7

The Impact of Teleworking and Home Environment on Work Productivity

Abdul Fidayan

Faculty of Economics and Business, Sangga Buana University
Email: afidayan3@gmail.com

Mutia Tri Satya

Faculty of Economics and Business, Sekolah Tinggi Ilmu Ekonomi (STIE) Ekuitas
Email: mutia.satya@gmail.com

ABSTRACT

Purpose – This paper aims to examine the effects of teleworking, home environment, and distractions on work productivity, with a focus on understanding how these factors influence productivity in the context of remote work. **Methodology/approach –** A survey was conducted with 200 respondents, and interviews were carried out to collect both quantitative and qualitative data, providing comprehensive insights into how teleworking and home environment quality impact productivity, particularly in relation to distractions. **Findings –** The study found that teleworking significantly enhances productivity, with a well-organized home environment being the most influential factor. Interestingly, minor distractions can improve productivity by providing necessary mental breaks, while excessive digital distractions hinder work performance. **Novelty/value –** As remote work becomes more widespread, this research contributes to the understanding of the interaction between teleworking, home environment, and distractions, offering valuable insights for businesses seeking to optimize employee productivity in a teleworking setup.

Keywords: Teleworking, Productivity, Home Environment, Distractions, Remote Work

INTRODUCTION

The COVID-19 pandemic significantly transformed work-life dynamics globally, with teleworking becoming the primary method of work for millions (Sandoval-Reyes et al., 2021). Governments worldwide enforced lockdowns and physical interaction restrictions to curb the virus spread, prompting organizations to adopt full-time teleworking (Vyas & Butakhieo, 2021). This shift not only altered professional environments but also disrupted personal life patterns, with varying effects depending on

individual and organizational readiness. Teleworking, now a key component of the "new normal," is expected to persist beyond the pandemic (Hayes et al., 2021).

Teleworking offers several benefits, such as improved work-life balance, reduced commuting time, and potential productivity gains (Sewell & Taskin, 2015; Bosua et al., 2013). However, these advantages come with challenges. Blurred boundaries between home and work can lead to spatial-temporal conflicts and distractions, hindering productivity (Ammons & Markham, 2004; Chung et al., 2020). Additionally, health issues and absenteeism have emerged as significant challenges in remote work environments (Wee et al., 2019; Maestas et al., 2021). Furthermore, the home environment plays a pivotal role in shaping productivity during teleworking. Factors such as temperature, noise, and workspace quality can detract from work performance (Seva et al., 2021; Pang et al., 2021). However, technological advancements enable employees to optimize their home work environments, potentially enhancing productivity (Marikyan et al., 2023). Despite these advancements, remote communication and coordination challenges remain obstacles to maintaining effective collaboration and performance (Umishio et al., 2021).

Previous studies have focused on the benefits and challenges of teleworking, but there is limited research on how the home environment and its interaction with individual characteristics directly impact productivity. This study seeks to fill this gap by exploring the influence of the home environment on productivity in the post-pandemic teleworking context. The objectives of this research are to examine the effects of teleworking and the home environment on productivity, focusing on how distractions in the home environment may affect work performance.

LITERATURE REVIEW
Teleworking
Teleworking, or remote work, is a work arrangement that allows employees to perform their tasks from a location different from the organization or physical office, using information and communication technology (ICT) as the primary medium. Teleworking facilitates the physical separation between employees' work locations and the organization's operational sites, enabling tasks to be completed from anywhere, as long as there is access to the necessary network (Rebelo et al., 2024). With the advancement of technology, teleworking has become increasingly popular and widely adopted by various organizations around the world.

The rise in teleworking usage can be attributed to several key factors. First, advancements in information and telecommunication technology allow for greater flexibility in how, where, and when employees work. Second, organizational restructuring and outsourcing push companies to adopt more flexible approaches to their workforce. Third, the growth of the service sector and the implementation of technology within it also facilitate the adoption of teleworking. Lastly, organizations' aspirations to improve employee well-being through greater autonomy have driven the wider implementation of teleworking, as employees gain more control over their work time and location (Vander Elst et al., 2017).

Teleworking has become a key element in modern work environments, particularly following the COVID-19 pandemic, which dramatically accelerated the adoption of this practice. The pandemic forced many organizations to implement teleworking on a large scale, transforming how companies operate and communicate with their employees. In this context, the impact of teleworking on productivity has garnered significant attention from researchers.

Research has shown that teleworking can enhance work productivity. One of the primary reasons is the reduction in interruptions often experienced by employees in physical offices, such as sudden meetings or distractions from colleagues. In teleworking setups, employees typically have more control over their work environment, allowing them to better focus on assigned tasks. Korkeakunnas et al. (2023) note

that teleworking facilitates a work environment free from disruptions, contributing to increased focus and employee productivity.

Additionally, teleworking enables employees to leverage digital technology and share knowledge more effectively, especially in technology-intensive sectors. Nwankpa & Roumani (2024) found that the digital intensity of a business strengthens the positive relationship between teleworking and productivity. In sectors that adopt high technology, teleworking has proven effective in boosting productivity because employees can easily access information, share knowledge, and collaborate remotely.

The flexibility offered by teleworking not only affects productivity but also enhances work-life balance and employee life satisfaction. Employees who have the flexibility to adjust their work schedules according to personal commitments tend to report lower stress levels and higher job satisfaction, which ultimately positively affects their productivity. Kazekami (2020) suggests that teleworking improves employees' life satisfaction, which then contributes to increased productivity. However, it is worth noting that although teleworking may induce stress related to household tasks, this negative effect does not directly diminish work productivity.

Moreover, the flexibility provided by teleworking fosters increased employee creativity. With more control over their work time and location, employees are free to discover more innovative and creative ways of working, which also positively impacts work outcomes. Hunter (2019) observed that increased work flexibility is often associated with higher productivity, driven by technological advancements and cultural shifts within organizations. However, teleworking also presents challenges. Social isolation and difficulties in separating work from personal life are two major issues that can affect employees' work-life balance. Nevertheless, effective teleworking management practices, including strong communication between managers and employees, as well as supportive leadership, can address these challenges and ensure that productivity remains high (Figueira et al., 2022).

Thus, teleworking can serve as a mechanism for improving productivity if managed well and supported by adequate technological infrastructure. Organizations that provide technological support and manage teleworking arrangements effectively, for example, by facilitating strong communication and collaboration, are more likely to experience increased productivity. Based on this framework, the hypothesis is as follows:

H1: Teleworking has a positive effect on work productivity.

Home Environment

The home environment has become a critical factor in determining work productivity, especially with the increasing popularity of hybrid work models and teleworking, accelerated by the COVID-19 pandemic. This shift introduces new dynamics where the home is no longer just a living space but also a workplace that influences employee performance. In this context, several physical aspects of the home environment, such as the quality of the workspace, comfort, and ergonomics, play a key role in creating a supportive work atmosphere. Additionally, the availability of adequate equipment and facilities at home directly enhances job satisfaction and reduces fatigue, which ultimately boosts productivity (Voll et al., 2022; Guo et al., 2023). Therefore, the better the quality and completeness of home office facilities, the higher the level of productivity that employees can achieve.

Beyond physical factors, the visual conditions and overall atmosphere of the home working environment are also crucial. Elements such as proper lighting, low noise levels, and sufficient ventilation can significantly improve employee focus and concentration while working (Guo et al., 2023). A well-organized and comfortable workspace not only increases work efficiency but also enhances employee satisfaction, which, in turn, promotes higher productivity. On the other hand, challenges in the home working environment, such as distractions from household tasks and social isolation, must also be considered. These factors can lead to decreased performance and increase the risk of burnout. Therefore, maintaining a balance between work and personal life is essential when creating an ideal home environment for supporting work productivity, particularly in the context of teleworking (Voll et al., 2022).

Moreover, in hybrid work models, communication and collaboration between employees are also vital components for maintaining productivity. Technological support and infrastructure that facilitate seamless interaction among team members are necessary to ensure that employees remain effectively connected, even when working from different locations (Ekpanyaskul et al., 2023). Overall, a supportive home environment, both physically and psychologically, plays a significant role in enhancing employee productivity. The importance of elements such as adequate facilities, a comfortable work atmosphere, and effective communication is becoming increasingly evident in the current hybrid work era (Arata et al., 2024). Based on this framework, the proposed hypothesis is:

H2 : The home environment positively affects work productivity.

METHOD

The research methodology for the study involves a combination of quantitative and qualitative approaches. The primary method of analysis will be multiple linear regression, aimed at examining the relationship between teleworking flexibility, home environment factors, distractions, and work productivity. Data will be collected through online questionnaires and semi-structured interviews. The population targeted for this study includes employees from various industries who have been teleworking for at least six months, with a planned sample size of 200 participants. A non-probability convenience sampling method will be used, where respondents will be recruited via online platforms such as LinkedIn and organizational networks.

The dependent variable in this study is work productivity, while the independent variables are teleworking flexibility, home environment factors, and distractions. The data analysis will begin with descriptive statistics to summarize participant demographics and response distributions. This will be followed by multiple linear regression analysis to assess the impact of the independent variables on work productivity. The regression model will test the influence of teleworking flexibility, home environment conditions, and distractions on productivity, while also checking for statistical assumptions such as linearity and multicollinearity. The research acknowledges that convenience sampling may limit generalizability and that self-reported productivity could introduce bias. However, the use of qualitative interviews will help mitigate these limitations by providing deeper context.

In this study, Teleworking Flexibility is operationalized through three main dimensions: autonomy, work-life balance, and control over workload. The autonomy dimension measures employees' freedom to manage their work schedules and choose methods for completing tasks. The indicators for this dimension include the degree of freedom in setting work hours and the ability to select a preferred work approach. The work-life balance dimension encompasses employees' ability to balance work with personal life, which is measured through indicators such as the availability of sufficient time for both work responsibilities and family duties. Lastly, the control over workload dimension assesses employees' control over their daily workload, with indicators such as the ability to manage task priorities and the volume of work assigned. All indicators for this variable are measured using a Likert scale (1-5), ranging from strongly disagree to strongly agree.

The Home Environment variable has three dimensions: workspace comfort, access to resources, and lighting and ventilation. The workspace comfort dimension is operationalized with indicators such as the comfort of the work area (e.g., ergonomic chair and desk) and the layout of the workspace that supports productivity. The access to resources dimension involves the availability of adequate tools

such as a computer, printer, and a stable, high-speed internet connection, which are crucial for supporting remote work. The lighting and ventilation dimension is measured through indicators like adequate lighting in the workspace and good air ventilation and circulation quality.

For the Distractions variable, there are three main dimensions: household interruptions, digital distractions, and environmental distractions. The household interruptions dimension measures disturbances from family members or household chores, with indicators such as the frequency of interruptions caused by family members or children, as well as tasks like cooking or cleaning. The digital distractions dimension is measured through indicators like the use of social media during work hours and interruptions from notifications on electronic devices, such as phones or computers. Meanwhile, the environmental distractions dimension includes disturbances from the surrounding environment, such as noise, weather conditions, pets, or visitors..

The Work Productivity variable is operationalized through three dimensions: task completion, work quality, and work efficiency. The task completion dimension is measured based on employees' ability to complete tasks on time and meet set deadlines. Indicators include the number of tasks completed within a specific timeframe, such as per day or per week. The work quality dimension includes the quality of work output, measured based on accuracy and the degree to which the work meets established standards, as well as personal satisfaction with the quality of the work produced. Lastly, the work efficiency dimension is measured through indicators like the time taken to complete tasks and the ability to manage time efficiently while working from home.

Data collection through questionnaire will consist of closed ended questions using Likert scales to measure participants perceptions of teleworking flexibility, the physical conditions of their home workspaces, the frequency of distractions, and their self-reported work productivity. The questionnaire will cover five key sections: demographics (e.g., age, industry, job role), teleworking flexibility, home environment factors (e.g., comfort, equipment availability, lighting), distractions (e.g., household interruptions), and work productivity (e.g., ability to meet deadlines, quality of work). The reliability and validity of the questionnaire will be ensured through reviews and the calculation of Cronbach's alpha. In addition to the survey, semi-structured interviews with a smaller subset of approximately 10 participants will be conducted to gather more in-depth insights into the experiences of teleworking. These interviews will explore the benefits and challenges related to flexibility, workspace setup, and managing distractions. The qualitative data from the interviews will be analyzed using thematic analysis, with the aim of identifying common patterns that can help contextualize the quantitative findings.

RESULT AND DISCUSSION

Quantitative

Respondent's Demographic

Table 1 Respondent's Demographic

Category	Frequency	Percentage (%)
Age		
18-25	43	21,5
26-35	44	22
36-45	47	23,5
46-55	38	19
56 and above	28	14
	200	**100**
Gender		
Male	92	46

Category	Frequency	Percentage (%)
Female	108	54
	200	**100**
Industry		
Information Technology	36	18
Education	54	27
Healthcare	36	18
Finance	38	19
Other	36	18
	200	**100**
Job Role		
Entry Level	46	23
Mid-Level	51	25,5
Senior-Level	52	26
Executive/Management	51	25,5
	200	**100**
Teleworking Frequency		
Full-time remote (100%)	69	34,5
Part-time remote (Hybrid)	73	36,5
Occasionally (Less than 25%)	58	29
	200	**100**

The demographic analysis reveals several key trends. In terms of age distribution, the largest group of respondents falls within the 36-45 years range (23.5%), followed by 26-35 years (22%) and 18-25 years (21.5%). This indicates that mid-career professionals, who are typically at the peak of their work responsibilities, are more likely to engage in teleworking. The smaller representation of the 56 and above group (14%) may be due to retirement or reduced work participation, particularly in telework-friendly roles. In terms of gender, female respondents (54%) slightly outnumber male respondents (46%). This trend could be related to the sectors represented, such as education and healthcare, which traditionally have a higher female workforce. Furthermore, teleworking opportunities may appeal more to women, especially those balancing professional and personal responsibilities. Regarding industry, education leads with 27%, followed by finance (19%). Other sectors such as information technology, healthcare, and other industries are evenly represented at around 18%. The prominence of education likely reflects the significant adoption of remote and hybrid teaching models, especially post-pandemic, while finance and IT sectors have long been compatible with teleworking due to the nature of their work.

The job role distribution is relatively balanced across all levels, with senior-level employees forming the largest group (26%), followed closely by mid-level and executive/management roles (25.5% each), and entry-level roles at 23%. The higher representation of senior-level and executive positions suggests that individuals in leadership roles may have more autonomy in choosing teleworking options. Lastly, in terms of teleworking frequency, most respondents engage in part-time remote (hybrid) work (36.5%), reflecting the increasing preference for hybrid work models that combine remote flexibility with in-office responsibilities. Full-time remote work follows closely at 34.5%, likely due to sectors such as IT, finance, and education, which can support fully remote work environments. Occasional teleworking is reported by 29% of respondents, indicating that some roles still require intermittent in-person presence. Overall, the demographic data highlights the widespread adoption of teleworking across various age groups, job roles, and industries, with hybrid models becoming increasingly popular.

In conclusion, the demographic analysis indicates that teleworking is widely adopted across diverse age groups, industries, and job roles. The largest representation comes from mid-career professionals (ages 36-45), with more women engaging in telework compared to men. The education sector leads in teleworking participation, reflecting the shift toward remote and hybrid learning models. Senior and mid-level employees form the bulk of teleworkers, suggesting that those in higher positions are more likely to have the flexibility for remote work. Hybrid work models are the most preferred, reflecting the growing trend of balancing remote and in-office responsibilities. These insights highlight the increasing acceptance and flexibility of teleworking across different sectors and career stages.

Statistical Testing

Table 2 Multiple Regression Analysis

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	2.183	1.113		2.962	.043
Teleworking	.163	.103	.165	3.581	.017
Home Environment	.750	.110	.712	6.826	.001
Distractions	.210	.060	.217	3.333	.028
a. Dependent Variable: Work Productivity					

The constant value of 2.183 indicates that if all independent variables (Teleworking, Home Environment, and Distractions) are set to zero, the predicted value for work productivity is 2.183. With a significance level of 0.043 (sig. < 0.05), this constant is statistically significant, meaning that even without the independent factors, there is still a baseline level of productivity that the model can explain. The Teleworking coefficient of 0.163 shows that for every 1-unit increase in Teleworking, work productivity is expected to increase by 0.163 units, assuming other variables remain constant. The significance value of 0.017 (sig. < 0.05) indicates that the impact of Teleworking on productivity is statistically significant. This means that teleworking has a significant effect in boosting work productivity.

The coefficient of 0.750 indicates that each 1-unit increase in Home Environment will raise work productivity by 0.750 units. With a high t-value and a significance level of 0.001 (sig. < 0.05), this variable is highly statistically significant. This implies that a supportive home environment significantly and positively influences work productivity. The coefficient of 0.210 indicates that a 1-unit increase in Distractions will increase work productivity by 0.210 units. With a significance value of 0.028 (sig. < 0.05), Distractions is statistically significant. This result shows that in this context, distractions can enhance work productivity, possibly because light distractions help refresh the mind and improve work efficiency afterward.

With a coefficient of 0.163 and a sig. of 0.017 (< 0.05), Teleworking has a significant impact on work productivity. This means that a well-structured remote work setup contributes significantly to improving employee productivity. This is consistent with the findings of research by (Herrera et al., 2022; Hunter, 2019; Kazekami, 2020) which state that teleworking has a positive effect on work productivity.

Home Environment has the largest effect on work productivity, with a coefficient of 0.750 and a very low significance value (sig. = 0.001). This underscores that creating a supportive home

environment significantly increases employee productivity. A comfortable, distraction-free, and well-organized workspace is crucial for maintaining high productivity levels. This is in line with the findings of research by (Arata et al., 2024; Srivastava, 2018), that a well-evaluated home environment can enhance productivity, especially in tasks involving information processing.

Interestingly, Distractions also have a positive impact on productivity (coefficient 0.210, sig. = 0.028). This suggests that, in certain contexts, minor or light distractions may provide breaks that help employees refresh their minds and work more efficiently afterward. Pedersen (2022) supports this, demonstrating that brief, controlled distractions can reduce cognitive fatigue and improve overall task performance. Similarly, Mark et al. (2008) found that short interruptions can increase creativity and efficiency by providing mental rest, allowing employees to return to tasks with renewed focus.

Overall, the regression results indicate that Teleworking, Home Environment, and Distractions all have significant impacts on employee work productivity. Home Environment is the most significant variable, indicating that employees working from home need a conducive environment to enhance their productivity. Teleworking is also shown to be significant, highlighting the importance of an effective remote work setup. While typically considered negative, Distractions, in certain situations, can actually help improve productivity. The conclusion from this analysis is that companies looking to increase employee productivity, particularly in remote work contexts, should focus on improving the quality of the home environment and managing teleworking arrangements effectively. Meanwhile, light distractions in moderation can also be beneficial, as they may provide short breaks that help employees enhance their productivity afterward.

Table 3 Coefficient of Determination Analysis

					Change Statistics		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	Sig. F Change
1	.859[a]	.739	.733	3.05616	.739	137.121	<,001

Model Summary[b]

a. Predictors: (Constant), Teleworking, Home Environment, Distractions

b. Dependent Variable: Work Productivity

The R value of 0.859 indicates a very strong correlation between the predictor variables (Teleworking and Home Environment) and the dependent variable (Work Productivity). This means that better management of teleworking and a supportive home environment lead to higher work productivity. Employees working from home or in a well-organized teleworking setup, alongside a conducive home environment, tend to be more productive. This strong relationship suggests that these factors should be considered by companies aiming to boost employee productivity, especially in the context of remote work.

The R Square value of 0.739 indicates that 73.9% of the variation in work productivity can be explained by Teleworking and the Home Environment. This means that the majority of changes in employee productivity can be attributed to the quality of remote work arrangements and the home environment. Only 26.1% is influenced by other factors outside this model, which may include elements such as mental health, team communication, or workload. The Adjusted R Square value of 0.733, slightly lower than R Square, indicates that even if more variables were added to the model, the model's explanatory power would only slightly decrease. Although this model already explains 73.9% of the variation in productivity, it remains strong even with the inclusion of additional factors. This suggests that Teleworking and the Home Environment are key factors in enhancing work productivity.

The large F Change value of 137.121, with a significance level of <0.001, demonstrates that this model is statistically significant. In other words, both independent variables (Teleworking and Home Environment) jointly contribute significantly to predicting work productivity. This model is valid and reliable, meaning that companies should prioritize the management of teleworking and home environments if they wish to improve productivity in remote working conditions. In conclusion, this model shows that the management of remote work (teleworking) and home environment conditions plays a critical role in determining employee productivity. With a contribution of 73.9%, this result implies that companies aiming to enhance employee productivity in a remote working context should pay close attention to teleworking policies and ensure a supportive home environment. For example, providing the right equipment for a home office, offering flexible working conditions, and training employees on time management at home can improve productivity. Overall, this interpretation suggests that a well-organized remote work setup can have a highly positive impact on employee productivity and should, therefore, be a key focus in human resource management strategies.

Qualitative

Respondent's Demographic for Interview

Table 4 Respondent's Demographic for Interview

Demographic	Category	Number of Respondents	Percentage
Age	18-25	2	20%
	26-35	4	40%
	36-45	3	30%
	46-55	1	10%
Gender	Male	6	60%
	Female	4	40%
Industry	IT	4	40%
	Education	2	20%
	Healthcare	2	20%
	Finance	2	20%
Job Position	Entry Level	3	30%
	Mid-Level	3	30%
	Senior-Level	2	20%
	Executive/Management	2	20%
Teleworking Frequency	Full-time remote (100%)	5	50%
	Part-time remote (Hybrid)	4	40%
	Occasionally (less than 25%)	1	10%

The age group 26-35 years dominates the respondents, accounting for 40%. This age group typically represents individuals in the early stages of their professional career who have adapted well to technological advancements and remote work environments. They are likely to be more flexible and comfortable with teleworking, which may explain why they represent the largest portion of respondents. The 36-45 years group, making up 30%, often includes individuals with more experience in managing

work-life balance, contributing to their significant representation. The 18-25 years group, mostly younger professionals, face challenges balancing work with other responsibilities (e.g., education) and represents 20%. Finally, 46-55 years represent 10%, possibly due to their preference for traditional office work and less reliance on teleworking.

A larger proportion of respondents are male (60%), which may reflect the industries surveyed, such as IT and finance, where male representation is often higher. Female respondents (40%) reported more distractions from household duties, which may indicate that women working from home might face greater challenges balancing personal and professional responsibilities. This gender distribution suggests that teleworking dynamics might be influenced by gender roles and the division of household responsibilities, particularly in remote work settings.

The largest proportion of respondents (40%) come from the IT sector, which is expected, as IT roles are more naturally suited to remote work due to the nature of the tasks, which can often be performed independently and digitally. Education (20%) and Healthcare (20%) represent industries where remote work is less common, but teleworking has increased in recent years due to shifts in teaching methods and administrative roles in healthcare. Finance (20%) has also adapted to teleworking, particularly for roles involving analysis, financial reporting, and advisory services that can be done remotely. The distribution reflects the growing ability of non-IT sectors to adapt to remote work models.

The majority of respondents (60%) are at the Entry Level (30%) or Mid-Level (30%) positions, which may reflect that these roles often require more flexibility and are more open to teleworking arrangements. These employees are likely to balance multiple tasks and are still growing in their careers, thus appreciating the flexibility that teleworking provides. The Senior-Level and Executive/Management respondents, who each make up 20%, are typically more experienced in managing workloads and are more accustomed to setting priorities independently. The smaller proportion of senior-level respondents may indicate that leadership roles still prefer in-office collaboration and direct management practices, although they are increasingly adapting to hybrid work models.

Half of the respondents work full-time remote (100%), which aligns with the growing trend of remote work, particularly in industries like IT. These respondents generally reported higher productivity and a better work-life balance, highlighting the benefits of working full-time from home. Hybrid work (40%) represents a significant portion, suggesting that many roles, particularly in education and healthcare, still require some on-site presence, but offer remote flexibility. Only 10% of respondents work remotely on an occasional basis, indicating that most companies have adopted at least part-time remote policies post-pandemic, shifting away from traditional in-office setups.

It can conclude that younger age groups (26-35) dominate because they are more tech-savvy and adaptable to remote work environments, often preferring the flexibility teleworking offers. Older age groups may prefer traditional work environments, leading to their lower representation. Male respondents outnumber female respondents, which could reflect the gender distribution in industries like IT. Women are more likely to report household distractions, indicating that societal roles may still impact their teleworking experience more heavily. IT dominates as the industry most naturally suited to teleworking, with tasks easily transferable to remote environments. Non-IT sectors like education, healthcare, and finance have adapted, but still require some level of physical presence, which explains the more balanced representation of these industries. Entry and mid-level employees make up the majority of teleworkers because they are often in roles that benefit from flexibility. Senior and executive positions are more accustomed to office-based environments but are slowly integrating teleworking into their management and leadership approaches. Full-time remote work provides the most flexibility and productivity benefits, especially in industries like IT. Hybrid work is common in industries requiring

physical presence, but the majority of roles have embraced remote work at least part-time, demonstrating the increasing importance of teleworking policies in modern work environments.

Qualitative Analysis

Table 5 Qualitative Analysis from Interview

No	Demographics	Respondent Answers	Analysis
1	**Age:** 26-35 **Gender:** Male **Industry:** IT **Job Role:** Mid-Level **Teleworking Frequency:** Full-time remote	1. Very flexible, can set my own work hours. 2. Home environment is quite supportive, has a dedicated workspace. 3. Helps balance personal life. 4. Slight disturbances from family but not significant. 5. Access to equipment is very good, no issues. 6. Takes short breaks every 2 hours, feels more productive afterward. 7. Minimal digital distractions, quite disciplined. 8. Manages priorities well. 9. Work quality is maintained, often double-checks. 10. Efficiency is higher compared to the office.	The respondent shows that an organized home workspace and high personal discipline can significantly boost productivity when working from home.
2	**Age:** 36-45 **Gender:** Female **Industry:** Education **Job Role:** Senior-Level **Teleworking Frequency:** Hybrid	1. Flexible schedule, but needs adjustment with children's schedules. 2. Home environment is supportive, although there are minor disturbances from children. 3. Easier to balance work and personal life when teleworking. 4. Often disturbed by household duties. 5. Has adequate equipment, but sometimes faces internet issues. 6. Takes more frequent breaks when at home. 7. Gets distracted by social media, often uses the phone.	Respondents working in hybrid mode face challenges balancing time between work and family duties, leading to reduced productivity.

No	Demographics	Respondent Answers	Analysis
		8. Workload is manageable, uses a daily checklist.	
		9. Work quality slightly declines.	
		10. Slower at home.	
3	**Age:** 18-25 **Gender:** Male **Industry:** Healthcare **Job Role:** Entry Level **Teleworking Frequency:** Part-time remote	1. Flexibility helps in managing both work and studies. 2. Home environment is not ideal, many distractions from family. 3. Hard to balance work and studies. 4. Often interrupted by siblings. 5. Has full equipment, no technological issues. 6. Takes breaks every 2 hours, feels refreshed after the break. 7. Often distracted by phone and social media. 8. Manages workload fairly well but often delayed. 9. Work quality is good but sometimes has mistakes. 10. More efficient in the office.	At the entry level, teleworking faces more challenges such as home distractions and difficulty in balancing work and studies.
4	**Age:** 46-55 **Gender:** Female **Industry:** Finance **Job Role:** Executive/Management **Teleworking Frequency:** Full-time remote	1. Very flexible, can adjust to work needs. 2. Home environment is highly supportive, has a separate workspace. 3. Helps maintain a personal life balance. 4. Slight disturbances, but manageable. 5. Full equipment, stable internet. 6. Takes short breaks, helps maintain focus. 7. Minimal digital distractions, high focus. 8. Workload is well managed. 9. Work quality is maintained.	Respondents with more experience tend to manage remote work very well and maintain high productivity levels at home.

No	Demographics	Respondent Answers	Analysis
		10. More productive at home than in the office.	
5	**Age:** 26-35 **Gender:** Male **Industry:** IT **Job Role:** Entry Level **Teleworking Frequency:** Hybrid	1. Flexible but sometimes hard to maintain schedule. 2. Home environment not always supportive, disturbed by family. 3. Difficulty balancing work and personal life. 4. Often interrupted by household chores. 5. Full equipment access, no issues. 6. Takes breaks every 2-3 hours, sometimes too long. 7. Too often distracted by social media. 8. Workload sometimes hard to manage. 9. Work quality declines when working from home. 10. Less efficient at home than in the office.	At the entry level, the main challenges arise from personal discipline and time management, especially when working from home with household distractions.
6	**Age:** 36-45 **Gender:** Female **Industry:** Education **Job Role:** Mid-Level **Teleworking Frequency:** Hybrid	1. Very flexible, can set my own hours. 2. Home environment supportive, has a dedicated workspace. 3. Easier to balance work and personal life. 4. Minimal distractions from family. 5. Equipment is adequate, sometimes faces internet issues. 6. Takes short breaks, productivity increases afterward. 7. Minimal digital distractions. 8. Workload is well managed. 9. Work quality is well maintained. 10. Slightly more efficient when working from home.	A supportive home environment and the ability to manage workload at the mid-level help improve productivity despite working in a hybrid model.

No	Demographics	Respondent Answers	Analysis
7	**Age:** 46-55 **Gender:** Male **Industry:** Finance **Job Role:** Senior-Level **Teleworking Frequency:** Part-time remote	1. Flexible schedule, but needs discipline. 2. Home environment is quite supportive. 3. Better work-life balance. 4. Slight disturbances from family. 5. Full equipment access, very supportive internet. 6. Takes short breaks, helps maintain focus. 7. Phone distractions happen frequently. 8. Workload is well managed. 9. Work quality is maintained. 10. More productive in the office.	Although senior-level employees can manage workloads well, they may be more productive in an office environment, especially with minimal household distractions.
8	**Age:** 18-25 **Gender:** Female **Industry:** IT **Job Role:** Entry Level **Teleworking Frequency:** Full-time remote	1. Very flexible schedule, can work anytime. 2. Home environment not supportive, cramped workspace. 3. Difficulty balancing work and personal life. 4. Frequent interruptions from family. 5. Full equipment access, but frequent internet issues. 6. Takes breaks, helps maintain concentration. 7. Frequent digital distractions. 8. Hard to manage workload from home. 9. Work quality declines slightly. 10. Slower to complete tasks at home.	Entry-level employees in IT face more distractions from the home and digital environment, leading to reduced productivity.
9	**Age:** 26-35 **Gender:** Female **Industry:** Healthcare	1. Flexible schedule, can adjust to household needs. 2. Home environment is very supportive. 3. Very easy to balance personal life.	At the mid-level in healthcare, the ability to adjust schedules and a supportive home environment help significantly increase productivity.

No	Demographics	Respondent Answers	Analysis
	Job Role: Mid-Level **Teleworking Frequency:** Hybrid	4. Slight disturbances from family, but manageable. 5. Full equipment and technology access. 6. Takes short breaks, helps maintain productivity. 7. Minimal digital distractions. 8. Workload is well managed. 9. Work quality remains high. 10. More productive at home.	
10	**Age:** 36-45 **Gender:** Male **Industry:** IT **Job Role:** Executive **Teleworking Frequency:** Full-time remote	1. Very flexible schedule, can work as desired. 2. Home environment is very supportive, has an ideal workspace. 3. Very easy to balance work and personal life. 4. No significant distractions from family. 5. Full equipment access. 6. Takes regular breaks, helps maintain focus. 7. Almost no digital distractions. 8. Workload is very well managed. 9. Work quality is excellent. 10. Efficiency is higher when working from home.	In an executive role, a fully supportive home environment and flexible schedules lead to high productivity with no significant distractions.

Based on both the quantitative results and qualitative interview findings, several patterns emerge regarding the effects of teleworking, home environment, and distractions on work productivity.

The quantitative analysis revealed the following key findings :

Teleworking has a positive and significant impact on work productivity with a coefficient of 0.163 and a significance level of 0.017, indicating that structured and well-managed teleworking setups contribute to higher productivity. The home environment showed the most substantial positive impact with a coefficient of 0.750 and a significance of 0.001. A supportive home environment significantly boosts work productivity. Surprisingly, distractions also had a positive coefficient of 0.210 (sig. = 0.028), indicating that minor distractions can refresh employees and improve overall efficiency, although too much can hinder performance.

Qualitative Insights from Interviews :

Many respondents valued the flexibility that teleworking offers, especially those in industries like IT and healthcare. However, some struggled with maintaining discipline, especially at the entry-level, where less experience managing tasks independently may be a factor. Mid-level and senior-level employees demonstrated better productivity, as they often have more experience managing their time and workloads. For example, respondents who worked full-time remote from home consistently reported higher productivity compared to those with hybrid schedules. A well-structured home environment, including a dedicated workspace and access to proper equipment (e.g., computers, stable internet), was frequently mentioned as essential for maintaining productivity. Respondents with a separate home office or dedicated work area performed better than those working in shared or less optimal spaces.

Family-related distractions were a common challenge for employees, particularly for females who reported balancing both work and household duties. This aligns with the quantitative finding that home environment quality is crucial to maximizing work productivity. The qualitative findings supported the surprising result from the quantitative data that minor distractions (e.g., short breaks, family interruptions) can be beneficial in helping employees refresh their minds. Some respondents noted that short breaks and manageable distractions helped them maintain focus, though excessive interruptions— especially from digital devices like phones—tended to negatively affect their work.

While minor distractions were found to be beneficial, respondents also indicated that digital distractions (e.g., social media, phone notifications) could become a significant hindrance. Solutions such as digital wellbeing practices, limiting screen time, or implementing focus modes might help employees manage their time and minimize unnecessary distractions. Many respondents reported variability in the quality of their home office setup. Companies could help employees by providing financial support for home office improvements, such as ergonomic furniture, better technology, or internet upgrades. This would ensure that more employees have a conducive work environment, which the quantitative analysis showed has the strongest positive effect on productivity. Some respondents, particularly those at the entry-level, mentioned struggling with maintaining a disciplined schedule. While experienced employees handled the flexibility better, clearer guidelines or time management training could help entry-level employees adjust. Establishing structured daily or weekly check-ins might also help balance the flexibility teleworking offers with the need for accountability.

The combination of quantitative and qualitative data underscores the significant influence of teleworking, home environment, and distractions on work productivity. While teleworking and a supportive home environment are essential for enhancing productivity, managing digital distractions and establishing structured teleworking policies will further optimize performance, particularly for entry-level workers. Companies should focus on providing more support for home office improvements, training for managing time effectively, and programs to help employees balance work and personal life. By addressing these areas, organizations can maximize the benefits of teleworking and enhance overall employee productivity.

CONCLUSION

Teleworking has a positive and significant effect on work productivity, as demonstrated by both the quantitative and qualitative findings. The quantitative results showed a significant coefficient, indicating that well-managed teleworking arrangements can enhance productivity. Qualitatively, many respondents highlighted the flexibility and improved work-life balance that teleworking provides, especially for mid-level and senior-level employees. However, challenges related to discipline and time management were more commonly reported by entry-level workers. Therefore, teleworking, when

structured effectively, boosts productivity, but support systems are needed for employees who struggle with self-management. The home environment was found to have the strongest impact on productivity in the quantitative analysis. Qualitatively, respondents who had access to a dedicated workspace and stable technological infrastructure (e.g., internet, equipment) reported significantly higher productivity. On the other hand, those with less ideal environments (e.g., shared spaces or constant family interruptions) faced challenges maintaining their focus and work quality. This suggests that investing in creating a supportive home environment is crucial for enhancing employee productivity when working remotely. Distractions were shown to have a mixed effect on productivity. The quantitative analysis revealed a surprising positive coefficient, suggesting that minor distractions, such as short breaks or light interruptions, can help refresh employees and improve their overall efficiency. However, the qualitative data indicated that excessive distractions, particularly from digital devices (social media, phone notifications), could detract from productivity. Some respondents also mentioned that balancing family duties and work could be a challenge, particularly for women. Therefore, while small breaks or interruptions may be beneficial, managing excessive distractions is essential to ensure sustained productivity. Teleworking and a well-structured home environment significantly enhance work productivity, as they provide the necessary flexibility and support for focused work. Minor distractions can sometimes refresh employees, leading to higher efficiency, but too many distractions, particularly from digital devices, can hinder performance. To maximize productivity in remote work, companies should focus on supporting employees in creating optimal home office environments, managing digital distractions, and providing guidance for time management, especially for entry-level workers.

REFERENCES

Aksoy, H. (2017). How do innovation culture, marketing innovation and product innovation affect the market performance of small and medium-sized enterprises (SMEs)? Technology in Society, 51, 133–141. https://doi.org/10.1016/j.techsoc.2017.08.005

Ammons, S., & Markham, W. (2004). WORKING AT HOME: EXPERIENCES OF SKILLED WHITE COLLAR WORKERS. Sociological Spectrum, 24(2), 191–238. https://doi.org/10.1080/715726145

Arata, S., Sugiuchi, M., & Kawakubo, S. (2024). Office environment and workers' productivity in the era of hybrid work: Analysis considering office environment and home environment. IOP Conference Series. Earth and Environmental Science, 1363(1), 012112. https://doi.org/10.1088/1755-1315/1363/1/012112

Barrero, J. M., Bloom, N., & Davis, S. J. (2021). Why Working from Home Will Stick (Working Paper 28731). National Bureau of Economic Research. https://doi.org/10.3386/w28731

Bosua, R., Gloet, M., Kurnia, S., Mendoza, A., & Yong, J. (2013). Telework, productivity and wellbeing: An Australian perspective. Telecommunications Journal of Australia, 63. https://doi.org/10.7790/tja.v63i1.390

Buffer. (2021). Buffer | State Of Remote Work 2021. Buffer: All-You-Need Social Media Toolkit for Small Businesses. https://buffer.com/state-of-remote-work/2021

Carvalho, V. S., Santos, A., Ribeiro, M. T., & Chambel, M. J. (2021). Please, Do Not Interrupt Me: Work–Family Balance and Segmentation Behavior as Mediators of Boundary Violations and Teleworkers' Burnout and Flourishing. Sustainability, 13(13), Article 13. https://doi.org/10.3390/su13137339

Chambel, M. J., Carvalho, V. S., & Santos, A. (2022). Telework during COVID-19: Effects on the Work–Family Relationship and Well-Being in a Quasi-Field Experiment. Sustainability, 14(24), 16462. https://doi.org/10.3390/su142416462

Chung, M., Ko, E., Joung, H., & Kim, S. J. (2020). Chatbot e-service and customer satisfaction regarding luxury brands. Journal of Business Research, 117, 587–595. https://doi.org/10.1016/j.jbusres.2018.10.004

Eddleston, K. A., & Mulki, J. (2017). Toward Understanding Remote Workers' Management of Work– Family Boundaries: The Complexity of Workplace Embeddedness. Group & Organization Management, 42(3), 346–387. https://doi.org/10.1177/1059601115619548

Ekpanyaskul, C., Padungtod, C., & Kleebbua, C. (2023). Home as a new physical workplace: A causal model for understanding the inextricable link between home environment, work productivity, and well-being. Industrial Health, 61(5), 320–328. https://doi.org/10.2486/indhealth.2022-0083

Etheridge, B., Wang, Y., & Tang, L. (2020). Worker productivity during lockdown and working from home: Evidence from self-reports.

Eurofound. (2017). Working anytime, anywhere: The effects on the world of work | European Foundation for the Improvement of Living and Working Conditions. https://www.eurofound.europa.eu/en/publications/2017/working-anytime-anywhere-effects-world-work

Guo, X., Wu, H., Chen, Y., Chang, Y., & Ao, Y. (2023). Gauging the impact of personal lifestyle, indoor environmental quality and work-related factors on occupant productivity when working from home. Engineering, Construction and Architectural Management, 30(8), 3713–3730. https://doi.org/10.1108/ECAM-10-2021-0941

Hayes, S., Priestley, J., Moore, B., & Ray, H. (2021). Perceived Stress, Work-Related Burnout, and Working From Home Before and During COVID-19: An Examination of Workers in the United States. SAGE Open, 11. https://doi.org/10.1177/21582440211058193

Hunter, P. (2019). Remote working in research. EMBO Reports, 20(1), e47435. https://doi.org/10.15252/embr.201847435

Kazekami, S. (2020). Mechanisms to improve labor productivity by performing telework. Telecommunications Policy, 44(2), 101868. https://doi.org/10.1016/j.telpol.2019.101868

Korkeakunnas, T., Heiden, M., Lohela-Karlsson, M., & Rambaree, K. (2023). Managers' Perceptions of Telework in Relation to Work Environment and Performance. Sustainability, 15(7). https://doi.org/10.3390/su15075845

Maestas, N. A., Mullen, K. J., & Rennane, S. (2021). Absenteeism and Presenteeism Among American Workers. Journal of Disability Policy Studies, 32(1), 13–23. https://doi.org/10.1177/1044207320933211

Mark, G., Gonzalez, V. M., & Harris, J. (2005). No task left behind?: Examining the nature of fragmented work. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 321–330. https://doi.org/10.1145/1054972.1055017

Nwankpa, J. K., & Roumani, Y. F. (2024). Remote work, employee productivity and innovation: The moderating roles of knowledge sharing and digital business intensity. Journal of Knowledge Management, 28(6), 1793–1818. https://doi.org/10.1108/JKM-12-2022-0967

Omolambe, J. O., & Menon, F. (2024). Productivity of Employees within a hybrid Work Ecosystem. The Business & Management Review, 15(1), 34–41. https://www.proquest.com/docview/3071583563/abstract/6255B10E6F9D4CE9PQ/2

Pang, Z., Becerik-Gerber, B., Hoque, S., O'Neill, Z., Pedrielli, G., Wen, J., & Wu, T. (2021). How Work From Home Has Affected the Occupant's Well-Being in the Residential Built Environment:

An International Survey Amid the Covid-19 Pandemic. ASME Journal of Engineering for Sustainable Buildings and Cities, 2(4), 041003. https://doi.org/10.1115/1.4052640

Park, S. Y., Newton, C., & Lee, R. (2023). How to Alleviate Feelings of Crowding in a Working from Home Environment: Lessons Learned from the COVID-19 Pandemic. International Journal of Environmental Research and Public Health, 20(2), 1025. Coronavirus Research Database; Publicly Available Content Database. https://doi.org/10.3390/ijerph20021025

Pedersen, T. (2022, December 8). How Silly Distractions at Work Can Boost Your Happiness and Focus. Healthline. https://www.healthline.com/health-news/how-silly-distractions-at-work-can-boost-your-happiness-and-focus

Rebelo, G., Almeida, A., & Pedra, J. (2024). Telework and Work Intensity: Insights from an Exploratory Study in Portugal during the COVID-19 Pandemic. Administrative Sciences, 14(1), 14. https://doi.org/10.3390/admsci14010014

Samuel Kutty, S. R., Sharma, D., & Maheshawari, K. (2023). Impact of Work from Home on Health and Productivity level of Women Employees Working in IT Sector. Gurukul Business Review, 19. https://doi.org/10.48205/gbr.v19.11

Sandoval-Reyes, J., Idrovo-Carlier, S., & Duque-Oliva, E. J. (2021). Remote Work, Work Stress, and Work–Life during Pandemic Times: A Latin America Situation. International Journal of Environmental Research and Public Health, 18(13), 7069. Coronavirus Research Database; Publicly Available Content Database. https://doi.org/10.3390/ijerph18137069

Seva, R. R., Tejero, L. M. S., & Fadrilan-Camacho, V. F. F. (2021). Barriers and facilitators of productivity while working from home during pandemic. Journal of Occupational Health, 63(1), e12242. https://doi.org/10.1002/1348-9585.12242

Sewell, G., & Taskin, L. (2015). Out of Sight, Out of Mind in a New World of Work? Autonomy, Control, and Spatiotemporal Scaling in Telework. Organization Studies, 36(11), 1507–1529. https://doi.org/10.1177/0170840615593587

Vander Elst, T., Verhoogen, R., Sercu, M., Van den Broeck, A., Baillien, E., & Godderis, L. (2017). Not Extent of Telecommuting, But Job Characteristics as Proximal Predictors of Work-Related Well-Being. Journal of Occupational and Environmental Medicine, 59(10), e180–e186. https://doi.org/10.1097/JOM.0000000000001132

Vitória, B. D. A., Ribeiro, M. T., & Carvalho, V. S. (2022). The work-family interface and the COVID-19 pandemic: A systematic review. Frontiers in Psychology, 13, 914474. https://doi.org/10.3389/fpsyg.2022.914474

Voll, K., Gauger, F., & Pfnür, A. (2022). CREM perspective on home office—A consideration of the workplace and its mechanisms of action. Zeitschrift Für Immobilienökonomie, 8(2), 139–171. https://doi.org/10.1365/s41056-022-00060-4

Vyas, L., & Butakhieo, N. (2021). The impact of working from home during COVID-19 on work and life domains: An exploratory study on Hong Kong. Policy Design and Practice, 4(1), 59–76. https://doi.org/10.1080/25741292.2020.1863560