**Literature Review**

The Impact of Communication Technology on Employees’ Productivity during Government mandated lockdown

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## Abstract

This review aims to determine the impact of Communication Technology on Employees’ Productivity during Government Mandated Lockdown.

The polarisation of the debate and the contradiction of information available on the productivity of remote workers are evident. While some argued that remote work has a positive impact on productivity due to the lack of office issues and politics, others argued that the impact is minimal, if not negative due to the non-suitability of non-office environments which are prone to distractions and other issues (Fonner & Roloff, 2010).

The review will therefore aim to respond to the disagreement over the performance of remote employees and the many questions regarding the role played by communication technology and its effect on employees’ performance.

The review will analyse data collected on employee productivity and performance during the pandemic and use articles, research papers, literature, journals, surveys, reports, government publications, etc. to provide a factual response and evidence.

The audience for this review is academia, decision-makers in organisations, and anyone looking for a fair and unbiased review of the impact of communication technology on productivity, and performance during lockdowns.

## Introduction

The coronavirus (Sauer, 2022) pandemic has completely changed the way we live, the way we work, and the way we socialise. It has ushered in and accelerated a new digital era that has forced the most reluctant organisations to change course and allow employees to work remotely and adopt new technologies (Soto-Acosta, 2020). At the forefront of this revolution are technologies such as video conferencing, web meeting apps, social media, mobility applications, smartphones, etc. These technologies have played a critical role in allowing employees to work remotely and businesses to survive. They have given organisations unlimited access to their employees’ homes by blurring the boundaries between work and private life, thus introducing new challenges.

Therefore, it is important to directly assess the impact of these technologies on employees’ performance and productivity and also look at the new challenges faced by employees.

# Background

The Coronavirus pandemic has been an unprecedented awakening for the whole world which required swift and coordinated actions with governments imposing strict controls on movements and lockdowns. Many governments responded to the crisis by mandating people to stay home, forcing employees to work from home. This unleashed an unprecedented remote working experiment across the globe.

# Defining Remote Working.

Working From Home (WFH), Telecommuting, e-working, Teleworking, virtual office, etc. are some of the terms commonly used to describe remote working.

Remote working is a practice that allows employees to work from a location other than their employer’s work premises by extensively using communications technology to access resources and communicate with the office (Tim Jacks, 2021).

The various terms are interchangeable and are used to describe the same working arrangement. Generally, remote work means working from home (WDC, 2017).

Before the pandemic, remote working was only available and used by a few companies, a selected number of employees, and small groups.

# Remote Working before the pandemic.

Before the pandemic, the percentage of employees working remotely was low, approximately 10% or less in most of the major countries (Eurostat, 2020a).

With a figure of 4.7% in 2019, the UK was among the European countries with the lowest adoption of remote working, the highest being Finland and the Netherlands with 14.1% (Eurostat, 2020a). Despite the frequent advertisement of the benefits of remote working, the adoption rate of teleworking did not change and remained the same (Eurostat, 2020a).

Additionally, similar figures were observed in Japan, with only 5% of employees working from home in 2017 (Morikawa, 2018).

And in the US, a number of studies conducted in 2004 estimated that between 22 and 29% of jobs could be done remotely (Blinder, 2009). A similar figure of 25% was also reported in 2013 by a separate study (Blinder and Krueger, 2009). A more recent study by Dingel and Neiman, (2020) also showed a slight increase (37%) in jobs that could be performed away from the office.

# Remote Working during the Pandemic: A look at the data.

In March 2020, the pandemic took a turn for the worse and forced governments and businesses to change policies and allow employees to work remotely. This propelled the number of employees working from home to a level never seen before (Galanti et al., 2021; Barone Gibbs et al., 2021; van Zoonen et al., 2021; Tim Jacks 2021; Espitia et al., 2021; Ozimek, 2020)

In their 2020 survey, Deloitte, (2020) reported more than half of employees worked from home during the lockdown. In 60% of businesses, the majority of employees were working remotely.

Across the European Union space, over 33.7% of employees worked full-time remotely during the pandemic (Eurofound, 2020).

In the US, half of employees worked remotely during the pandemic (Brynjolfsson et al., 2020). The survey estimated that the percentage of remote workers in the US rose 4 times to almost half of the total number of employees. (Brynjolfsson et al., 2020).

Before the pandemic, only a few employees were allowed to work remotely. However, during the pandemic, remote work became the norm without which businesses would have been forced to close down.

It is also important to note that the main drivers of remote working are the flexibility and comfortability afforded to remote employees.

# Measuring Productivity.

The Organisation for Economic Co-operation and Development (OECD) defines productivity as the proportion between the volume of intake and the volume of produced goods (OECD, 2020). Therefore, employees’ productivity could be calculated simply by values such as the number of worked hours, the number of completed tasks compared to the number of worked hours, the number of generated sales compared to the running cost, and the cost of retaining the employee, etc. Productivity can be viewed as the value added by each employee. This value is aggregated by the business to reach an overall value that is used to represent the productivity of the company (Sauermann, 2016).

Performance and Productivity could be synonymous, however, the former only takes into account how efficient and effective work is done while the latter considers the cost associated with the produced work (output) (Jex and Britt, 2014).

# Communication Technology and Productivity.

In today’s digital age, employees working from home have a huge array of options at their disposal. New technologies have given employees the power to control their workloads, flexibility, responsibility, and adequacy to manage their time as they see fit, as long as the work is done on time and productivity is increased and not impacted. For example, remote employees do not necessarily need to work from their homes. They could choose to work from their homes or public places such as libraries and cafes.

Over the past few years, many studies have investigated the impact of communication technology and remote working on productivity. The results have shown a good impact on employees' productivity (Barrero et al., 2021; Aczel et al., 2021; WEF, 2022; Galanti et al., 2021; Bloom et al., 2022). The increase in productivity is due to the flexibility available to remote workers, lack of commuting, self-time management, the disappearance of office distractions and politics, comfortable and less formal home working environment, etc. (Aczel et al., 2021)

However, it is important to note that productivity is not always a guarantee when working from home. Many criteria must be available to achieve productivity while working remotely. One of these criteria is the job type. A study by Battiston et al., (2021) in a public sector organization charged with answering emergency calls in the UK, found that productivity is better when employees can work together and communicate face-to-face. They concluded that jobs, where face-to-face communication is required, cannot be done remotely.

Another issue that affects productivity for employees working remotely is the effect of remote working on employee mental well-being, especially for vulnerable categories of employees. Isolation, lack of socialization, decreased work motivation, distractions, and multi-tasking may also impact employees’ mental well-being and cause multiple drawbacks that in turn can have negative impacts on productivity (Kitagawa et al., 2021; Mustajab et al., 2020).

In their study, Etheridge et al., (2020) found that productivity is negatively affected by employees’ societal status, financial and economic status, industry and sector, and occupation. This includes low-paid and temporary employees and women with small children. Additionally, working remotely may increase employees’ fear that they are missing out or are overlooked for opportunities such as pay rise, promotions, incentives, and positive appraisals (Aczel et al., 2021; Gibbs et al., 2021; Galanti et al., 2021).

In Japan, productivity for remote workers was 60% to 70% lower, especially for employees and companies that started remotely after the spread of the pandemic (Morikawa, 2022). This seems to indicate that a period of adjustment is necessary for employees to acclimate themselves to the new working arrangement.

The World Bank (2021) also recognized that productivity was negatively impacted by the pandemic and lockdown due to factors such as the decrease in demand for goods and services, lack of incentives, and innovation which impacted productivity.

# Further Research

As remote working has become mainstream and adopted by more and more organisations, further research is needed to determine the impact of communication technology on productivity. In light of the evidence provided as part of this review, there is no doubt that communication technology and government-mandated lockdowns heavily impacted the world economy and global productivity. However, with various research and investigations conducted throughout the world, there are still disagreements on how heavily productivity was impacted during lockdowns.

There is also a lack of consensus on how productivity can be effectively measured for remote-working employees.

Further research is therefore needed to understand factors that positively affect productivity and how they can be measured and maintained.

Another area that needs further research is the impact of sustained remote working on employees’ mental health. This research would need to be conducted by using quantitative and qualitative studies to have good outcomes (Beno M and Hvorecky J, 2021).

## Conclusion

Communication technologies have given organisations the capability to allow their employees to work from anywhere. They have shifted the balance from the traditional working system based on a rigid working practice that involves long commuting and sitting all day behind a desk to zero commuting and working in the comfort of one’s home.

Before the pandemic, most countries and organisations were averse to their employees working remotely.

Data collected pre-pandemic indeed showed a small number of employees allowed to work remotely. Remote work was perceived as a privilege for the few. However, all that changed once the pandemic quickly spread and governments put restrictions on people’s movement. This new situation forced organisations to review their policies and embraced the new reality.

Data collected at the height of the pandemic showed an exponential rise in employees working from home with more than 50% of employees working remotely (Brynjolfsson et al., 2020).

The shift to remote work has had both a positive and negative impact on productivity. Productivity increased and was impacted positively due to the newfound autonomy and comfort of the home environment which provided flexibility, self-time management, inexistence of office distractions, and politics (Aczel et al., 2021).

The negative impact on productivity was due to mental well-being issues exacerbated by prolonged isolation, lack of socialization, exhaustion (longer connection and working hours), and other issues (Aczel et al., 2021).

As the pandemic is now over, it is clear that remote working is not abating and is here to stay. As a result of the implementation of remote work during the pandemic, a large number of employees are no longer willing to return to the office on a permanent basis. They now wish to work remotely or at least be given the opportunity to choose where to work from. At the same time, more organisations are also choosing to continue with remote work and allow their employees either to work fully remotely or hybrid (home and office). Other organisations have no plan to have their employees back in the office (Jack, 2020).

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