	China	798.49
Nyland C.	151.31	Department Of Community Medicine and Public Health, Örebro County Council, Örebro, Sweden	64.1	Germany	755.55
Zhang M.	130.31	National Centre for Work And Rehabilitation, Department Of Health And Society, Linköping University, Linköping, Sweden	64.1	Sweden	604.62
Cremer H.	55.42	Division Of Rehabilitation Medicine, Norrbacka Building, Karolinska Hospital, S-171 76 Stockholm, Sweden	40.33	Netherlands	484
Pestieau P.	55.42	Department Of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden	36	United Kingdom	479.02
Koreh M.	9.83	Division Of Rehabilitation Medicine, Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden	16	Canada	337.5
Nelson K.	9.5	Division Of Insurance Medicine, Department of Clinical Neuroscience, Karolinska Institutet, Stockholm, Sweden	11	Australia	321.23
Gao Q.	6.6	Swedish Institute for Social Research, Stockholm University, Sweden	10.6	Norway	288.45
Alexanderson K.	6.2	NBER, United State	8	Israel	215.67

tion to bibliometrics by providing valuable information. The results (Table 3) show that P. Pestieau is the most cited author, followed by H. Cremer and I. Nielsen. The works of author P. Pestieau focus on how behavioral aspects such as adverse selection and moral hazard are incorporated in the social insurance domain and differences in the various social insurance systems that are prevalent in the different countries. Authors from UC Berkeley are most cited, followed by those from the University of Virginia and Stockholm University. In addition, authors from the United States are most cited followed by those from Sweden and Norway. The results of the articles (Table 4) indicate that older articles have very high citation counts. The

study uses two parameters for citations. Local citation indicates the citations for a document in the downloaded dataset. The global citation count is taken from Google Scholar.

Due to the limitations of the BC and citation analysis in favoring articles based on their age, a prestige analysis is carried out on the data set. Prestige analysis ranks the articles based on their PageRank (Brin & Page, 1998). A PageRank is a statistic in Gephi that determines the worth of an article based on several pre-set parameters. The results (Table 5) show the top articles in our dataset based on the PageRank analysis. It is interesting to see the deviations in the results from the ci-

**Table 3.** Top contributions based on citation analysis

Author	TLS	Organization	TLS	The country of the author	TLS
Pestieau, P.	201	Uc-Berkeley, United States	210	United States	2810
Cremer, H.	175	University of Virginia, United States	190	Sweden	1276
Nielsen, I.	168	Swedish Institute for Social Research, Stockholm University, Sweden	101	Norway	690
Smyth, R.	168	NBER, United States	86	United Kingdom	526
Alexanderson, K.	165	Georgetown University, United States	82	Germany	371
Nelson, K.	152	Duke University, United States	55	Australia	353
Gao, Q.	117	Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden	52	China	276
Nyland, C.	116	Columbia University, United States	44	Belgium	275
Zhang, M.	86	Division of Rehabilitation Medicine, Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden	36	France	237
Koreh, M.	41	Department of Clinical Neuroscience (CNS), Division of Insurance Medicine, Karolinska Institutet, Stockholm, Sweden	31	Netherlands	224

**Table 4.** Top articles based on citation analysis

Article	Local citations	Global citations
Inequality, social insurance, and redistribution	408	1042
Redistributive taxation as social insurance	268	804
Why the social insurance budget is too large in a democracy	190	596
On the benefits from rigid labor markets: norms, market failures, and social insurance	171	535
A prospective study of leisure-time physical activity and mental health in Swedish health care workers and social insurance officers	158	359

**Table 5.** Most valuable contributions based on Prestige Analysis

Article	Page Rank
Income maintenance and social insurance	0.019967
The welfare state with private alternatives: The transformation of popular support for social insurance	0.012547
On the determinants of labor market institutions: Rent seeking vs. social insurance	0.01216
On the desirability of taxing capital income in optimal social insurance	0.010964
Inequality, social insurance, and redistribution	0.010574
Social Insurance, Incentives and Risk Taking	0.010457
Optimal Social Insurance for Heterogeneous Agents with Private Insurance	0.010327
Being on sick leave due to heart failure: Encounters with social insurance officers and associations with sociodemographic factors and self-estimated ability to return to work	0.009745
Negative encounters with social insurance officers – Experiences of women and men on long-term sick leave	0.009745
Political sustainability and the design of social insurance	0.009691

tation analysis, as only two of the top-cited articles make it to the list. It is because PageRank analysis other parameters also while calculating the worth of the article.

In the last bibliometric analysis of the study, a keyword co-occurrence analysis is conducted on the “author provided keywords” and “indexed keywords”. The difference between the two is that author provided keywords are narrowed down and based on what the paper is about, whereas indexed keywords are provided by the journals and broader and general. A filter is applied, and the keywords with a link strength greater than ten are selected in the study. Of the total of 1,217 unique keywords provided by the authors, 58 qualified for the cut-off and were included in the analysis. Of the 965 indexed keywords, 61 met the cut-off score and were included in the study. Table 6 provided the list of top keywords authors and is indexed based on their total link strength. Figure 2 represents the author given keywords co-occurrence network, while Figure 3 represents the density-based co-occurrence network of indexed keywords. The darker shade in the Figure 3 represents the higher link strength of the word. Both the keywords network shows the presence of three clusters:

*Cluster 1:* Economic and Social Welfare reforms,

*Cluster 2:* Operational aspects and Human Resource Management,

*Cluster 3:* Welfare System and legal aspect.

**Table 6.** Most frequent keywords in the analysis

Author Keywords	TLS	Indexed Keywords	TLS
China	23	Social Security	109
Sick Leave	22	Health Insurance	57
Social Security	22	Adult	53
Disability Insurance	18	Male	53
Pensions	18	Insurance System	49
Return To Work	18	Female	51
Redistribution	17	Middle Aged	37
Welfare State	17	Sweden	31
Health	16	Economics	30
Sickness Absence	16	Disability	24
Unemployment Insurance	16	Organization And Management	24
Vocational Rehabilitation	16	United States	22
Labor Supply	15	China	21
Migration	15	Social Policy	20
Optimal Taxation	15	Employment	16



#### 4.1. Cluster 1 based on Social Insurance regulations, officers, and operational aspects

The articles in this cluster focus on aspects such as workmen compensation, sick leave, absenteeism, disability, and medical leave. It is the second largest cluster, with about 28 percent of articles. The first paper in this cluster by Mortelmans et al. (2007) recommended enhancing the inter-physician exchange of patient information in Belgium. It suggested a need for an effective information exchange system. Ydreborg et al. (2007) studied the role of social influencers in dealing with the application of disability pensioners. The study observes that many applications hinder the proper disposal of client grievances and support services. A few studies also highlight the challenges in the working of social insurance officers. Thorstensson et al. (2008) observe that issues such as heavy workload, lack of personal contact, and reorganizations affect the working of insurance officers. The study recommends a need for better coordination with healthcare services and provider. In the same regard, Kärholm et al. (2008) also urged systematic cooperation between employers, social insurance officers, and occupational health services and providers. A few studies also highlight the challenges with social insurance and the need for subsequent reforms. Hall and Hartman (2009) observed a moral hazard with the social insurance scheme and concluded that, at times, higher rewards for sickness correspond with higher reporting of sickness. Upmark et al. (2011) pointed out that people might experience a negative encounter with the social insurance officers, and thus, reduce the chances of empowerment of the weak and their return to work. Interaction with social insurance officers also influences the ability to return to work for sick people (Marklund et al., 2015; Olsson et al., 2016). Nordgren and Söderlund (2015) reported that in the case of a heart-related ailment in younger people, a positive interaction helps in the ability to return to work.

Most of the studies in this cluster adopted a similar methodological approach. These qualitative studies were based on open-ended interviews with social insurance officers, health occupational, and sick people. They were conducted in similar study regions, most in Sweden and most of these studies were cross-sectional and included demographics as a key variable in their study.

#### 4.2. Cluster 2 based on Welfare provisions and social insurance reforms

The largest of the three clusters encompasses approximately 51 percent of articles. The articles in this cluster relate to the welfare provision of social insurance with respect to employment, insurance system, retirement benefits, pension system, labor market, health care, and welfare provisions. The focus of the studies was more on developing a system of social insurance that benefits the people and simultaneously does not burden the states (Fölster, 1997). In one of the oldest studies in the cluster, Diamond and Mirrlees (1978) constructed models for social insurance with variability in retirement age. Since the academicians focused on incorporating reforms to the social insurance policies, Montanari (2001) studied the convergence of the social insurance practices followed in the 18 OECD countries. Montanari et al. (2007) added to the literature by examining the convergence pattern in the following time period.

Reducing income inequality and income redistribution are significant welfare provisions of social insurance. Sickness insurance and disability benefits contribute most to the cause (Ferrarini & Nelson, 2016; Khan et al., 2002). Financing social insurance programs is one of the challenges faced by several economies (Campbell & Morgan, 2005). It is because there is very little fluctuation in demand for the good while the cost associated is high. However, through modeling, Chetty and Looney (2006) show that social insurance schemes are highly beneficial in low-developed economies irrespective of their demand. The researchers then began to focus on understanding the various social insurance systems prevailing across the globe. Cultural and social differences influence social insurance plan decisions (Achterberg et al., 2013; Laun & Wallenius, 2016). Ebenstein and Leung (2010) observed that in China, those who had sons were less likely to participate in the social insurance mechanism. In addition, individual-level factors such as economic and political factors also influence the consumption of social insurance (Carnes & Mares, 2012). Studies in this cluster also explored the efficacy of insurance systems of the US (Huggett & Parra, 2015), Australia (Dabbs & Kumru, 2016), and South Korea (Yen, 2022) in providing social insurance.

Most of the studies in the cluster also adopt a similar methodology. However, studies became more quantitative and used increased modeling to analyze the data set. The studies mostly belong to the settings of Eastern Asian countries such as China and South Korea. Nevertheless, the results from the studies do offer a diverse view.

### 4.3. Cluster 3 based on Benefits and features of social insurance system

This is the smallest cluster in the dataset comprising literature covering benefits and features of social insurance such as legal aspects, compliance, health care management, financial aspects, and economics. The major advantage of social insurance is its ability to safeguard people when they are most vulnerable. Further, it is a powerful tool in an industry segment where private players feel reluctant to operate (Barr, 1989; Shapiro, 1997). The development of social insurance has faced tremendous challenges from economic forces (Weyland, 1996). Social insurance offers benefits for the people as well as the states. It helps to “lessen the financial burden on the state, expand home and community-based services; lessen dependence on means-tested welfare; and increases support of informal caregivers” (Cuellar & Wiener, 2000). Studies also suggest that “Educational subsidies and capital taxation are used as catalysts to facilitate social insurance” (Schindler & Yang, 2015). Social insurance schemes have also been criticized for demotivating people from becoming self-reliant and starting to earn (Xu, 2022). One of the challenges to increasing participation in the social insurance support is the lack of education among its target audience (Huang & Han, 2021). Therefore, Bana et al. (2022) suggest that firms play a crucial role in making employees avail of such services.

Like in other insurances, the issue of moral hazard is also present with social insurance. Krueger and Meyer (2002) and the European Economic Advisory Group (2007) pointed out that social insurance affects labor supply. An example of this has been seen in America during Covid 19 pandemic, where the US federal government’s social insurance scheme of weekly compensation of USD 600 to the unemployed dissuaded many of them

from returning to work and reduced the supply of labor during the pandemic, leaving the economy striving to recover (Greszler, 2021). Also, the poor implementation of social insurance programs has always been a concern. During the COVID-19 pandemic, unemployment benefits by the federal government equated to 176 percent of workers unemployed, an estimated USD 357 billion excess in payment to the people who were not unemployed. (Greszler, 2021). Hall and Hartman (2010) state the case where sick people did not report their sickness as a benefit of sickness insurance were far less than what they could earn while working. In research conducted in China, Ebenstein and Leung (2010) concluded that the sex composition of the family affects the demand of social insurance programs. It showed that parents with only daughters in the family are more likely to opt for rural pension programs than parents with sons. Financing of social insurance programs is also one of the challenges faced by several economies (Campbell & Morgan, 2005) as it requires a major portion of the government budget.

The major contribution in research on social insurance has been made by developed countries. Table 1 depicts that among the top 10 countries that are doing great in social insurance research, nine are developed nations, one is a developing nation, and there is no poor nation among the top 10 contributors. Similar is the situation in Bibliographic Coupling (Table 2) and Citation Analysis (Table 3). It shows that developing and poor nations are lagging behind in social insurance research. Social insurance has been a topic of research for decades. However, after reviewing the available literatures, it has been found that the studies in this cluster adopted a similar methodological approach. Most of the research is qualitative and based on open-ended interviews with social insurance consumers and officers (Gard & Söderberg, 2004). The studies in this domain are majorly conducted in Sweden, and most of these are cross-sectional and include demography as a key variable (Wang et al., 2018). However, the study observes that there has not been much progress in terms of methodologies adopted in social insurance research. Most of the research is based on a similar research design barring the geographical location in which the research is set. The use of advanced statistical analysis is negligible in so-

cial insurance research, despite the higher number of publications. In addition, there is observed a lack of interdisciplinary and multidisciplinary research in the theme. Thus, the study recommends borrowing concepts from other managerial streams to understand more about the behavior of people opting for social insurance, the psychology behind their decisions, and marketing the social insurance to increase awareness and adoption of the social insurance scheme.

Eventually, social insurance programs have played a vital role in the economic upgradation of people in need. It is one of the much-talked-about policy frameworks. Since the 2008 financial crisis, it has been observed that there are varied needs and benefits of social insurance

programs. The role of social insurance has been there in stable economic situations and in the situations like the Financial Crises of 2008, the European Crises of 2010, and the latest Covid Crises (Bell & Blanchflower, 2020). Also, it has implications for every type of economy, be it a developed economy, developing economy, and underdeveloped economy. However, the correct amount, time, and duration of benefits and their correct implementation have always been a matter of concern (Hall & Hartman, 2010). Greszler (2021) states how the time, duration, and benefit of unemployment dissuaded people from getting out for work. Even the federal government's social insurance program suffered significant unintended consequences, including widespread fraud, identity theft, and misuse.

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## CONCLUSION

This study aimed to map the knowledge clusters in the field of social insurance as the lack of research integration in the existing literature on social insurance, security, and pension systems makes it challenging for emerging researchers to pinpoint research gaps, as studies in these areas are dispersed. Thus, study applied bibliometric analysis to capture the essence of the work that has been done in the field. The available knowledge is synthesized and clustered through keyword co-occurrence networks and co-citation analysis. The obtained result showed the presence of three knowledge clusters, i.e., benefits and features of social insurance, welfare provisions in social insurance and operational aspects of social insurance research. These derived clusters are interconnected to each other to align social insurance phenomenon to implement completely in the economy. Social Insurance operational aspects commended that much of research done in Sweden with similar methodology of open-ended interviews. Also, concluded that the developed countries have primarily led the way in making significant contributions to research in the field of social insurance.

Insights from the current study revealed a positive trend in the publication of research on social insurance over the past two decades with developed nation. On the other hand, the need for social insurance research in developing and under developing nation prevailed much during and after the COVID-19 pandemic. The pandemic caused people to reassess the sense of social security, pension system, and insurance when there is as such no source of income for an individual. To effectively accomplish the goals of social insurance programs while considering the demographic characteristics of the country, the reforms and policies should be suited to the needs of beneficiaries as well as the resources that are now available, and they should be updated as necessary over the course of time. Also, researchers have arrived at the conclusion that there has been a very small amount of research done on the subject of social insurance that combines empirical research with major research methodologies, which implies that this sector has the potential to have a future research deficit in this particular field.

Further concluded, academics from developing nations ought to collaborate more closely with one another to concentrate on the implementation of social insurance and its reforms. It is recommended to encourage further growth in domain knowledge of social insurance in the future by sharing cross-border information on social insurance. One of the primary goals to encourage greater adoption and utilization of the pension schemes to reduce the financial burden that it places in society. In addition,

potential research gaps or studies can be pursued in a variety of other managerial, social, and psychological areas that have the potential to be integrated into research on social insurance. Further, there are lot of developing countries that are hesitant to expand social insurance programs to their general populace because they are worried about the ability of the programs to remain fiscally viable. Therefore, government intervene through reform on social insurance is need of hour.

## AUTHOR CONTRIBUTIONS

Conceptualization: Mosab I. Tabash, Shekhar Shekhar, Poonam Singh, Mujeeb Saif Mohsen Al-Absy.

Data curation: Mosab I. Tabash, Shekhar Shekhar, Poonam Singh

Formal analysis: Mohd Shamshad, Mujeeb Saif Mohsen Al-Absy.

Funding acquisition: Mujeeb Saif Mohsen Al-Absy.

Investigation: Shekhar Shekhar.

Methodology: Mohd Shamshad.

Project administration: Mujeeb Saif Mohsen Al-Absy.

Software: Mosab I. Tabash, Poonam Singh.

Supervision: Mosab I. Tabash, Poonam Singh, Mohd Shamshad, Mujeeb Saif Mohsen Al-Absy.

Writing – original draft: Shekhar Shekhar.

Writing – review & editing: Mohd Shamshad.

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