Factors Influencing Employee Productivity in Work From Anywhere: A Systematic Literature Review (SLR)

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Abstract. Many companies have begun to adopt both ways of working simultaneously or commonly referred to as Work From Anywhere (WFA); it is necessary to model business processes used to evaluate and improve the WFA work system in the future. In modelling business processes, it is necessary to carry out a needs analysis, one of which is to find out what factors affect employee productivity when doing their work. Several research journals related to WFA work productivity factors are still scattered in various journal databases, so it is necessary to unify them from various journals. Therefore, it is necessary to research the grouping of factors and theories that affect the productivity of WFA employees in the Systematic Literature Review (SLR) method. Before grouping, the search criteria and journal search process are determined first. The first search is to identify based on keywords, year of publication, and journal quality. Then continued, the use of Cohen's Kappa method for selection based on the field of discussion and language, abstracts, and contents. In improving the reliability of the library screening results, each selection is made twice (or more) and calculates the value of Cohen's Kappa. The SLR method makes the usually subjective literature study more objective to reduce the researcher's bias. The results obtained were a total of 17 screening journals with a total of 11 factors, namely environment, time efficiency, psychology, health, cost efficiency, employee personality, adequate technology, gender, geographical flexibility, salary, and communication.

Keywords: factors influencing, SLR, WFA, WFH, work from anywhere, work productivity

1. Introduction

Many companies, both state and private, in Indonesia have adopted the Work From Home (WFH) concept to enable employees to continue working efficiently by utilizing technology [1]. Utilizing technology such as Zoom, Google Meet, WhatsApp, and other applications allows employees to connect online without needing physical contact [2].

The WFH work system is a form of flexible working which helps employees balance work obligations with non-work demands [3]. However, with technological advances and the availability of adequate internet connections, the concept of Work From Anywhere (WFA) has emerged [4]. The WFA work system allows employees to regularly work outside the usual workplace, utilizing Information and Communications Technology (ICT) [5]. The WFA concept is more flexible than WFH because work can be done anywhere, not limited to the home environment.
Some employees want to return to work from the office (WFO), while others prefer to continue WFA. The company's decision to establish a new status quo in the post-pandemic era must be mutually beneficial for employers and employees, whether in the form of office work, remote work, or a combination of both [6].

Productivity is critical to company success [7]. Therefore, in modelling business processes to evaluate and improve WFA work systems in the future, it is necessary to pay attention to the factors that affect employee productivity [8]. Research shows that transitioning from WFH to WFA can increase employee productivity [9].

However, many separate studies on the factors that affect work productivity in the context of WFA are spread across various journal databases. Therefore, it is necessary to unify and analyze these studies to understand the factors contributing to employee work productivity in the WFA work system.

Previous research by Akbari (2019) [10] proposed using the Systematic Literature Review (SLR) method to identify factors that affect work productivity in any work context. This approach will provide a structured and comprehensive analysis of highly rated journal articles relevant to this topic. By doing SLR, researchers can provide solutions based on existing evidence, identify differences and exciting things, and fill knowledge gaps from various perspectives.

This study aims to identify the factors that affect employee productivity in the WFA work system. The SLR method will primarily collect, review, and analyze relevant, highly rated journal articles. By pooling knowledge from previous studies, the researcher hopes to comprehensively understand the factors contributing to employee productivity in the context of WFA.

This research will provide an essential contribution to practitioners and academics in understanding the factors that need to be considered and appropriately managed to increase work productivity in the WFA work system. The results of this study will also provide direction for further research in deepening understanding of the influence of certain factors on work productivity in the context of WFA.

2. Method

2.1 Journal Collection and Selection

This research involves collecting journals that will be selected using the ScienceDirect and EBSCO journal databases. These two databases were selected based on their excellent and credible reputation in the research world. Both provide a filter feature that allows the selection of journals based on criteria specified in the research phase, as shown in Fig. 1.

The initial search used "Factors AND (Work From Anywhere OR Work From Home) AND Work Productivity." Next, a comparison is made by searching using each keyword separately. In the first search, journal selection is carried out more quickly, but the number of results obtained on the topic is less, and the discussion needs to be more detailed and directly relevant. Meanwhile, journal selection becomes more difficult in the second search because it is necessary to group journals based on search keywords. Still, the results are more relevant and directly related to the topic.

In the first search, journals are selected based on keywords, year of publication and quality, field of discussion, and language. Cohen's Kappa method is used to make selections based on the journal's title, abstract, and content. The journal search was carried out by considering several relevant research keywords. These keywords are determined based on essential points in the research discussion and references from...
previous studies. The keywords used in this research are work from anywhere, working anywhere, work from home, and work productivity.

The next step involves selecting journals based on the year of publication by selecting journals published since 2019 or later. This was adjusted to the emergence of the Covid-19 pandemic in December 2019. The criteria for the quality of the journal set were at least indexed in Scopus. After several selections of reference journals have been made, these journals are grouped based on several areas of discussion related to the research to be carried out. In the ScienceDirect database, the selected discussion areas are Social Sciences, Psychology, and Art and Humanities. In contrast, the selected discussion areas in the EBSCO database are Sociology & Social Work, Psychology, and Humanities. The journals found in these two databases are in English.

Total of 137 journals were collected, with 97 journals from the ScienceDirect database and 40 from the EBSCO database. After ensuring that the articles found to match the keywords used, the selection can proceed to the next stage.

2.2 Journal Selection and Cohen’s Kappa

The researcher selects the title by considering the criteria contained in the title. The criteria considered include keywords such as "work from anywhere," "working anywhere," "work from home," "work productivity," "WFA," "WFH," "working from home," "working from anywhere," "factor productivity," and "productivity." This study invited other raters for their opinion about the selected paper to get opinions about the selected titles. Then calculates Cohen's Kappa value to measure their reliability from selected journal. Cohen's Kappa is a measure used to check the agreement of results between two raters. The closer to the value of 1, the more similarities in results between the first rater and the second rater. To overcome differences of opinion between the two raters, two stages of selection were carried out to discuss the differences found. Cohen's Kappa is a metric used to measure the level of agreement between two observers or raters.

The Cohen’s Kappa (K) formula is defined as in Equation (1), where $P_o$ represents the observed agreement percentage and $P_e$ represents the expected agreement percentage by chance. Cohen’s Kappa value ranges from -1 to 1, with 1 indicating perfect agreement, 0 indicating the same level of agreement as expected by chance, and negative values indicating worse disagreement than expected by chance. This metric is
commonly employed in various contexts such as medical research, product evaluations, or inter-rater assessments in research projects.

\[ K = \frac{P_0 - P_e}{1 - P_e} \]  

(1)

The final result of the two stages of title selection was the discovery of a Cohen's Kappa value of 0.88, with the number of journals selected after selection is 70 journals. According to Stemler [11], Cohen's Kappa value can be considered reliable if the value is above 0.6. Therefore, title selection as shown in Table 1.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>An Investigation into Anywhere Working as a System for Accelerating The Transition of Ho Chi Minh City into a more Livable City [10]</td>
<td>There is a word “anywhere working”.</td>
</tr>
<tr>
<td>3.</td>
<td>Spatio-Temporal Variations of Traffic Congestion under Work From Home (WFH) Arrangements: Lessons Learned from COVID-19 [12]</td>
<td>There is a word “work from home atau WFH”.</td>
</tr>
<tr>
<td>5.</td>
<td>Social Intelligence, Employee Work Engagement and Environmental Changes [14]</td>
<td>Does not meet the criteria</td>
</tr>
</tbody>
</table>

After the selection stage based on the title, 70 journals matched the title criteria. The next step is to select based on the abstract by reading the abstracts of these journals and looking for keywords appropriate to the topic and problem formulation raised, such as WFA, WFH, and work productivity. This stage was carried out twice by involving the two researchers and calculating Cohen's Kappa value from their discussion. The final result of the selection based on the abstract was the discovery of 44 journals that met the criteria, with a Cohen's Kappa value of 0.94 as shown in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Selected Abstract</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>From Forced Working-From-Home to Voluntary Working-From-Anywhere: Two Revolutions in Telework [15]</td>
<td>“The COVID-19 outbreak has admittedly caused interruptions to production, transportation, and mobility, therefore, having a significant impact on the global supply and demand chain’s well-functioning...”.</td>
<td>The journal analyzes various aspects of productivity. Analyzed various aspects of productivity, such as developer job satisfaction and wellbeing, activity, communication, and collaboration, efficiency, and flows based on commit data archives, calendar invites, Slack communications, internal WFH experience reports, and 30 interviews.</td>
</tr>
</tbody>
</table>
The final stage in SLR selection is selection based on journal content. At this stage, the researcher reads and analyzes whether the journals discuss productivity in WFH or WFA work that can be done remotely. Selection is made by reading thoroughly and looking at the research models used in these journals as shown in Table 3. This selection stage was repeated by calculating Cohen's Kappa value from the two selections.

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Topic</th>
<th>Reason 1</th>
<th>Reason 2</th>
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<tbody>
<tr>
<td>1.</td>
<td>Assessing Preference and Potential for Working From Anywhere: A Spatial Index for Ireland [4]</td>
<td>WFA is work productivity.</td>
<td>The journal analyzes the perspective of employees working remotely.</td>
<td>Lots of potential to work from anywhere, and a difference in results.</td>
</tr>
<tr>
<td>2.</td>
<td>“Alexa, Let’s Talk about My Productivity”: The Impact of Digital Assistants on Work Productivity [13]</td>
<td>Work productivity on jobs done digitally.</td>
<td>This journal aims to explore the factors that can cause individuals to be satisfied with the use of technology</td>
<td>This journal aims to explore the factors that influence satisfaction with productivity and job engagement.</td>
</tr>
</tbody>
</table>

The result of the selection based on content was the discovery of 44 journals that matched the topic and formulation of the problem raised. The Cohen's Kappa value calculated at this stage is 0.7. In this selection, 24 journals were eliminated based on abstracts.

3. Results and Discussion

In research conducted using the Systematic Literature Review method, 24 journals were selected from the ScienceDirect and EBSCO databases related to employee work productivity factors using WFA (Working From Anywhere).

3.1 Description of Selected Journals

After coding analysis based on predetermined criteria, 17 journals met these criteria. Of the 17 journals [4],[9],[10],[13],[16],[17],[18],[19],[20],[21],[22],[23],[24],[25],[26],[27],[28], there are 51 factors that affect work productivity identified. These journals are spread across various research fields, with the Business & Management journal area having the most significant percentage of 47%, followed by Social Sciences at 23% percentage, Information Systems at 12% percentage, and other journal areas at 18% percentage.

Furthermore, an analysis is carried out on the year of publication of these journals. It can be seen that the number of journals discussing WFA work productivity increased from 2019 to 2022. In 2019 there were two journals; in 2020, there was one
journal; in 2021, there were three journals; and in 2022, there was a significant increase with 11 journals discussing this topic. The existence of the concepts of WFH (Work From Home) and WFA, which are widely discussed in these journals, is indicated as an effect of the Covid-19 pandemic. Fourteen journals discuss Covid-19, while three other journals do not. This shows that the Covid-19 pandemic influenced the WFA concept.

In previous research, the methods used in solving research problems varied, including quantitative, qualitative methods, and literature review. However, quantitative methods dominate with 91% of the total journals analyzed. Qualitative methods are used in 6% of journals, while literature review is used in 3%. Therefore, the literature review method still needs to be improved, and further research needs to utilize this method to enrich information sources.

Based on the distribution of journals in the selected literature, it is known that the most widely discussed context is IT (Information Technology), with a percentage of 65%. This indicates that the working concepts of WFH and WFA are widely applied in the IT industry. Therefore, the topic of work productivity with the WFA approach is interesting to study because there are many factors that influence it and there are gaps between the journals discussed previously.

3.2 Analysis of Factors Affecting Work Productivity

Based on the coding analysis of the 17 selected journals [17], the factors that affect employee work productivity in the remote working model (Work From Anywhere/WFA) have been identified. These factors are then grouped into 11 significant factors, further divided into 25 sub-factors that affect the productivity of WFA employees. These significant factors include environment, time efficiency, psychology, health, cost efficiency, employee personality, adequate technology, gender, geographical flexibility, salary, and communication.

From a total of 25 identified sub-factors, 38 were known to have a positive effect on WFA work productivity, 4 had a negative effect, and 9 had a neutral effect as shown in Fig 2. Sub-factors are said to have a positive effect if employees positively impact and increase productivity.

![Figure 2. Factors that influence Work Productivity WFA](image)
Conversely, a subfactor is said to have a negative effect if it harms employees and reduces productivity. Sub-factors with a neutral effect can affect the increase or decrease in productivity depending on changes in these sub-factors. For example, the salary factor has a sub-factor of the salary amount that can positively or negatively affect work productivity. In some journals, research shows that a decrease in salary harms employee motivation to maintain productivity [27]. In contrast, other journals indicate that a salary increase has an impact on reducing employee living costs and contributing to higher productivity [20].

In this study, environmental factors are the main focus, with seven journals that discuss them, followed by psychological factors in six journals. This shows the high interest of researchers in studying the influence of environmental and psychological factors on employee productivity in the WFA model. Understanding these factors can provide valuable insights into developing strategies and policies to increase the work productivity of WFA employees. The results of this study also justify the use of the literature review method in subsequent case studies because there are still a few journals that use this method so that it can enrich research information sources.

This study identifies the significant factors that affect employee productivity in the WFA model. These factors have been grouped into subfactors that play a significant role in increasing or decreasing productivity. Further analysis of the factors that affect employee productivity in the WFA model can provide a deeper understanding of the relationship between these factors and productivity. For example, further research can be conducted to explore the impact of the living environment, family environment, and office environment on work productivity. Likewise, with psychological factors, research can focus on the influence of employees’ psychological and mental well-being and stress levels on productivity.

In addition, health factors can also be exciting research subjects, such as the effect of better health, increased sleep hours, and reduced sick days on the productivity of WFA employees. Time efficiency is also a significant factor, and further research could investigate the effect of reducing congestion, saving time, and reducing travel time on productivity.

The cost efficiency factor also has attractive research potential, including savings in employee living costs, employee travel costs, and company operating costs. In addition, employee personality, adequate technology, gender, geographical flexibility, salary, and communication can also be relevant research subjects to understand their impact on the work productivity of WFA employees.

Further studies may involve quantitative and qualitative approaches to deepen understanding of the relationship between these factors and work productivity. Survey, interview, observation, or secondary data collection methods can be used to collect relevant information. Through comprehensive follow-up research, a more effective strategy can be developed to increase the work productivity of WFA employees by considering the factors that influence it. This study’s results also guide organizations and managers to create a work environment that supports and maximizes the productivity of WFA employees.

3.3 Gaps in Literature

Based on the study of the literature review, it is suggest that there are factors that have been studied quite a lot, namely environmental factors, time efficiency, psychology, health, cost efficiency, employee personality, adequate technology, gender, geographic flexibility, salary, and communication.
There are several other factors that tend to have a negative effect, namely employee personality factors and communication factors. On the employee personality factor, the work style adaptation sub-factor, employees who experience a decrease in productivity are caused by ignorance of work style. [25]. Meanwhile, on the communication factor, the communication between employees sub-factor, poor communication between employees causes a decrease in productivity. [21].

There are also several factors that are neutral, namely psychological factors, there are psychological and mental well-being sub-factors and stress levels, health factors, there are sick day reduction sub-factors, cost efficiency factors, there are sub-factors for saving company operational costs. The psychological and mental health sub-factors affect and maintain the quality of work productivity. Meanwhile, high stress levels will reduce productivity [4] and vice versa [10]. In the sick days reduction sub-factor, protecting employees from illness can optimize office space without decreasing productivity. In the sub-factor for saving company operational costs, the company saves money by optimizing office space and reducing maintenance costs, without decreasing productivity [21].

There are also factors that have inconsistent findings, namely health, gender and salary factors. On the health factor, the reduction of sick days sub-factor had a neutral and positive impact on productivity. Increased employee productivity by 13 percent, partly due to reduced rest time and sick days [9]. Meanwhile, protecting employees from illness can optimize office space without decreasing productivity. Without this decline, it can be interpreted as constant or neutral. In the gender factor, the male or female sub-factor who is already married or not is influenced by their gender which is inconsistent with productivity. Men seem to enjoy WFH, experience less stress, and feel more capable of coping with adversity, while women report lower satisfaction with family life as well as lower work productivity [21]. Whereas in another study the increase in productivity was found to be more prominent among female respondents (27%) than among their male counterparts (12%) [10]. In the salary factor and sub-factor, the greater the amount of salary, the greater the increase or decrease in work productivity. The amount of salary has experienced a decrease in salary and an increase in salary on the effect of productivity. A reduction in salary has an effect on employee motivation to maintain their job position [27], whereas in other journals discussing salary increases has an impact on increasing work productivity [20].

The factors that can still be explored further are neutral factors on psychological factors, there are psychological and mental well-being sub-factors and stress levels, health factors, there are sick day reduction sub-factors, cost efficiency factors, there are sub-factors on saving company operational costs, which still need to be discussed further. The impact of these factors. Then on the factors that have inconsistent findings, namely the health factor, the reduction in sick days sub-factor, the gender sub-factor, men or women who are married or not, and the salary sub-factor, the amount of salary needs to be explored further because there are differences in the effect on productivity, so further analysis is needed.

4. Conclusion
The conclusions obtained from the complete screening of 17 selected journals get several 11 factors that affect WFA work productivity: environment, time efficiency, psychology, health, cost efficiency, employee personality, adequate technology, gender, geographical flexibility, salary, and communication. In 11 factors divided into 25 sub-factors: digital platforms, technology infrastructure availability, congestion reduction, time saving, travel time reduction, communication between employees,
workplace flexibility, better health, snore sleep hours, sick days reduction, psychological mental well-being of employees, stress level, cost saving for employees, travel cost saving, company operational cost saving, openness, personality value, work style adaptation, work discipline, living, family, company, marital status, age, and the amount of salary. Subsequent research can expand the scope of journal sources (databases) other than those selected in this study to enrich the results and broaden knowledge based on the topics raised. In addition, salary and gender factors need further analysis because there are differences in contrast analysis between researchers on WFA work productivity.

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References
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