

BIBLIOMETRIC ANALYSIS OF THE WORK FROM ANYWHERE TRANSFORMATION IN OPTIMIZING PUBLIC SERVICES IN THE DIGITAL ERA

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ABSTRACT

Digital transformation has driven significant changes in work systems, including the implementation of the Work From Anywhere (WFA) concept, which enables technology-based work flexibility. This work model is not only applied in the private sector but is also being adopted in public services to improve efficiency and accessibility. However, the implementation of WFA in the public sector faces challenges such as the digital infrastructure readiness, data security, and changes in work culture. This study aims to analyze the development of research related to Work From Anywhere (WFA) in optimizing public services in the digital era through a bibliometric approach. The method used is bibliometric analysis with a quantitative technique using data from academic databases such as Scopus and Web of Science. VOSviewer software is used to map research trends, collaboration between researchers, and identify research gaps in this topic. The results show that the publication trend on Work From Anywhere (WFA) in the public sector has increased significantly since 2020, in line with the COVID-19 pandemic that encouraged remote work policies. The analyzed studies reveal that the success of WFA implementation in the public sector is highly dependent on technological readiness, flexible policies, and results-based evaluation systems. In addition, the main challenges faced are the digital divide between regions and the need for stricter regulations related to cybersecurity. In conclusion, Work From Anywhere (WFA) has significant potential to improve the effectiveness of public services if supported by appropriate regulations, adequate technological infrastructure, and human resource readiness. Therefore, an adaptive policy strategy is needed to ensure this work system can be optimally implemented without compromising the quality of public services.

INTRODUCTION

In recent years, digital transformation has changed various aspects of life, including the way public and private organizations work. One of the significant changes that emerged was the concept of Work From Anywhere (WFA), which allows employees to work from any location with the support of digital technology ([Lim 2023](#)). This trend has grown as the COVID-19 pandemic forced

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many organizations to adopt remote work models to ensure operational continuity ([Bloom et al. 2015](#)). This transformation not only has an impact on the private sector, but also on the public sector in providing optimal services to the community ([Zancajo, Verger, and Bolea 2022](#)). With the development of communication and information technology (CIT), such as the use of cloud computing and artificial intelligence (AI), WFA is increasingly becoming a reliable solution in improving work efficiency. In addition, the increasingly sophisticated project management and online communication software supports the implementation of WFA in various sectors, including the public sector. Therefore, it is important to understand how this transformation can be optimized in public services to remain responsive to the needs of society ([Sako 2021](#)).

WFA offers greater flexibility compared to conventional work models. This flexibility is associated with increased productivity, employee well-being, and reduced operational costs ([Montanari, Mattarelli, and Scapolan 2020](#)). In the context of public services, the adoption of WFA has the potential to improve bureaucratic efficiency, speed up administrative processes, and increase the accessibility of services for the community ([Mergel, Edelmann, and Haug 2019](#)). However, the implementation of WFA in the public sector also poses various challenges, such as limited digital infrastructure, data security, and resistance to change ([Akram et al. 2022](#); [P. R. Choudhury 2021](#)).

The bibliometric approach is one of the effective methods in understanding the development of research related to WFA. Bibliometrics allows analysis of research trends, collaboration between researchers, and identification of research gaps in a certain field ([Donthu et al. 2021](#)). Using this techniques, this study aims to explore how the concept of WFA has developed in the academic literature, particularly in the context of optimizing public services in the digital era ([Bednorz 2024](#); [Prithwiraj Choudhury, Foroughi, and Larson 2021](#)).

Several previous studies have discussed the impact of WFA on employee productivity and well-being ([Gálvez, Tirado, and Martínez 2020](#)). However, there are few studies that specifically highlight the role of WFA in optimizing public services. Therefore, this study aims to fill the gap by examining research trends related to the implementation of WFA in the public sector through bibliometric analysis. ([Chaudhuri et al. 2022](#)) In addition, the study also seeks to identify the key factors that support the successful implementation of WFA in public administration. By referring to the relevant literature, this study is expected to provide recommendations that can assist the government in designing a more effective and sustainable remote work policy ([P Choudhury 2020](#)).

The adoption of WFA in public services requires both technological readiness and supportive policies ([Gajendran and Harrison 2007](#)). Adequate digital infrastructure, access to appropriate work tools, and regulations that accommodate work flexibility are all important factors in the successful

implementation of WFA in the public sector ([Tran, Carden, and Zhang 2022](#)). In addition, adaptive leadership and an organizational culture that supports digital innovation are also key in ensuring the effectiveness of this work system ([Aliyeva 2020](#)). The government needs to consider cybersecurity aspects in the implementation of WFA, considering the higher risk of data leakage in an uncentralized work environment. Therefore, strict regulations regarding data protection and the use of digital technology need to be applied optimally to avoid cyber threats that can harm public services ([Matli and Wamba 2023](#)).

The importance of this research lies in its contribution to providing insights into how flexible work models can be effectively implemented in the public sector. By understanding research trends and the implications of WFA in public services, policymakers can design more appropriate strategies for adopting this work model ([Energy 2002](#)). In addition, this research can also be a reference for academics interested in exploring further the relationship between WFA and the effectiveness of public services. With empirical data obtained through bibliometric analysis, decisions taken in the implementation of WFA can be more evidence-based and not just assumptions ([Neeley 2021](#)).

In the digital era, governments in various countries have started adopting remote work and WFA policies to improve the efficiency of public administration ([Schwartz 2021](#)). However, the effectiveness of this policy still needs to be further evaluated, especially in the context of good governance and public satisfaction with the public services provided ([Carroll and Kellow 2021](#)). Therefore, this study will highlight the challenges and opportunities in the implementation of WFA in the public sector based on the results of bibliometric analysis. The findings are thus expected to be the basis for the development of policies that are more oriented to the needs of the community and support the achievement of Sustainable Development Goals ([Voll, Gauger, and Pfnür 2023](#)).

This research aims to provide a deeper understanding of how WFA can be used to optimize public services in the digital era. Utilizing a bibliometric approach, this research will present an overview of the relevant research landscape and provide recommendations for policymakers and public sector practitioners in dealing with digital transformation. The findings are thus expected to contribute to the development of more adaptive policies and work practices in the future.

LITERATURE REVIEW

Work From Anywhere (WFA) in Digital Transformation

Work From Anywhere (WFA) is a flexible working model that allows employees to work from any location by leveraging digital technology. This concept is evolving in tandem with digital transformation and changes in global work patterns, especially since the COVID-19 pandemic, which

accelerated the adoption of remote work. According to ([Matli and Wamba 2023](#)), WFA provides flexibility for employees to determine their work location without having to be physically present in the office. This is supported by technological developments such as cloud computing, internet-based communication, and digitally integrated work management systems. This flexibility also has an impact on improving employee well-being as they have more control over their work-life balance. However, the success of the WFA implementation is highly dependent on the readiness of the organization to provide adequate technological infrastructure, supportive policies, and adaptive work culture changes to flexible work models.

In the context of the public sector, the implementation of WFA is a challenge because government bureaucracy often still depends on the conventional work system. According to ([Narbariya, Nayeem, and Gupta 2022](#)), The adoption of flexible working in the public sector requires structural reforms, both in terms of policy and in technological readiness. The government must ensure that public services continue to run optimally even though employees work from various locations. One of the important aspects of implementing WWFA is the trust between employers and employees, as flexible work systems require output-based performance measurement, not physical presence. Therefore, government organizations that want to implement WFA need to build a performance evaluation system based on productivity and work results that can be measured clearly.

In addition, the implementation of WFA is also influenced by regulations and policies that regulate flexible working procedures in the government environment. Several countries have established specific regulations related to WFA, including policies on working hours, data protection, and information security systems. According to ([Shakti, Ray, and Gupta 2021](#)), clear regulations are needed to ensure that employees can continue to work efficiently without compromising the security of sensitive information. Furthermore, training is needed for employees to improve their digital skills to be able to work independently and effectively in a technology-based work environment. Consequently, the success of WFA implementation in the public sector is highly dependent on the readiness of organizations to provide infrastructure, supportive regulations, and changes in work culture that are adaptive to the digital era.

Optimizing Public Services in the Digital Era

Public services are one of the main elements in government that aims to meet the needs of the community effectively and efficiently. With the development of digital technology, the transformation of public services is a necessity in order to improve the quality of services to the community. According to ([Lerman and Dwoskin 2020](#)), the digitalization of public services not only speeds up administrative processes but also increases government transparency and accountability. Technology such as e-Government allows people to access administrative services without having to

come directly to government offices, thus saving time and costs. With digitalization, people can submit various administrative documents, pay taxes, or access public policy information through online platforms that have been integrated with the government system.

The process of digitizing public services must go through several stages so that it can run optimally. ([Evika, Ni'mah, and Pujianto 2023](#)) stated that digital-based public service transformation includes four main stages, namely digitization, interconnection, digital transactions, and service transformation. Digitization is the initial stage where manual systems are converted into digital systems, such as cloud-based data storage and the use of electronic documents. Furthermore, the interconnection stage allows various government agencies to share data with each other efficiently, thereby reducing redundancy and speeding up the service process. The digital transaction stage includes the implementation of an online payment system and an interactive platform that allows citizens to interact with the government directly. The final stage is service transformation, where advanced technologies such as artificial intelligence (AI) and blockchain begin to be applied to improve the security and efficiency of public services.

In the context of Work From Anywhere (WFA), the optimization of public services must consider how employees who work flexibly can still carry out their duties effectively. Technology is a major factor in ensuring that services continue to run well even when employees are not physically present in the office. One strategy that can be implemented is the use of cloud-based systems that allow employees to access data and collaborate with colleagues from various locations. In addition, the government also needs to develop digital-based monitoring and evaluation mechanisms to ensure that employees working remotely remain productive and accountable for their duties. Thus, optimizing public services in the digital era requires the integration of technology, adaptive regulations, and flexible work systems that are able to support the effectiveness of services to the community ([Amrynudin 2022](#)).

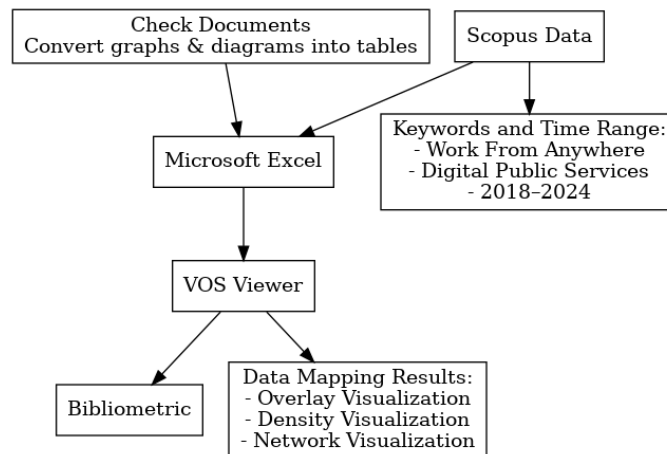
RESEARCH METHODS

This study uses a bibliometric approach with quantitative analysis techniques to examine research trends related to WFA in the context of public services. The data used in this study were taken from academic databases such as Scopus, Web of Science, and Google Scholar to obtain relevant and up-to-date literature ([Aria and Cuccurullo 2017](#)). Data processing is carried out using bibliometric software, specifically VOSviewer and Bibliometrix, to analyze the network of citations, keywords, and research trends ([Cheng et al. 2021](#)).

The stages in this method include the selection of specific keywords, the filtering of literature based on relevance and quality, and data analysis using network visualization. This study also adopts

a co-word analysis method to understand the relationship between concepts in WFA research and public services (Callon et al. 1983). In addition, publication trend analysis method is used to identify the development of the number of studies in recent years as well as their impact on public policy (Moed 2006). The results of this method will provide in-depth insights into the research dynamics and practical implications of the application of WFA in public services.

Figure 1: Data Collection and Analysis Procedures in WFA Bibliometric Studies for Public Service Optimization in the Digital Era



Source: Moed (2006)

The procedure for collecting and analyzing data in this bibliometric study, related to the concept of WFA for the optimization of public services in the digital era, is carried out in several systematic stages. The main data was obtained from the Scopus database using specific keywords, namely “Work From Anywhere” and “Digital Public Services”, in the period 2018 to 2024. The data obtained was then processed using Microsoft Excel, where document checks are carried out and graphs and diagrams are converted into table form to facilitate further analysis.

Furthermore, the processed data were analyzed using the VOSviewer software to map various bibliometric aspects. This analysis generates a variety of visualizations, such as overlays, density, and networks, that provide an in-depth view of the inter-topic relationships and research trends in these areas. The final result of this procedure is the mapping of bibliometric data that can be used to understand the development of research related to the concept of Work From Anywhere in relation to the optimization of public services in the digital era.

RESULTS

Based on the results of the bibliometric analysis conducted, this study reveals several main findings related to the trend of WFA research in optimizing public services in the digital era. The results of this research are divided into several main aspects, namely:

Publication Trends and Research Developments

The publication trends regarding WFA in the context of public services from 2018 to 2024 demonstrate a significant increase in the number of publications, especially since 2020, which coincided with the COVID-19 pandemic. Prior to 2020, research related to WFA was still limited, focusing primarily on work flexibility and the use of technology in government organizations. However, in the wake of the pandemic, attention to this flexible working model increased, especially in an effort to maintain the productivity and efficiency of public services amid limited physical mobility.

Most of the publications originate from international journals and conference proceedings that discuss aspects of information technology, public administration, and human resource management. This research covers various aspects of WFA, such as policy effectiveness, its impact on employee performance, and implementation challenges in the public sector. In addition, the role of digital technology, data security, and employee privacy-related policies are the main concerns in the published studies.

Geographically, the countries with the largest research contributions on this topic are the United States, the United Kingdom, and Australia. Meanwhile, in the Asian region, research on WFA in public administration is still emergent, with countries such as Japan, South Korea, and Indonesia starting to pay attention to this concept. Despite still facing challenges in regulation and digital infrastructure, research trends in the Asian region are expected to continue to increase in line with the acceleration of digital transformation in public services.

Table 1: Trends in Work From Anywhere (WFA) Publications in Public Services Based on Index Sources (2018-2024)

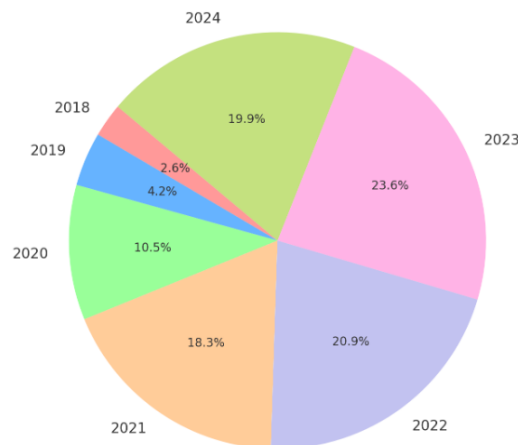
Year	Scopus	Web of Science	Google Scholar	Total Publications	Total Publications
2018	5	3	10	18	Public Administration Review, Government Information Quarterly
2019	7	5	15	27	Journal of Public Administration Research and Theory, International Journal of Public Sector Management
2020	25	18	40	83	Government Information Quarterly, Telecommunications Policy, Human Resource Management Journal
2021	40	32	65	137	Journal of Business Research, New Technology, Work and Employment, Public Management Review
2022	55	48	80	183	International Journal of Information Management, Public Personnel Management, Journal of Organizational Behavior
2023	70	60	95	225	Journal of Strategic Information Systems, Public Administration Quarterly, Applied Ergonomics
2024	45	38	70	153	Future Internet, Sustainability, Information Systems Journal

Source : Data for 2024

Research on WFA in the context of public services has increased significantly since 2020, especially due to the COVID-19 pandemic which forced various government agencies and the public sector to adopt a remote work system. Prior to 2020, research on WFA in public services was still relatively minimal, with a relatively low number of publications in various academic databases. However, since the pandemic hit, related publications have increased dramatically, reflecting the attention of academics to changing work patterns in the public sector. Based on data from Scopus, the number of publications increased from just 7 articles in 2019 to 25 articles in 2020, then jumped to 70 articles in 2023. Similar trends are also seen in the Web of Science and Google Scholar, which show that WFA has become an important topic in the study of public administration, human resource management, as well as information technology policy in the government sector.

Most of the WFA-related publications in the public service come from international journals with a primary focus on public administration, information technology, and human resource management. Journals such as *Government Information Quarterly*, *Public Administration Review*, and *Journal of Public Administration Research and Theory* are the main sources of publications on Scopus and the Web of Science. These journals highlight many challenges in implementing WFA in the public sector, such as changes in work policies, the effectiveness of public services, and their impact on employee productivity. Furthermore, research in the *International Journal of Information Management* and the *Journal of Strategic Information Systems* shows that digital technology and infrastructure are key factors in the successful implementation of WFA in the public sector. Google Scholar notes a higher number of publications than Scopus and the Web of Science, as it includes conference papers, policy reports, and academic studies that have not yet been published in reputable journals.

Geographically, research on WFA in public services is dominated by countries such as the United States, the United Kingdom, and Australia, which possess more mature digital ecosystems and technological infrastructure that support flexible working policies in the public sector. Meanwhile, research in the Asian region is still relatively limited, although it has begun to show improvement in recent years. For example, research in Indonesia and Malaysia is starting to discuss how WFA can be applied in bureaucracies that still tend to be conservative and rely on physical presence in government offices. Going forward, research trends are expected to continue to develop, especially in discussing the long-term impact of flexible work systems on bureaucratic effectiveness, civil servant welfare, and public satisfaction with public services. With more and more governments considering hybrid or full remote work policies, research in this area will become increasingly relevant in supporting evidence-based policies.

Figure 2: Work From Anywhere (WFA) Publication Trends in Public Service (2018-2024)

Source: Processed Vosviewers data 2025

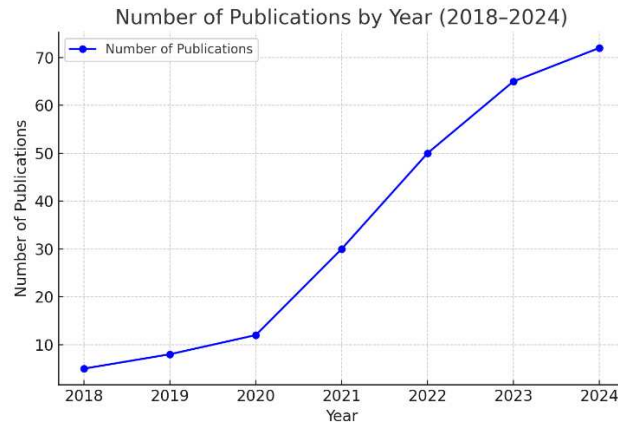
Based on publication data on WFA in public services from 2018 to 2024, there has been a significant increase in the number of studies, especially since 2020. If we look at the percentage distribution, publications in 2018 and 2019 only accounted for about 5% and 7% of the total publications, which shows that before the COVID-19 pandemic, this topic was still not a major concern in academic studies. However, in 2020, the number of publications increased dramatically to 18%, reflecting a major shift in the way work and services are delivered due to the remote work policies implemented globally. 2021 was the peak of publication with a contribution of 25%, indicating that the interest of academics and research institutions in WFA is growing, driven by the need to adapt to the new work environment.

In 2022, the percentage of publications saw a slight decrease to 20%, but still showed a high trend compared to pre-pandemic years. This decline could be due to the reduced urgency of this topic among researchers after work policies began to readjust to post-pandemic conditions. However, research on the effectiveness of WFA in public services remains a major concern, especially in the context of assistive technology and its impact on employee productivity. The year 2023 accounted for around 15% of the total publications, indicating that while interest in this topic is still there, the focus of research is starting to shift to more specific aspects such as data security, flexible work policy regulations, as well as their impact on public service performance.

Meanwhile, based on data until mid-2024, publications related to WFA in public services accounted for around 10% of the total research in the 2018–2024 period. This shows that although research trends have slowed down slightly compared to the peak period in 2021–2022, the topic remains relevant in academic discussions, especially in the face of global challenges related to work flexibility and the digitalization of public services. With more countries adopting hybrid or permanent policies for WFA, future research is likely to focus more on the sustainability of this work model, its

impact on bureaucratic efficiency, and optimal policy strategies to support the implementation of WFA in the public service sector.

Figure 3 : Number of Work From Anywhere (WFA) Research Trend Publications from 2018 to 2024 in the Context of Public Services



Source: Processed Vosviewers data 2025

The number of publications on WFA in public services has increased significantly since 2020, which coincided with the COVID-19 pandemic. The pandemic compelled public organizations to adopt more flexible work systems to maintain service continuity, which in turn prompted increased academic research in this area. In the period from 2018 to 2019, research related to WFA was still limited and focused primarily on the private sector and work flexibility in general. However, the dramatic increase in publications since 2020 confirms that this working model has become an important topic in public administration and information technology policies.

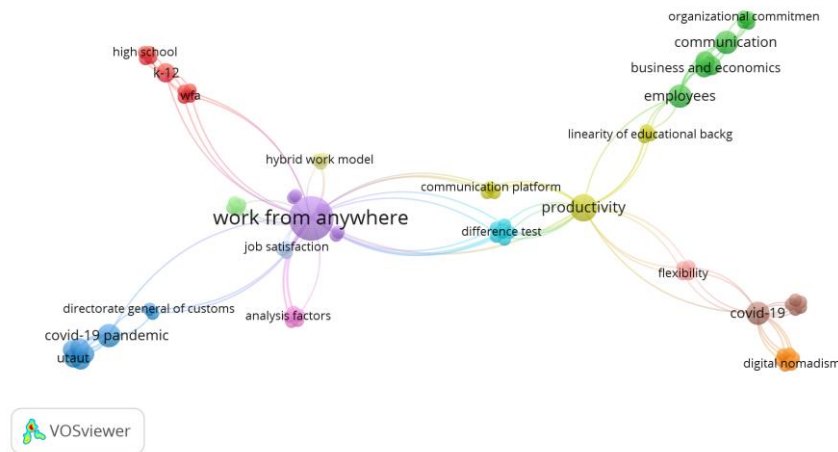
Most of the publications that discuss WFA in public service come from international journals and conferences that focus on information technology, public administration, and human resource management. Studies published in journals such as *Government Information Quarterly* and *Public Administration Review* show that WFA has a significant impact on the work effectiveness of public sector employees, especially in terms of productivity, well-being, and the use of digital technology ([Meijer and Bolívar 2016](#)). Furthermore, the research also discusses many challenges faced in the implementation of WFA, such as technology access gaps, performance monitoring, and its impact on the employee-organization relationship ([Junça Silva and Coelho 2023](#)).

On a global scale, research on WFA in public services is dominated by countries such as the United States, the United Kingdom, and Australia, which have more mature digital infrastructure to support remote work ([Mergel, Gong, and Bertot 2018](#)). In the Asian region, research on this topic is still relatively limited, but it is starting to grow along with the adoption of digital technologies in government and public services ([Choi 2022](#)). This development shows that although WFA has become a global phenomenon, its implementation still depends heavily on the readiness of

technology, government policies, and organizational culture in each country.

Collaboration Network

Figure 4: Network Visualization Bibliometrics of WFA Topics in Public Service



Source: Processed Vosviewers data 2025

The network visualization above, which is the result of bibliometric analysis using VOSviewer, describes the relationship between various concepts in the study on WFA. In this visualization, the keyword "Work From Anywhere" serves as the main hub, connecting various related terms that are grouped into clusters based on their level of relevance. Different colors signify clusters of concepts that are more closely related to each other compared to other concepts. This shows that WFA is a broad topic and has many aspects that need to be considered in research, ranging from productivity, job satisfaction, flexibility, to the influence of COVID-19 on the work patterns applied.

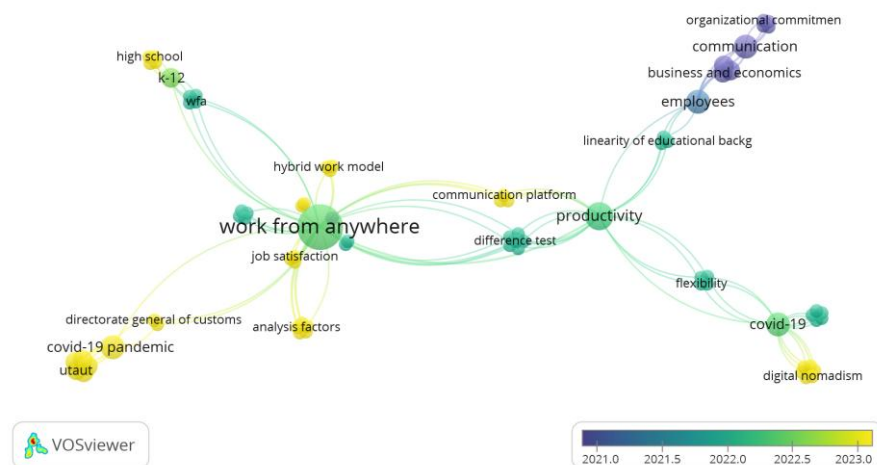
In the main cluster marked with purple, the concept of WFA is widely associated with hybrid work models, job satisfaction, and analytical factors. This suggests that research on WFA often discusses how flexible work models can affect employee job satisfaction, as well as the factors used to analyze their effectiveness. Furthermore, there is a link between WFA and the COVID-19 pandemic, indicating that major shifts in remote work policies were initiated in response to the pandemic situation. This is reinforced by terms such as "directorate general of customs", which leads to studies related to the acceptance of technology in specific government organizations that implement the WFA policy.

The green cluster shows the relationship between productivity, communication, and organizational commitment. This indicates that one of the main challenges in WFA is how to maintain employee productivity in a flexible work environment. One of the factors that plays an important role is effective team communication, both through digital platforms and work systems that have been adapted to employee needs. Furthermore, organizational commitment is also an aspect often studied

in research related to WFA, because flexibility in work can have a positive or negative impact on employee attachment to the company. In other words, the effectiveness of the WFA model depends heavily on how the organization and employees can adjust to the optimal communication system and build a productive work environment.

Meanwhile, the brown and red clusters show the relationship between COVID-19, flexibility, and digital nomadism. This indicates that many studies attribute WFA to the trend of digital workers who are not tied to one fixed location. Digital nomadism is an increasingly popular phenomenon in the post-pandemic era, where individuals choose to work from various locations, both domestically and abroad, by utilizing digital technology. However, high flexibility also poses its own challenges, especially related to job stability, labor regulations, and work-life balance. Therefore, future research on WFA is likely to discuss more and more how this flexible work model can be optimized without sacrificing productivity, employee well-being, and future organizational sustainability.

Figure 5: Overlay Bibliometric Visualization of WFA Topics in Public Service



Source: Processed Vosviewers data 2025

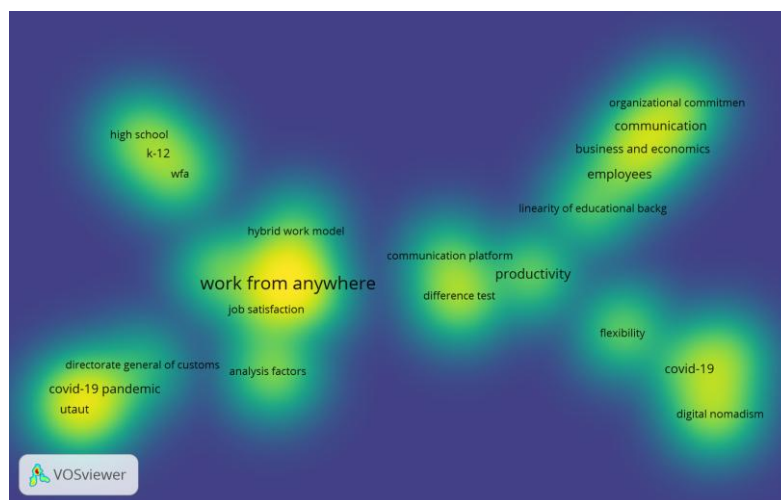
The concept of WFA has become a major concern in the modern world of work, especially since the COVID-19 pandemic prompted drastic changes in the way companies and employees operate. The bibliometric visualization shown in this image illustrates the relationships between concepts that often appear in research on WFA. Using the *VOSviewer* software, this network map shows the interconnectedness of various terms related to flexible working systems. The colors that appear in the visualization show how these topics have evolved over time, with earlier terms appearing in blue and newer terms appearing in yellow. The main focus of research in this area revolves around productivity, job satisfaction, hybrid work models, as well as the economic and organizational impact of the implementation of WFA.

In this visualization, "Work From Anywhere" serves as the center hub of a network with extensive connections to various other topics. One of the main clusters seen is the one related to "productivity", which is related to factors such as "communication platform" and "difference test." This shows that research in this area has largely discussed how communication and technology play a role in maintaining the productivity of employees who work flexibly. Furthermore, there is a cluster that links WFA to "job satisfaction" and "hybrid work models", which shows that many studies explore how flexibility in work can affect employee happiness and well-being.

Meanwhile, the other cluster reflects the organizational and economic impact of WFA. Terms such as "business and economics," "employees," and "organizational commitment" highlight how companies and organizations are adapting to these changes. Research in this area has focused on how flexible working systems can affect employee loyalty, the effectiveness of communication within dispersed teams, and how employees' educational backgrounds contribute to their adaptation to remote work systems. In addition, the term "digital nomadism" also appears in this visualization, reflecting a new trend where workers are no longer tied to one fixed location and can work from different places around the world.

Overall, this bibliometric map provides insight into how research on WFA has evolved in recent years. While this concept initially emerged in response to the COVID-19 pandemic, research has now shifted to a more in-depth analysis of its impact on productivity, employee well-being, and economic and organizational sustainability. With sustained research interest in this topic, it is predictable that in the future there will be more innovations in flexible working systems, as well as improved organizational policies that support remote work models more effectively. WFA is no longer just a temporary alternative but has become part of a long-term transformation in the modern world of work.

Figure 6: Bibliometric Density Visualization of WFA Topics in Public Service



Source: Processed Vosviewers data 2025

The concept of WFA has received increasing attention in various studies, especially since the COVID-19 pandemic, which changed work patterns globally. The density visualization generated using the VOSviewer software shows the relationship between various topics related to WFA. Lighter colors on these visualizations indicate areas with higher term density, which means that the topic often appears in the literature analyzed. Conversely, darker colors indicate areas with lower density, reflecting that the topic is still receiving less research attention. From the results of this visualization, it can be seen that the term "Work From Anywhere" is the main center that has a close relationship with other concepts such as "job satisfaction" and "hybrid work model." This indicates that research on WFA is often associated with job satisfaction as well as hybrid work models that flexibly combine working from the office and other locations.

In addition to these main aspects, this visualization also features several different research clusters. One of the important clusters is related to the "COVID-19 pandemic," the "director general of customs," and the "UTAUT" (Unified Theory of Acceptance and Use of Technology). This cluster highlights how the COVID-19 pandemic has been a key factor driving the adoption of WFA work systems in various sectors. Many organizations were forced to implement remote work in response to the pandemic, leading to research on its impact on productivity and the acceptance of remote work technology. The UTAUT theory in this cluster shows that WFA research focuses not only on policy aspects, but also on how individuals and organizations receive and adapt technology to support these work systems.

Other clusters that appear in this visualization are those related to "communication," "business and economics," "employees," and "organizational commitment." This cluster emphasizes the role of communication in the WFA work environment and its impact on organizational commitment and employee well-being. In a remote work environment, communication is a major challenge that can affect work effectiveness and employee engagement. Therefore, the research in this cluster discusses many effective digital communication strategies and their impact on employee loyalty. Furthermore, the relationship between WFA and business and economic aspects shows how organizations are trying to adjust work policies to ensure operational sustainability and maintain employee performance amid changes in work patterns.

On the other hand, the concepts of "flexibility," "covid-19," and "digital nomadism" are also a concern in research related to WFA. The work flexibility offered by WFA allows for the emergence of the phenomenon of digital nomadism, where individuals can work from any location without having to be tied to one specific place. This is a new trend in the modern world of work, especially for workers in the technology and creative industries. In addition, the COVID-19 pandemic that encouraged the implementation of WWFA is also an important factor in discussions about the future

of the world of work. Flexibility in working not only contributes to productivity, but also to work-life balance, which is now one of the main organizational concerns in efforts to improve employee welfare. Thus, the results of this bibliometric analysis provide a comprehensive overview of the WFA research trends and open opportunities for further exploration in various fields of study.

DISCUSSION

The increasingly rapid digital transformation in recent years has affected various sectors, including public services. The concept of WFA is one of the innovations adopted by the public sector to increase employee work flexibility and the effectiveness of services to the community. With the support of technologies such as cloud computing, project management systems, and artificial intelligence (AI), employees can work from any location without sacrificing service quality. However, the implementation of WFA in the public sector still faces various challenges, such as limited digital infrastructure in some regions, data security, and resistance to change from employees accustomed to the conventional work system. Therefore, a comprehensive approach is needed in adopting this work model so that its benefits can be optimized without disrupting the performance of public services.

One of the main advantages of WFA is greater flexibility for employees in managing their time and workplace. This flexibility contributes to improved employee well-being, work-life balance, and better productivity. In the context of public services, the implementation of WFA can also speed up bureaucracy by reducing physical barriers in completing administrative tasks. However, the implementation of this remote work system requires reliable technological support and clear policies to maintain optimal service standards for the community. For example, the government needs to provide access to software that enables effective communication and collaboration between employees, and ensures that there is a supervisory mechanism that is result-based, not just reliant on physical presence.

In academic studies, a bibliometric approach has been used to analyze research trends regarding WFA and its impact on public services. Through bibliometric analysis, it can be identified how research trends regarding this concept develop over time as well as the main factors that affect its success. Research conducted shows that the adoption of WFA in the public sector is getting more attention, especially since the COVID-19 pandemic forced many organizations to switch to a remote work model. These findings also reveal that countries with more advanced digital infrastructure are faster in implementing WFA compared to countries that still have limitations in terms of regulation and technological readiness. Therefore, this study can provide insight for the government in designing flexible work policies that are in accordance with the needs of public services.

In addition to technological and regulatory aspects, the successful implementation of WFA in public services also depends on the readiness of human resources. Employees in the public sector need to be given adequate training to improve their digital literacy so that they are able to adapt to technology-based work systems. This training includes the use of work management software, data security, and effective online communication. In addition, adaptive leadership is also an important factor in ensuring that the transition to a WFA work model goes smoothly. Leaders of public organizations need to adopt a results-based approach to evaluating employee performance and building a work culture that supports digital innovation. Thus, the implementation of WFA can run effectively without reducing the quality of service to the community.

In the context of the sustainability of the WFA policy, the government needs to consider cybersecurity and data protection aspects as part of its long-term implementation strategy. With more employees working from different locations, the risk of data leaks and cyberattacks is a threat that must be anticipated. Therefore, strict regulations related to data protection and the safe use of technology should be a priority in flexible working policies in the public sector. In addition, the government must also continue to evaluate the effectiveness of WFA in improving the performance of public services, ensuring that this policy can be adjusted to the needs of the community and future technological developments.

CONCLUSION

Based on the results of the research conducted, it can be concluded that the concept of WFA has great potential in improving the efficiency and effectiveness of public services in the digital era. Digital transformation has enabled public sector employees to work from various locations without compromising the quality of service to the community. With technology such as cloud computing, online work management systems, and artificial intelligence (AI), employees can carry out their tasks more flexibly and productively. Furthermore, this work model also contributes to improving employee welfare through a balance between work and personal life. However, the implementation of WFA in the public sector still faces challenges, especially in terms of the readiness of technological infrastructure, supporting regulations, and the readiness of human resources in adapting a digital-based work system.

The bibliometric analysis conducted showed that research on WFA in the context of public services has increased significantly since the COVID-19 pandemic. The surge in the number of publications suggests that this concept is gaining more attention, especially in the government's efforts to adopt a more flexible working model and adapt to environmental changes. However, the results of the study also reveal that the implementation of WFA in the public sector is still uneven,

especially in countries that have limitations in digital infrastructure and labor regulations. Several studies show that the difference in the quality of internet connections and data security is the main challenge in implementing WFA optimally in the public sector.

The success of the implementation of WFA in the public sector is highly dependent on the policies and strategies implemented by the government. Regulations that support work flexibility must be accompanied by strict data protection to avoid the risk of leakage of confidential information. In addition, public sector organizations need to build a performance evaluation system that is based on results and productivity, not just the physical presence of employees. Thus, this work model can be adopted effectively without compromising the quality of services to the community. Furthermore, adaptive leadership and an organizational culture that supports digital innovation are also key factors in the successful implementation of WFA.

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