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THE IMPACT OF FLEXIBLE WORK ARRANGEMENTS ON SOCIAL SECURITY MANAGEMENT: A SYSTEMATIC REVIEW

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ABSTRACT

The increasing prevalence of Flexible Work Arrangements (FWAs), such as gig work, part-time work, and remote work, has raised concerns about the sustainability and adaptability of social security systems worldwide. This systematic review aims to examine the impact of these arrangements on social security programs. The problem statement emphasizes the importance of understanding the implications for social security, including changes in contributions, demographics, and the need for policy adaptation. Through a systematic approach, the review analyzes academic literature from Scopus and Econbiz databases, focusing on studies providing empirical insights into the effects of FWAs on social security systems. The findings of the review are synthesized from seven primary studies (n=7), revealing critical dimensions of the issue. Key among these is the challenges posed to social security programs, including reduced contributions due to irregular income patterns and demographic changes as the workforce ages. Additionally, the findings highlight the necessity for legal and policy adjustments to accommodate the nuances of FWAs. The review identifies several gaps in current research, particularly the need for more longitudinal studies to assess the long-term effects of FWAs on social security systems. Looking forward, this review suggests avenues for future research, emphasizing the importance of exploring the intersection of FWAs with technology and globalization. It also calls for more comprehensive studies on the efficacy of new policy adaptations in various socio-economic contexts. By offering a comprehensive understanding of how FWAs are reshaping global social

security management, this review provides valuable insights for policymakers, researchers, and practitioners dealing with the dynamics of complex work and social welfare relations.

Keywords: flexible work, social security, policy, legal

INTRODUCTION

The traditional office-centric employment model has substantially transformed the contemporary work landscape. The advent of technology, changing demographics, and evolving societal values have led to the proliferation of Flexible Work Arrangements (FWAs) globally (International Organisation of Employers, 2021). These FWAs encompass a variety of work arrangements, including telecommuting, freelancing, part-time employment, compressed workweeks, and job-sharing (Fayard et al., 2021; International Labor Organization, 2020). These innovative work structures offer employees increased autonomy and work-life balance (Monteiro et al., 2019). They also raise important questions regarding their impact on managing social security systems. Notably, social security systems are fundamental pillars of modern welfare states, designed to provide financial protection and support to citizens during various life stages, including retirement, disability, and unemployment (ILO, 2001). In addition, the rapid expansion of FWAs introduces a set of challenges and opportunities for these systems, which are traditionally built around the assumption of stable, full-time employment.

This systematic review aims to explore the intricate relationship between Flexible Work Arrangements (FWAs) and social security management, shedding light on their multifaceted consequences for individuals, employers, and governments. By synthesizing existing research across multiple disciplines, we seek to answer critical questions: 1) How do FWAs affect an individual's access to and reliance on social security benefits? and 2) What are the implications for social security financing and sustainability in an era of increased labor market flexibility? Therefore, by addressing these questions, this systematic review contributes to our understanding of the evolving world of work. It also provides valuable insights for policymakers, researchers, and stakeholders invested in ensuring the continued effectiveness and relevance of social security systems in the face of rapid societal transformations.

LITERATURE REVIEW

The COVID-19 pandemic has accelerated the adoption of Flexible Work Arrangements (FWAs), especially remote work, due to movement restrictions and economic sector closures (Wahab et al., 2022). In the Netherlands, there has been a significant increase in FWAs, including own-account work, fixed-term contracts, and variable-hours contracts since the early 2000s (Boegheim et al., 2022). This trend has a positive effect, especially on disabled workers. For example, people with Neuromuscular Disease (NMD) are still able to work under flexible working conditions (Lexell et al., 2017). Note that NMD is a disease that affects the function of muscles due to problems with the nerves and muscles in the body (Clinic, 2023). It affects the ability to be employed and to work (Lexell et al., 2017). However, this group can work as hard as those without, provided the right environment, such as FWAs (“Empowerment for Americans with Disabilities: Breaking Barriers to Careers and Full Employment,” 2011).

Additionally, Flexible Work Arrangements (FWAs) can address the issues of elderly care. In the United States, an aging population presents challenges in providing personal care, health care, and social support to the elderly. This is with an increasing reliance on non-family caregivers, as nearly 60% of elderly caregivers are employed. Moreover, the diversity in parents' backgrounds and cultural contexts further complicates care. Various stakeholders, including health care providers, community-based service providers, employers, governments, families, and the elderly themselves, are involved in elder care. Therefore, large companies have taken steps to address elderly care by

offering FWAs (Bookman & Kimbrel, 2011).

Nevertheless, the adoption of Flexible Work Arrangements (FWAs) can have adverse effects on specific demographics. In Santiago, Chile, the flexible work economy has impacted individuals working in beauty salons. These workers lack formal employment contracts and are compensated as if they were independent service providers. Furthermore, this employment model represents a novel development within the realm of urban informality, carrying present and future implications related to social security and job stability (Palacios, 2018). Another instance can be observed in India, where women in the informal sector often opt for home-based or flexible work due to childcare and household responsibilities. This choice has social and economic ramifications. It leads to low-wage employment and limited opportunities for career advancement, compromising women's access to social security (Khurana, 2022). Consequently, addressing the legal aspects of FWAs becomes crucial. In addition, concerns related to FWAs should encompass managerial rights and boundaries while also delineating the rights of employees. Hence, various employment-related matters of FWAs, including wage and leave policies, safety and health considerations, confidentiality and information security, as well as social security provisions, must be thoroughly examined (Wahab et al., 2022).

According to the International Labour Organization (ILO) (2001), social security is defined as the protection that society provides to individuals and households to ensure access to health care and to guarantee income security. This is particularly true in cases of old age, unemployment, sickness, disability, workplace injuries, maternity, or the loss of a primary wage earner (ILO, 2001). Note that implementing Flexible Work Arrangements (FWAs) can impact individuals' reliance on social security benefits, as the shifting work landscape may influence their access to healthcare and financial stability in cases of unemployment or other unforeseen circumstances.

METHODOLOGY

The systematic review process involved three basic phases in selecting numerous relevant papers for this research: Identification, Screening, and Eligibility.

Identification

The first step initially involved was identification. This initial stage was to identify keywords and search for related, comparable terms using thesaurus, dictionaries, encyclopedias, and past studies. After identifying all pertinent keywords, search strings were formulated for use in the Scopus and Econbiz databases (see Table 1). The EconBiz database is preferred because it offers a more tailored collection of resources in business fields, whereas Scopus is highly favored for its extensive citation analysis tools (McCullough, 2023), which are essential for conducting this systematic literature review. Scopus also provides broader access to certain journals and publications that may not be indexed in other databases (Scholastica, 2021). Consequently, in this systematic review process, which primarily utilized the EconBiz and Scopus databases, 136 papers were successfully obtained in the initial phase, with 19 papers retrieved from Scopus and 117 papers from EconBiz.

Table 1
The Search Strings

Scopus	“social security” AND “flexible work”
Econbiz	“social security” AND “flexible work”

Screening

Any duplicate papers will be removed from the list of papers to be reviewed at the early stage of screening. The screening stage is a step to determine whether each study meets the predefined inclusion and exclusion criteria set out for this review (see Table 2.0). As research articles are the major source of practical advice, it was the first inclusion criterion used while reviews, meta-synthesis, meta-analyses, books, book series, chapters, and conference proceedings were excluded. Furthermore, the review was limited to English-language publications. The publication years were set from 2013 to 2023 due to the limited availability of relevant references. In total, 128 publications were excluded based on specific criteria.

Table 2
The Selection Criterion in Searching

Criterion	Inclusion	Exclusion
Language	English	Non-English
Timeline	2013 – 2023	< 2013
Literature type	Journal (Article)	Conference paper, Book chapter, Conference review, Review, Book
Publication Stage	Final	In Press

Eligibility

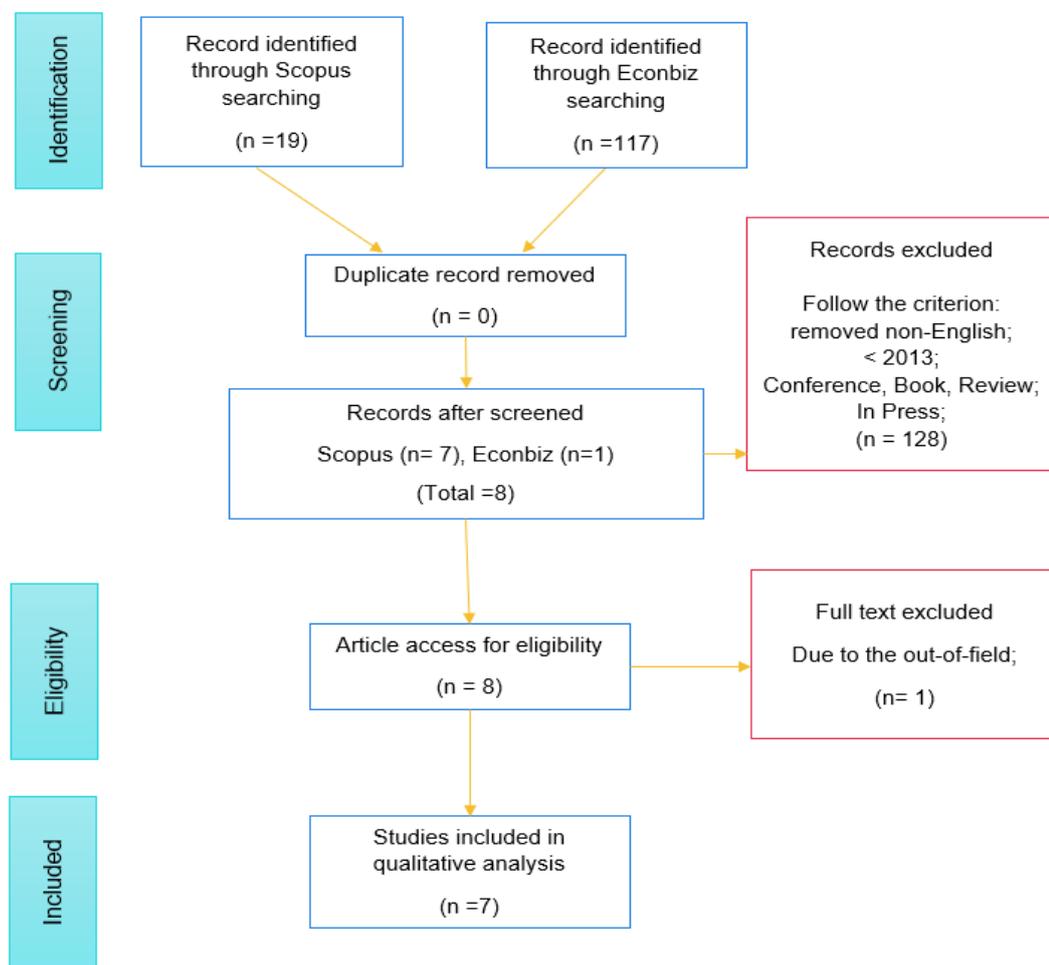
A total of eight articles are included in the third level, called eligibility. Eligibility is a detailed assessment of the studies that have passed the initial screening based on titles and abstracts. During the eligibility stage, the full texts of the selected studies are examined to ensure they meet all the inclusion criteria set for the review. As a result, one paper was excluded because it was out of scope. Finally, there are seven articles eligible for review.

DATA ABSTRACTION AND ANALYSIS

In this study, an integrative analysis approach was utilized as the main method of evaluation to examine and integrate various research methodologies, including quantitative, qualitative, and mixed methods. The central objective of the expert analysis was to identify relevant themes and subthemes. The initial phase of theme development commenced with data collection, involving a meticulous examination of 136 publications to extract statements or content relevant to the study’s focal areas, as illustrated in Figure 1. Subsequently, the authors assessed the impact of Flexible Work Arrangements (FWAs) on social security by identifying and establishing key groupings in the subsequent phase. The two primary topics that emerged from this process were economic impact and legal and policy implications. Building on this foundation, the authors continued to explore each identified subject along with associated themes, concepts, and ideas, collaborating with co-authors to construct themes grounded in the evidence uncovered during the

research. A comprehensive log was maintained throughout the data analysis to document analytical insights, perspectives, questions, and other relevant considerations. Finally, the authors conducted a comparative analysis to identify and resolve any inconsistencies in the theme development process, actively engaging in discussions among themselves to address any disparities in concepts. Lastly, the themes were refined to ensure coherence. To ascertain the validity of the issues, an expert specializing in social security conducted the analysis. The expert review phase, aimed at establishing domain validity, ensured the lucidity, significance, and appropriateness of each sub-theme. The author revised her assessments based on feedback and professional judgments.

Figure 1
Flow Diagram of the Proposed Search Study



RESULTS

To arrive at the thematic analysis results, the author utilized ATLAS.ti to systematically code the data collected from selected studies, identifying initial themes. This involved an iterative process where the text was read and annotated to capture key concepts and patterns. After this initial coding, the emerging codes were grouped into broader themes based on their relationships and relevance to the research questions. Subsequently, these themes were reviewed and refined to ensure they accurately represented the data. To enhance the validity of the findings, the analysis and resultant themes were also reviewed and verified by experts in the field. This dual approach

of using ATLAS.ti for data analysis and incorporating expert feedback ensured a rigorous and methodologically sound thematic analysis. As a result, reviewed articles were categorized into two main themes, which are: “Economic Implications of FWAs” (three articles) and “Adapting Social Security Policies for Remote Workers” (four articles) – Table 3.

Economic Implications of Flexible Work Arrangements (FWAs)

Various studies have explored the impact of personal characteristics, support systems, and Flexible Work Arrangements (FWAs) on individuals’ ability to continue working. Lexell *et al.* (2017) highlighted how personal characteristics and support from work organizations, managers, and family members facilitate work continuation. Lexell *et al.* (2017) also emphasized the significance of these factors for employers, healthcare professionals, and the social security system. Conversely, physically demanding work and environmental factors can act as barriers. In a related context, Al-asqah (2018) discussed how students’ attitudes towards private work during their studies are influenced by financial and social security, personal skill development, and the role of the private sector in offering flexible work options. Negative factors include societal perceptions, conflicts with study hours, and insufficient information. The study proposes strategies to shift students’ attitudes toward private work, which could help reduce youth unemployment. Furthermore, Fernández-Kranz *et al.* (2015) investigated the wage effects of part-time work, particularly among mothers and different contract types. They discovered a significant negative wage effect of part-time work, with varying implications for motherhood status and contract type. This research also highlighted lower returns to experience in part-time employment and an increased likelihood of fixed-term contracts for part-time workers.

Adapting Social Security Policy for Flexible Workers

The studies collectively offer insights into adapting social security policies for flexible workers. Bolhaar *et al.* (2018) examined the Dutch context, revealing that Dutch institutions incentivize employers and workers to navigate institution-based risks and costs while highlighting that most workers prefer open-ended employment contracts. However, the prevalence of flexible employment contracts decreases over the life cycle, particularly among higher-educated individuals and men, while own account work, often a positive choice, increases. Azzopardi and Bezzina (2014) focused on the motivations and hindrances for an inactive group’s intention to work. They discovered that social and economic well-being are key motivators. Meanwhile, low wages, family responsibilities, and reliance on social security benefits hinder work. Hence, encouraging future work prospects is linked to work motives, hindrances, and demographics, suggesting that supportive and flexible work structures, equal opportunities for women, and employment incentives can enhance labor force participation. At the same time, Candon (2019) identified that those men returning to work with impaired health drive certain results, indicating the need for policies promoting flexible work options for older men to address future challenges.

Table 3
The Research Article’s Findings based on the Proposed Search Criterion

No.	Authors	Title	Source Title	Method	Remarks
1.	(Bolhaar <i>et al.</i> , 2018)	Three Perspectives on the Dutch Growth of Flexible Employment	Economist (Netherlands)	Survey.	Adapting Social Security Policies for Flexible Workers
2.	(Azzopardi & Bezzina, 2014)	Understanding female inactivity in Malta: An empirical study with homemakers	SAGE Open	Survey.	Adapting Social Security Policies for Flexible Workers

3.	(Lexell et al., 2017)	Vocational situation and experiences from the work environment among individuals with neuromuscular diseases	Work	Interviews: 9 participants with different NMDs.	Economic Implications of Flexible Work Arrangement
4.	(Candon, 2019)	The joint effect of health shocks and eligibility for social security on labour supply	European Journal of Health Economics	Model-based on the Health and Retirement Study data.	Adapting Social Security Policies for Flexible Workers
5.	(Al-asqah, 2018)	Investigating students' attitudes towards private sector work during study in Saudi Arabia	Education and Training	Questionnaires and interviews	Economic Implications of Flexible Work Arrangement
6.	(Wahab et al., 2022)	Legal Issues in Working from Home Amid Covid-19 Pandemic In Malaysia	UUM Journal of Legal Studies	Doctrinal approach using authoritative legal texts; case studies.	Adapting Social Security Policies for Flexible Workers
7.	(Fernández-Kranz et al., 2015)	Part-Time Work, Fixed-Term Contracts, and the Returns to Experience	Oxford Bulletin of Economics and Statistics	Data from Spanish Social Security records, estimate equations using Markov Chain Monte Carlo techniques.	Economic Implications of Flexible Work Arrangement

DISCUSSION AND CONCLUSION

The mandated adoption of Flexible Work Arrangements (FWAs) highlights a significant shift in the working landscape, potentially driven by external factors like the COVID-19 pandemic. Note that FWAs introduce newfound flexibility. However, it also raises questions about the readiness and preparedness of both employers and employees for this new normal. Moreover, the legal framework surrounding FWAs requires careful consideration, emphasizing the need for clear guidelines and regulations to ensure the rights and boundaries of both parties (Wahab et al., 2022). Notably, the rise of flexible work contracts and job structures demands more individual effort from employees to attain desirable employment, sufficient income, and a balanced work-life relationship. The importance of firm-based working time accounts as a novel instrument that combines workplace flexibility with social security must be highlighted. Thus, widespread adoption of such long-term working time accounts could represent a significant step towards a newly integrated approach to life course policy.

On the other hand, Azzopardi and Bezzina (2014) shed light on the motivations and hindrances of individuals when it comes to work. It is evident from the empirical evidence that social and economic well-being are strong motivators for employment. These aspects encompass financial security, access to benefits, and the overall economic

stability that work provides. However, personal, and professional development, while also important, play a relatively lesser role in motivating individuals to work. Conversely, the hindrances to work are multifaceted. The loss of social security benefits is a significant deterrent, as it can disrupt an individual's safety net. Moreover, enjoyment from staying at home highlights the appeal of leisure and non-working activities. Family responsibilities, often involving caregiving roles, can present obstacles to work. Lastly, the fear of losing the freedom and flexibility currently enjoyed can discourage individuals from traditional employment.

In conclusion, this study contributes to the theoretical understanding of Flexible Work Arrangements (FWAs) by providing a framework that links FWAs with changes in social security systems. This includes exploring how these work arrangements affect contributions and demographic shifts within these systems, thus offering a new perspective on policy adaptations needed for modern work environments. While our study sheds light on some aspects of FWAs, it also identifies several research gaps. Notably, there is a need for more empirical studies examining the long-term effects of FWAs on social security systems across different cultural contexts. Additionally, the impact of FWAs on specific demographic groups, such as older workers or those in precarious employment, requires further investigation.

This study has some limitations. Firstly, the scope of our literature review was confined to articles available in certain databases, which may not include all relevant studies due to access and indexing limitations. Secondly, our analysis predominantly relied on secondary data, which might not capture the most recent developments in policy changes and their effects. Further studies utilizing primary data and longitudinal approaches could provide deeper insights into these dynamics. In addition, the comprehensiveness of this review may be impacted by potential sources of bias such as publication bias and language bias. Firstly, studies that demonstrate clear benefits or drawbacks of FWAs may be more likely to be published. This could skew the perceived impact of FWAs on social security benefits and financing, potentially overestimating positive outcomes or underreporting challenges. Recognizing this bias is crucial for accurately assessing how FWAs affect reliance on and access to social security benefits. Secondly, language bias also significantly limits the scope of this review. The inclusion of only English-language publications may omit critical insights from studies published in other languages. This exclusion can lead to a less comprehensive understanding of the topic and potentially overlook important cultural or regional variations in the data. These biases and limitations are crucial for readers to bear in mind as they consider the conclusions of this review. Future reviews are encouraged to adopt a more inclusive approach to data collection and analysis.

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