



Research Paper

Organizational Factors Affecting on Employees' Productivity in NGOs during WFH Case Study: NAWA for Culture and Arts Association

Mohammed S M AbuTawahina

Master of Professional Management, School of Management
University of Science Malaysia, Malaysia

Received 01 Jan., 2023; Revised 09 Jan., 2023; Accepted 11 Jan., 2023 © The author(s) 2023.
Published with open access at www.questjournals.org

ABSTRACT : COVID-19 has had significant effects on workers and workplaces around the world and many organizations are rapidly changing their operations and procedure due this pandemic. This study aims to explain the factors that influence on workers productivity during working from home arrangement in non-governmental organization in Palestine based on Scientific Management Theory. The focus is the impact of organizational factors that includes management support, digital infrastructure, and IT training on employee's productivity during WFH. The primary data used in this study all staff were working at NAWA for Culture and Arts Association by distributing questionnaires through Microsoft Form. The descriptive and statistical analysis conducted by SPSS 26 to determine the relations between study variables. Only digital infrastructure was found to have a significant impact on employee productivity during implementing WFH in this pandemic at NGOs. The research findings suggest that the organizational support processes such as management support and IT training were ineffective at NGOs and require further development to improve their support towards employee productivity when engaging in WFH.

KEYWORDS: Employee Productivity, WFH, Management Support, Digital Infrastructure, IT Training.

I. INTRODUCTION

New business models, agile operating techniques, and regulation all constantly alter how firms run. COVID-19 further exacerbated this transformation, which is based on values of human experience, and which can ultimately result in lasting changes at the level of behavior, culture, and organizations (Chaudhary et al., 2022). COVID-19 is a global health emergency and an international economic menace. The lockdown created a wide range of issues for both workers and employers globally (Kniffin et al., 2021). COVID-19 has also led to a widespread transition into virtual teamwork, often termed remote working in literature. It has also reignited interest in how Information and Communication Technology (ICT) can lead to work reconfigurations, enabling different ways of working, thus making new research necessary (Waizenegger et al., 2020).

When the first case of Covid 19 infection confirmed in Palestine, the Palestinian government began implementing strick lockdowns and guidelines on social distance. Many employees have lost their jobs and the important ones faced new standard operational procedures and constraints for protecting staff and customers' health and well-being. The government, non-government organizations (NGOs) and privet companies have switched their entire workforce to temporary remote work. As a result of this global pandemic, all businesses have changed their workplace dramatically, and their experience has been completely full of challenges.

There are things the organization and leaders should do to make sure that the now virtual employee can still be productive as an element of team that has and to interact with others in new ways. These items range from establishing new organizational technical and employee support systems to leadership training on the way to not only effectively communicate with virtual employees but, also, the way to sustain their cultural values, beliefs, and norms in an exceedingly trusting relationship with team members and therefore the leader (Newman and Ford, 2021).

The biggest challenge cited by 48% of employers was, not surprisingly, the unsuitability of some jobs to be done from home. Otherwise, it absolutely was the management, employee wellbeing and performance-related issues that dominated the challenges with 36% reduced staff interaction and co-operation, 33% the effective administration of home-based workers, and 28% regarding the monitoring of staff performance. More

technical challenges included staff proficiency with the new technology, not enough laptops, and computers (both at 25%) and outdated technology (23%) (CIPD, 2020). Although many organizations had to build employee digital capabilities to support working from home (WFH) rapidly, not most are fully competent with all of technologies that may enable hybrid working and further training is also necessary (CIPD, 2022).

Even though an increasing interest in remote working, most of the work in this field is concentrated in developed countries and in profit-oriented business e.g. (Chaudhary et al., 2022; Kniffin et al., 2021; Wang et al., 2020; Monteiro et al., 2019). Therefore, more research is needed to study the effect of organizational factors on employee productivity in developing or less developed countries, especially in non-governmental organizations. So, in a way, this study aims to fill the gap in this field in developing countries, Palestine being an example of a developing country and NGOs plays strategic role in Palestine in terms of employment and economic development.

Thus, the results of this study will give a new perspective to the findings of the previous studies on the issue of WFH and organization factor which identified from the literature as being potentially relevant to impacting on productivity included IT Training, Digital Infrastructure, and Management Support on employee's productivity in a somewhat different culture and business.

Therefore, the main purpose of this research is to examine the factors that impact on the ability of workers in completing their tasks and responsibilities through WFH arrangements in response to COVID 19, mainly in non-governmental organization. Then the following question was asked as a research question in this study: What are the effects of organization factors during WFH on employees' productivity whose working in non-governmental organization?

Problem Statement

From improving education and environment to supporting the needy people, the objective of NGOs can cover any topic related to improving a region or country based on the available fund and the human capital/worker who serve this organization. As a result of Covid 19, NGOs started laying-off employees, remote working, and in general increased uncertainty (Ramaswamy et al., 2021). Many organizations including NGOs, rethinking in managing the resources it has especially the human resources and how the organization can keep them performing well during WFH. Over the course of the pandemic, employees and employers have developed their knowledge and skill sets related to virtual work and now look to optimize the benefits of virtual work post-pandemic (Mitchell, 2021).

It can be said that the Pandemic scenario was compelling all the organizations to call for more IT and behaviour change with an aim to recover employees' output with efficiencies. Employee performance became the topmost priority issue for the IT-HR managers due to Covid-19 pandemic and WFH. Like other organizations, due to the continuous changes in IT work environment, and business behaviour in Covid 19 era, NGOs are operating in a dynamic environment. Therefore, within NGOs, the need to use IT in business, to support and communicate with staff, perform tasks, and measure performance continues to grow (Al-Ammary and Hamad, 2012).

What has been written about employee performance is mainly from profit-oriented business, paying little attention to the employees' performance in NGOs. Moreover, much recent research about employee performance during WFH can be found in academic journals such as (Chaudhary et al., 2022; Kniffin et al., 2021; Wang et al., 2020; Monteiro et al., 2019) and more empirical research is needed to cover other business sector and other geographical area. An understanding of the organizational factors involved regarding employees' performance during WFH in NGOs is important for organisations to manage its limited resources, to achieve its objectives, and to sustain its operations as possible. However, no study has been conducted on workers performance from NGOs perspective towards the attainment of the NGOs performance goals and objectives which are essential to the management and their donors. The researcher felt that if nothing was done to discover this area, the NGOs would lose its resources and position as a leading institution for economic development in the region.

Research Objectives

While many literatures identified various key elements that have effects on employee's productivity from organizational and individual side, this study will focus on organizational factors and tried to find out how employees' productivity can be affected during WFH at NGOs. The findings from this study may help management make more informed decisions regarding the development of strategies from Management to IT perspective to improve performance during remote working.

The specific objectives of this study were to:

- i. Examine how management support influences employee productivity at NGOs during WFH.
- ii. Establish the relationship between digital infrastructures and employee Productivity at NGOs during WFH.

- iii. Find out how IT Training influences productivity of employees during WFH at NGOs.

Research Questions

One cannot fully appreciate improvements made in science, knowledge, or technology without some understanding of the conditions inside which these growths happened (Salin, 2003). To evaluate how organizational factors such as IT Training, Digital Infrastructure, and Management Support can be successfully used to stimulate worker's performance in an NGOs, the study aims to address the following questions which specify what the researcher looking to investigate:

- i. How is the management support during WFH effect on the employee's productivity in NGOs?
- ii. Does digital infrastructure in NGOs influence on the employee's productivity during WFH?
- iii. What is the effect of IT Training on productivity of employees working in NGOs during WFH?

Significant of the Study

In response to certain gaps in knowledge regarding virtual work in NGOs, this study adds to existing knowledge by exploring several closely related variables form organizational side such as (IT training, digital infrastructure, and management support) on employee productivity. It also identifies critical elements and relationships associated with employee productivity which provides recommendations for NGOs and other sectors to consider it in relation to developing the best policies and practices which could influence employee's productivity in remote working environment.

The practical significance appears from changes that forced many organizations including NGOs to be open to change and adopt new methodologies to running the business and managing workforces. As a result, organizations face challenges regarding development, training, and employee performance. Management support and ICT practices could play a pivotal role in this situation.

From the theoretical side, the work force is the most valuable asset for any business regardless of the size and type of business. The more employees are productive, the more businesses are successful. This study may fill a gap in the literature and contribute to business and organizational practices by equipping management and organizations with the knowledge, understanding, and essentials of the virtual workforce to achieve the best results from work force in NGOs.

The application of results study could bring positive social change in management's functional roles and responsibilities in NGOs working in Palestine via effective management support, and IT change management. The findings could provide management with information that will help them to develop strategies to increase employees' productivity and to adopt ICT processes and procedures for management success in a virtual environment.

Organization Overview: NAWA for Culture and Arts Association

Nawa for Culture and Arts Association (NAWA) is a non-profit association established in 2014 by a group of educated, enthusiastic and dedicated youth to help empower their local community through culture, arts, and non-formal education. The Association offers its services to Palestinian society in general with a special focus on the local community in Deir Al Balah and the Middle area. NAWA has five cultural and educational access points provides its services, without discrimination, for thousands of Palestinian children, youth, parents, and educators who have limited access to cultural, artistic, recreational, and psychosocial support programs with a focus on people in Deir Al Balah area. Moreover, NAWA has many partnerships with international and local institutions.

II. LITERATURE REVIEW

Theoretical Underpinning

In 1909, Frederick Taylor published "The Principles of Scientific Management" within which he started with the subsequent statement: "The principal object of management should be to secure the maximum prosperity for the employer, coupled with the maximum prosperity for each employee." In saying this, he meant that the organization and employees should work together, strive to induce the foremost out of one another, and be compensated for his or her efforts as it's in everyone's best interests.

Frederick Taylor and his associates were the first people whose study the work process scientifically in 1909. They studied how work was performed, and that they checked out how this affected worker productivity. Taylor's philosophy focused on the idea that creating people work as hard as they might was not as efficient as optimizing the way the work was done. Regarding their interaction, Taylor said that workers should be taught daily and receive the friendliest help from people who are over them, rather than being driven or coerced by bosses or left to their own unaided devices.

In fact, Taylor believed that training and development was the foremost important object of both the workmen and the management to provide maximum efficiency which an in depth, intimate, personal

cooperation between the management and therefore the worker is of the essence of contemporary scientific or task management. Taylor proposed that by optimizing and simplifying jobs, productivity would increase. This was very different from the way work was typically implemented in businesses beforehand. There was no standardization, and a worker's main motivation was often continued employment, so there was no incentive to work as quickly or as efficiently as possible (Taylor, 1911).

Taking what he learned from these workplace experiments, Taylor developed four principles of scientific management simply called "Taylorism" and these are: (1) Develop a science for each element of work, (2) Scientifically Select, Train, Teach, and Develop the worker, (3) Cooperate with the Worker, (4) Divide the Work and Responsibility. The relevance of Scientific Management Theory to this study is that it provides the simplest way to review workplace efficiency and productivity; and it encourages the concept of systematic design for organization (Taylor, 1997).

Homeworking and Employee's Productivity

By applying the scientific management theory to our investigation regarding productivity of employee and organizational factors during remote working practice, we expect to observe a powerful role for organizational factor such as IT training, digital infrastructure, and Management Support during WFH. In the following sections, we briefly review some existing knowledge in the literature about employee's productivity during WFH and how it can be affected by IT training, digital infrastructure, and Management Support.

With Covid 19 pandemic and ICT advances, the remote working has become normal in our working life and employees and managers have developed their knowledge and skill sets related to remote working and now look to optimize the benefits of virtual work post-pandemic for better performance (Mitchell, 2021). According to (Rizwan et al., 2014), Performance of the employee is considered as what an employee does and what he doesn't do. Employee performance entails quality and quantity of output, presence at work, accommodative and supportive nature, and timeliness. (Mitchell, 2021) recommended the organizational leaders to follow the next five steps for successful hybrid work as the following, (1) accommodate adaptable workspaces, (2) support employee engagement, (3) listen to employees (4) prioritize IT strategy, and (5) focus on outcomes.

The biggest challenge cited by 48% of employers was, not surprisingly, the unsuitability of some jobs to be done from home. Otherwise, it was the management, employee wellbeing and performance-related issues that dominated the challenges rather than technical aspects, with 47% citing reduced mental wellbeing amongst employees, 36% reduced staff interaction and co-operation, 33% the effective line management of home-based workers, and 28% regarding the monitoring of staff performance. The least common challenge, though still present for a significant minority, was staff motivation and engagement at 21%. More technical challenges included staff proficiency with the new technology, not enough laptops, and computers (both at 25%) and outdated technology (23%) (CIPD, 2020).

There are things the organization and leaders should do to ensure that virtual employee can continue to be productive as a part of team that must interact with others in new ways such as building new technical and employee support systems to leadership training on how to sustain their cultural values, beliefs, and norms in a trusting relationship with team members and the leader (Newman and Ford, 2021).

The research findings of (Wulida Afrianty et al., 2022) highlight the importance for employees to have a strong digital orientation to be able to cope with disruption in the workplace. In addition to digital and technical knowledge, (Prodanova and Kocarev, 2021) stated that to achieve an adequate job performance during WFH, both distraction and efficacy elements of the working activity should be addressed. Companies adopt remote work during the Covid-19 recognized the importance of creating a working climate that would enable the development of all practices in WFH environment and certainly require employees who are high achievers (Pawirosumarto et al., 2016).

Awadaa et al., (2021) designed and administered an online questionnaire to collect data from 988 respondents. Relative to their prior in-office productivity before the pandemic, workers' perceptions of their overall productivity level remained stable. Workers who were female, older, and made a high income were more likely to report higher productivity. Productivity was positively influenced by better mental and physical health statuses, having a teenager, increased communication with co-workers and having a dedicated room for work. From a qualitative standpoint, the findings of (Mustajab et al., 2020) are very surprising because they show that the productivity of most employees who work from home declines. This is due to a lack of work-supporting facilities like computers, internet networks, and other disturbances like feeling overwhelmed by the same environment.

Moreover, (Rietveld et al., 2021) show that motivational processes can provide an explanation for the decrease in productivity of employees during the first lockdown. Since employees experience less relatedness at work, their intrinsic motivation decreases and, with it, their productivity at work.

In light of (Galanti et al., 2021) study, training interventions may be supplied to WFH employees to develop self-observation strategies and to promote the schedule of work-related goal-based deadlines and priorities. Furthermore, attention to new work processes supporting the work, leveraging the specific skills of individuals, and providing functional tools for job management in the new context of remote work. Consequently, organizations should empower workers through training courses aimed at developing self-leadership behaviors.

From the above analysis we have reached the conclusion that employee productivity and employees performance affected by several factors from the individual side to the organizational side, whether these factors are behavioral or technical. In the next sections, we will focus on Three of these factors (IT Training, Digital Infrastructure, Management support) which are related to the organizational side to answer the research questions.

Management Support and Employees Productivity

Management support can take many different forms, including effective communication between workers and managers, involving workers in important decisions, giving workers clear feedback on their performance, and helping them with difficult tasks. Based on (Parfvonova, 2009), Management Support indicates the extent to which managers and management show care and concern for workers and acknowledge their feelings about work-related issues.

Moving forward, it will be important for leaders to connect with employees to assess goals and workplace values and get feedback regarding work experiences and preferences, while addressing challenges or roadblocks. Surveys, focus groups, or even one-on-one feedback should be utilized in the planning and design of future work arrangements (Mitchell, 2021). Chaudhary et al. (2022) concludes that the companies should consider regular contact with employees to guide them on how to improve the virtual work during WFH. Management needs to carry out discussion activities to find out the needs of employees in implementing the work from home policy. The results of monitoring, evaluation and discussion can be used as input to provide organizational support to employee (Aropah et al., 2020).

Moreover, during the lockdown the employees were confused, fearsome and curious to know about their job security and survival and ultimately eager to know the company's status. HRmanagers should work on the deficiency and build strong communication network (Ramaswamy et al., 2021). Kniffin et al. (2021) offer the following advice for management to improve communication during WFH: (1) pay attention to structure and nature of communication flows; (2) provide opportunity for non-task interactions among employees to allow emotional connections among them; and (3) Remote workers must navigate the conflicts that can lead to performance losses. As WFH is different from regular office-based work, management and communication must be adjusted.

Based on the analysis of (Aropah et al., 2020) which study the effect of organizational support on employee performance, organizational support does not affect or have an inverse effect on the implementation of WFH policies. Management should pay attention about what employee's needs from organizational support and monitor and evaluate current organizational support to used it as input to provide the support for employees. From other side, the democratic leadership style had a positive effect on organizational culture, and organizational culture significantly affected employee performance. Organizational culture mediates the relationship between democratic leadership style and employee performance (Diana et al., 2021). Moreover, the recognition of accomplishments of employees by common actions such as thanksgiving has shown increased commitment, enthusiasm, and work success (Chaudhary et al., 2022).

According to (Diamantidis and Chatzoglou, 2018), management should help employees when a mistake is made, discussing with employees job-related issues, and letting employees make decisions regarding their everyday job execution. These practices will trigger a healthy organizational climate where managers, employees and co-workers will collaborate efficiently, be more motivated and increase their performance. (Neves & Eisenberger, 2012) suggest that open communication between management and employees is an effective way to increase employee's performance—both their standard job and extra-role activities—mainly because it confirms on importance of the well-being and values the contributions of its employees. According to the last discussion, we developed the following hypotheses:

H1: The relationship between the Management Support and Employee's Productivity is positively during WFH.

Digital Infrastructure and Employees Productivity

Digital infrastructure incorporates hardware and software systems that supports organizational functioning and employee performance (ITU, 2019). The presence of technology-based systems owned by an organisation that can enable the implementation of the organization's core business online is what is indicated by digital infrastructure in this study.

Many organisations weren't expressly prepared for the effects of a worldwide pandemic, even if some had built contingency plans for office closures due to natural catastrophes or building and facility damage.

COVID-19 clearly highlighted the importance of technology investments. For successful implementation of telework the organization must provide and upgrade the digital infrastructure including high-speed internet and provide the necessary training for both managers and employees (Aropah et al., 2020).

Investing in expensive technology does not guarantee that workers will always deliver their work on time. In fact, there might be failures that could only affect some employees due to technical issues that are beyond their hands. Additionally, other issues such as power outage and bad weather that may also affect their working schedules. Moreover, extreme weather conditions such as sandstorms can destroy the infrastructure used to enhance communication and work between remote workers and their supervisors/offices (Alghaithi and Sartawi, 2020). Organizations of all sizes want to make sure they offer IT resources (such as hardware, software, networking, and data) and IT support for their employees, regardless of where they work. This goes along with physical workspace changes (Mitchell, 2021).

However, leaders who had already prioritized investment in collaboration technologies (e.g., videoconferencing), networking (e.g., virtual desktop infrastructure and remote support), and security (e.g., cloud-based security and cyber insurance) were certainly more prepared (Mitchell, 2021). Moreover, the virtual tools are found to be a significant factor as (Chaudhary et al., 2022) show that the speed of internet connection, the speed of computers, and the well-functioning of the virtual software has positive impact on employee engagement.

According to (OECD, 2020), policies should support the provision of access to a fast, reliable, and secure ICT infrastructure for firms and workers. Whereas the readiness of the ICT infrastructure is a key prerequisite for enabling telework, its quality matters greatly for the efficiency of teleworking. Therefore, the following hypothesis has developed:

H2: The digital infrastructure has a positive effect on employee productivity during WFH

IT Training and Employees Productivity

Training is one of the primary activities that a company may use to enhance the skills and capabilities of its personnel in the context of human resources management. IT training was shown to be one of the most often employed strategies for adjusting to evolving IT systems and software (Benamati & Lederer, 2001). IT-related expertise is recognised as a source of long-term competitive advantage for a company. Intangible IT resources, such as IT skills, are significant factors which in turn influences employee and organisational performance according to (Lertwongsatien et al., 2005). Investing in personal development comes with many benefits for the organizations such as equipping them with tools to be even more effective in their role (Chaudhary et al., 2022).

In order to maximise returns on human investment as firms transition to a hybrid work environment, executives must make deliberate choices about how and where to invest in the employee lifecycle related to the development of organizational culture (Mitchell, 2021). Firms that opt for remote work employ a relatively larger proportion of workers that use personal computer with fast speed internet. (Natália et al., 2019). Further, managers should consider improving a firm's training culture, to help employees to acquire new job-related knowledge, skills and abilities which help them to be more proactive and adaptive when faced with various job execution-related challenges (Diamantidis and Chatzoglou, 2019).

The virtual training, according to (Chaudhary et al., 2022) results, has positive effect on employee engagement score. However, managers should keep in mind that investing in a well-organized training culture, well improve level of employee adaptability for job requirements and challenges, thus affecting their job performance (Diamantidis and Chatzoglou, 2019). Technology plays a vital role in mitigating the potential disadvantages of WFH, namely social isolation and difficulties with communication and collaboration. Support and training for workers using technology while WFH is also important for enabling workers to maintain their performance at work (Green et al., 2020). Based on this discussion, we propose the following hypothesis:

H3: There is a positive relationship between the IT Training and Employee Productivity during WFH

III. METHODOLOGY

Research Paradigm

Leaders in the field Guba and Lincoln (1994) defined a paradigm as a fundamental set of assumptions or worldview that directs research activities or an inquiry. Research Paradigm has significant implications for every decision made in the research process, including choice of methodology and methods (Kivunja & Kuyini, 2017).

Positivism, constructionism, critical realism, and pragmatism are dominant research paradigms which are mostly influenced by academic researchers (Sekaran & Bougie, 2020). Positivists are concerned with the rigor and replicability of their research, the reliability of observations and the generalizability of findings (Sekaran & Bougie, 2020). On the other hand, a positivism research paradigm is frequently correlated with

quantitative research methodologies that presume the presence of a true reality that can be uncovered through rigorous empirical study (Creswell, 2009).

In general, the positivist paradigm fits the intended objective of the study to employ the quantitative method. Following the deductive approach, this study focuses on identifying problems, developing theory-driven hypotheses, gathering data, analysing empirical data, and drawing conclusions (Sekaran & Bougie, 2020). The research process involves identifying the population, examining the sample of the population, and conducting statistical analysis of the variables. This research paradigm has been widely used in renowned scholars in social sciences as it allows researchers to test theory and hypotheses based on objective (data) measures to support the results.

Research Design

A research design is a blueprint for fulfilling research objectives and answering research empirical questions (Schindler, 2022). According to (Bell et al., 2019) research design provides a framework for the collection and analysis of data. Obviously, no single design can be said to be superior in every situation. Instead, you'll need to make decisions and come up with a design that works for the task at hand. Therefore, research design includes research methodologies (such as performing experiments, surveys, case studies, or a combination of these strategies), as well as defining the research's scope, the depth of its data analysis, and its timeframe.

Based on research objectives, this study adopted the cross-sectional survey research methodology to provide standardized information that could be used to examine the associations between the variable under study at NAWA for Culture and Arts Association as a case study. These techniques frequently result in inexpensive costs, rapid responses, and greater control over the respondents. The survey was self-administered and created in Microsoft Forms and will be distributed entirely online to the target respondents whose working at NAWA for Culture and Arts Association in Palestine.

Research Process

The business research process provides a roadmap with directions for conducting a business research project (Hair et al., 2020). The research process defined by (Schindler, 2022) as a sequential process involving several clearly defined stages: clarify the research question, design the research, collect, and prepare data, analyse, and interpret data, and report insights and recommendations. The idea of a sequence is useful for developing a project and for keeping the project orderly as it unfolds.

The research process started with the literature review in which the problem and research questions were developed by identifying gaps in the literature about organizational factors and employee productivity/performance during WFH. Review of literature further led to the identification of the relevant theories about employee productivity which acted as a platform in developing the theoretical framework and hypotheses for this research.

The next phase was to determine the most suitable research design to be employed in this research and developing the survey questionnaire based on study variables. Once the survey questionnaire was finalised, the finalised instrument will use to collect data from the sample. The final stage will involve the interpretation of the findings and the discussion on the implication of the findings. In giving a clear explanation and detail discussion of the findings, the researcher needs to confer with relevant theories and literature.

Sampling, Data Collection and Questionnaire

Dawson (2009) in quantitative research indicated that if sample was chosen carefully using the correct procedure, it is then possible to generalise the results to the whole of the research population. According to the research objectives and research population and to the best of the researcher's knowledge, the study sample will cover all employee at NAWA for Culture and Arts Association by the survey. By using Microsoft Form, an online survey created and shared with the target participants targeted sample (60 worker at 2022) throughout official email to collect the data for this study.

At the beginning of the questionnaire, a cover letter explaining the objective of the study and ethical deliberations were included on the front page. The questionnaire was divided into three sections as the following: Section A questions are related to respondents' demographic information; Section B is designed to measure the dependent variable which is Employee Productivity and consist of 12 Q; and Section C is about the independent variables (Organizational Factors) which are Management Support (7Q), Digital Infrastructure (7Q), and IT Training (5Q). A five-Likert scale measurement (1= strongly disagree, 5= strongly agree) was employed to all items.

The researchers carefully considered the wording of the survey instructions to avoid any unnecessary words and any misunderstanding, and all the measurements were adapted from previous research and scales available in the literature, and as such they were all previously pretested. The measurement of management

support adapted from (Henderson & Argyle, 1985; Eisenberger et al., 1986). IT training measurement was adapted from (Bradford & Florin, 2003; Bhat & Bashir, 2018). The digital infrastructure measurement was adapted from (Aboelmaged & Subbaugh, 2012; Byrd and Turner, 2000; and ITU, 2019). The measurement of employee productivity in this study was adapted from (Koopmans et al., 2012; Villagrasa et al., 2019; and Griffin, 2007).

IV. DATA ANALYSIS AND HYPOTHESIS TESTING

Preliminary Data Analysis

After data has been collected with response rate of 80% as we received 48 responses from 60 participant targeted, the researcher examined it to ensure its completeness and validity before it is analyzed. According to (Hair et al., 2020), the typical tasks for preliminary analysis are editing, dealing with missing data, coding, transformation, and entering data. After handling all issues related to data cleaning, the final sample is 45.

Demographic Characteristics

Table (4.1) presents the personal characteristics of respondents on the questionnaire. The females form 75.6 % of participants and the males form 24.4%. NAWA encourages the Female recruitment due to the nature of its work and its target beneficiaries. 60% of these participants are married, 37.8% are single, and 2.2% are divorced according to marital status.

According to age range, (from 18 to 25 years = 6.7%, from 26 to 35 = 64.4%, from 36 to 45 = 26.7%, and from 46-55= 2.2%). The highest age range is from 26 to 35 by 64.45 given that the most respondents are youth. These statistics are consistent with the reality of NAWA Association where it depends basically on youth who have the energy to work, create, innovate, adapt with changes inside and outside the association.

Table 4.1
Personal Characteristics of the Research Population (n=45)

Construct	F	%	Construct	F	%	Construct	F	%
Gender			Age			Years of experience		
Male	11	24.4	18-25	3	6.7	Less than 2	2	4.4
Female	34	75.6	26-35	29	64.4	2-5	12	26.7
Position			36-45	12	26.7	5-10	21	46.7
Project Coordinator	12	26.7	46-55	1	2.2	< than 10	10	22.2
Senior Animator	12	26.7	Marital status			Education		
Specialist	9	20	Single	17	37.8	Diploma	1	2.2
Educator	4	8.9	Married	27	60	Bachelor	41	91.1
Officer	3	6.7	Divorced	1	2.2	Master	2	4.4
Other	5	11				PhD	1	2.2

With respect to educational level, (Diploma = 2.2%, Bachelor = 91.1%, Postgraduates = 6.6%). The highest percentage is the bachelor's degree with 91.1% of participants considering that age range (26 to 35) is the highest as the bachelor's degree is granted at 22 years, so those with age from 22 and above have a bachelor's degree. According to job position, (Project Coordinator= 26.7%, Senior Animator= 26.7%, Specialist = 20%, Educator = 8.9%, Officer = 6.3%, others = 11%). Project coordinator and Senior Animator are the highest. This returns to the fact that NAWA implemented many projects, and this position is popular among NGOs. Regarding experience years, (less than two years = 2.2%, 2-5 years = 26.7%, 5-10 years = 46.7%, more than 10 years= 22.2%). This is consistent with the age distribution of participants as 64.4% aged between 26-35 years old.

Reliability

Reliability of an instrument is the degree of consistency of questionnaire. For this purpose, Cronbach Alpha (Coefficient alpha) test was performed to determine the reliability of the questionnaire. Its values could range from 0.0 to 1.0 with a value closer to 1.0 indicating a higher level of reliability.

Table 4.2
Reliability of Measures

Construct	No of Items	Cronbach's Alpha
Productivity	12	.788
Management Support	7	.926
Infrastructure	7	.885
IT Training	5	.90

Findings of the study reported the following reliability coefficients using Cronbach's Alpha for each category in the scale (Table 4.2). Results showed a Cronbach's Alpha coefficient were in the range from 0.788 and 0.926. This range is considered high and ensures the reliability of each field of the questionnaire according to many scholars such as Nunnally (1978) $\geq 0.7 - 0.9$; Nunnally & Bernstein (1994) ≥ 0.6 ; and Sekaran (2003) ≥ 0.5

Descriptive Statistics of Variables of the Study

Once the construct validity and reliability were completed, mean scores were calculated from the scale's items to generate the composite scores for the constructs which will be used in the regression analysis (Ellinger et al., 2008; Hair et al., 2019). As the table (4.3) exemplifies, the mean and standard deviation of all variables calculated as the following: (Productivity: Mean= 3.8481, SD: 0.4239; Management Support: Mean= 3.7238, SD: 0.72101; Infrastructure: Mean= 3.9587, SD: 0.74145; IT Training: Mean= 4.1289, SD: 0.6932).

Table 4.3

Descriptive Analysis of Variables

Construct	Mean	Std. Deviation	Skewness	Kurtosis
Productivity	3.8481	.42391	.012	.128
Management Support	3.7238	.72101	-.664	.128
Infrastructure	3.9587	.74145	-.480	-.424
IT Training	4.1289	.69302	-.488	-.636

Furthermore, the normality of the composite scores was checked and the result indicated no violation with skewness and kurtosis. Skewness assesses the extent to which a variable's distribution is symmetrical. If the distribution of responses for a variable stretches toward the right or left tail of the distribution, then the distribution is referred to as skewed. Kurtosis is a measure of whether the distribution is too peaked (a very narrow distribution with most of the responses in the center) (Hair et al., 2019). Based on Table 4.3 the result indicated no violation with skewness and kurtosis values within the accepted range ($\leq \pm 1$ and $\leq \pm 7$, respectively) recommended by Curran et al., (1996).

Correlation

In order to establish the relations between employee productivity and organizational factors affecting them, a correlation analysis was performed. As the skewness and kurtosis results showed that distribution was normal, Pearson correlation coefficient was calculated. The following table (4.4) shows the results of Pearson correlation coefficients between variables of the study. The researcher calculates coefficients between all main constructs. Where the researcher sees through the results a positive weak correlation between the independent variables (Infrastructure) and the dependent variable (Productivity). This positive relation is significant at .05 level at NAWA for Culture and Arts Association.

Table 4.4

Correlation Matrix

Construct	Productivity	Management Support	Infrastructure	IT Training
Productivity	1			
Management Support	.270	1		
Digital Infrastructure	.353*	.684**	1	
IT Training	.155	.680**	.742**	1

* $p < 0.05$, ** $p < 0.01$

On the other hand, the results show no significant relationship between Employee Productivity and Management support and between Employee productivity and IT Training at any level of significant at NAWA for Culture and Arts Association.

Multiple Regression

A multiple regression was run to predict how employee productivity was explained by Management Support, Infrastructure, and IT Training. Based on table (4.5) and table (4.6), these variables significantly predicted Intention, $F(3, 44) = 2.62$, $p > .05$, $R^2 = .161$, which shows that 16.1% of the variance in employees' productivity can be explained by the 3 predictors. Two variables (Management Support and IT Training) were not significant predictors of employees' productivity whereas Infrastructure was a significant predictor.

Table 4.5
Regression Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.401 ^a	.161	.099	.40227
a. Predictors: (Constant), Management Support, Infrastructure, IT Training				
b. Dependent Variable: Productivity				

Table 4.6
ANOVA Test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.272	3	.424	2.620	.064 ^b
	Residual	6.635	41	.162		
	Total	7.907	44			
a. Dependent Variable: Productivity						
b. Predictors: (Constant), Management Support, Digital Infrastructures, IT Training,						

According to Table 4.7, All VIF values are lower than 5 indicating no issue of multicollinearity. The t-value is greater than 1.96 (2- tail) and the p-values are smaller than 0.05 for H2. On the other side, the t-values are less than 1.96 (2- tail) and the p-values are larger than 0.05 for H1 & H3.

Table 4.7
Hypotheses Testing

Hypothesis	Construct	Unstd. B	Std. Error	Std. B	t-value	Sig.	VIF
H1	Management Support	.087	.123	.149	.710	.482	2.143
H2	Digital Infrastructure	.270	.131	.472	2.058	.046	2.568
H3	IT Training	-.182	.140	-.297	-1.301	.200	2.543

Management Support (b = .087, t = .710, p > .05), IT Training (b = -.182, t=-1.301, p > .05) and Infrastructure (b = .270, t = 2.058, p < .05). Thus, H1 and H3 of this study were not supported while H2 was supported. Based on correlation and regression model, the digital infrastructure had the greatest impact on employee productivity at NGOs.

V. DISCUSSION AND CONCLUSION

This study seeks to determine the impact of Management Support, Digital Infrastructure, and IT Training on Employee Productivity during WFH at Palestinian NGOs. The strongest indicator of employee productivity was determined to be Digital infrastructure. Management Support and IT Training, however, were found not to be significant predictors of employee productivity.

The result from first hypothesis of this study, H1, is that Management Support has a positive not significant relationship with employee productivity during WFH in NGOs. This result supported by the findings of (Diamantidis and Chatzoglou, 2019) who discovered that helping employees when a mistake is made, discussing with employees job-related issues, and letting employees make decisions regarding their everyday job execution will trigger a healthy organizational climate where managers, employees and co-workers will collaborate efficiently, be more motivated and increase their performance and productivity. Based on (Diamantidis and Chatzoglou, 2019), lack of management support to employees' actions has a direct negative impact on employee performance.

In addition, (Neves & Eisenberger, 2012) found that Perceived Organizational Support fully mediates the relationship between management communication and both in-role and extra-role performance. Specifically, it reveals that management communication affects performance mainly because it signals that the organization cares about the well-being and values the contributions of its employees. On the other side, (Aropah et al., 2020) found that organizational support has a negative relationship with employee performance. (Wang et al, 2020) functioned the Workload and monitoring as demands which increasing remote workers' work-home interference, and thereby undermining employee well-being and productivity. The results of (Afrianty et al., 2022) found that organizational support through management support were found to have no impact on

productivity in WFH. This suggests that the organizational support processes were ineffective and require further development to improve their support towards employee productivity when engaging in WFH.

Policy allowing employees to work from home has a significantly negative effect on firm labour productivity as (Monteiro et al., 2019) stated. In short, the negative productivity effect of remote working seems to be mainly driven by small firms that do not export, that do not undertake any Research & Development activities, and that employ a relatively high share of low-skilled workers (Monteiro et al., 2019). For successful hybrid work, (Mitchell, 2021) recommended the organizational leaders to support employee engagement, listen to employees and focus on outcomes.

(Awadaa et al., 2021) designed and administered an online questionnaire to collect data from 988 respondents. Relative to their prior in-office productivity before the pandemic, workers' perceptions of their overall productivity level remained stable. Workers who were female, older, and made a high income were more likely to report higher productivity. Productivity was positively influenced by better mental and physical health statuses, having a teenager, increased communication with co-workers and having a dedicated room for work.

More specifically, out-of-office work can lead to a decline in productivity for routine, manual and repetitive tasks, whereas the opposite is true for cognitive and creative tasks. Such effects might be captured by considering the skill-level of the firm, if there is a positive relationship between the share of high-skilled workers and the share of creative tasks, which seems a plausible assumption (Monteiro et al., 2019). These findings of research are interesting, and leaders should pay attention about what employee's needs from management support. Management should monitor and evaluate current support. Management also needs to carry out discussion activities to find out the needs of employees in implementing the work from home policy. The results of monitoring, evaluation and discussion can be used as input to provide organizational support to employees.

The result from the second hypothesis of this study, H2, is that Digital Infrastructure has positive significant effect on employee productivity during WFH in NGOs. Because many interpersonal processes are mediated by ICTs in the current digital workplace and communication quality is an important experience to consider for remote workers (Wang et al, 2020). Poor communication will not only hinder performance, as suggested in (Wang et al, 2020) research, but can also impair professional relationship and increase work stress which will hinder the productivity of employee during remote working. This is supported by (Mitchell, 2021) results which stated that the Organizations of all sizes want to make sure they offer IT resources (such as hardware, software, networking, and data) and IT support for their employees, regardless of where they work. This goes along with physical workspace changes.

The results inconsistent with (Afrianty et al., 2022) who found that organizational support through digital infrastructure have no impact on productivity in WFH. Transformational changes in work at short notice are difficult to manage where there are variable staff IT capabilities in managing a different work medium. Technology plays a vital role in mitigating the potential disadvantages of WFH, namely social isolation and difficulties with communication and collaboration. Support for workers using technology while WFH is also important for enabling workers to maintain their performance at work (Green et al., 2020).

However, according to (Mitchell, 2021), the leaders who had already prioritized investment in collaboration technologies (e.g., videoconferencing), networking (e.g., virtual desktop infrastructure and remote support), and security (e.g., cloud-based security and cyber insurance) were certainly more prepared for WFH and received better results. The last result consists of (Koekemoer et al., 2021) research who find the Technological flexibility had a positive structural path to the adaptivity performance component for employee. The level of remote working implemented has a significant impact on how employees adapt to and cope with the changes necessary to successfully work from home.

The result from the third hypothesis of this study, H3, is that IT training has no positive no significant effect on employee productivity during WFH in NGOs, which is consistent with the findings of (Afrianty et al., 2022), who discovered that IT training was found to have no impact on productivity in WFH. This requires further development to improve their support towards employee productivity when engaging in WFH where there are variable staff IT capabilities in managing a different work medium. Although our findings did not reveal a positive relationship between IT training and employee productivity, we believe that IT training can assist employees in improving their productivity by improving their knowledge and skills.

Technology plays a vital role in mitigating the potential disadvantages of WFH, namely social isolation and difficulties with communication and collaboration. Training for workers using technology while WFH is also important for enabling workers to maintain their performance at work. (Green et al., 2020). The virtual training, according to (Chaudhary et al., 2022) results, has a positive effect on employee engagement score. Further, managers should consider improving a firm's training culture, to help employees to acquire new job-related knowledge, skills and abilities which help them to be more proactive and adaptive when faced with various job execution-related challenges. However, managers should have in mind that investing in a well-organized training culture, which is focused on employee needs, increased employee adaptability level to

emerging job requirements and challenges, thus affecting their job performance (Diamantidis and Chatzoglou, 2019). (Mitchell, 2021) recommended the organizational leaders to prioritize IT strategy for successful hybrid work.

In light of the results discussed in this study, NGOs should consider the most effective means of improving employee productivity during WFH. Our findings show that factors such as management Support and IT Training have not any significant effect on employee productivity, while Digital Infrastructure is key to improve employee productivity in NGOs during WFH. The COVID pandemic has demonstrated that many organizations, including NGOs, were not prepared to meet the unexpected challenges associated with IT based forms of working and service delivery. In the future and with health and environmental crisis, organizations need to seriously plan and organize staffing and service more successfully.

An organization's employees are the fuel of your organization and are considered a valuable asset. Organizations require a minor adjustment to efforts that have already been made, for example, to training, development, rewards, recognition, management support, physical work environment, leadership style, two-way communications, employee engagement, wellbeing, and work life balance.

Limitations and Further Studies

While the findings of this research improved the insights of organizational factors which may affect employees' productivity in NGOs during WFH, the discussion disclosed limitations, which offer avenues for future research.

Thus, firstly, the restricted generalization of the results could be improved with an extended study collecting a more extensive data sample representative more NGOs. On the other hand, different data can be collected from other sectors such as government and profit-oriented business as the last study focuses on NGOs. The current study has been performed in cross-section design while future studies can consider longitudinal studies and a mix of qualitative and quantitative methods can also be used.

Therefore, future research should focus on other factors which affect employee productivity other than organizational factors. For example, job factors, working environment factors, personal factors, Job satisfaction, and Employee engagement among others. Furthermore, bearing in mind the Covid-19 provoked stress, it can investigate more thoroughly these challenging psychological states, so other sources could be found, and they could be addressed from the basis, as the factors directly or indirectly affecting on persons and their outcomes.

VI. CONCLUSION

This research is one of the first studies that examined organizational factors (Management Support, Digital Infrastructure, IT Training) affecting employee productivity in implementing WFH during the covid-19 at NGOs in developing country. Our results show that factors such as management support and IT training do not have a significant impact on employee productivity of NGOs while WFH. On the other side, digital infrastructure is critical to and has significant impact on employee productivity at NGOs. Based on these results, the management of NGOs should consider the most effective means of improving employee productivity during WFH as these employees are the fuel of any organization and are considered a valuable asset. Finally, other factors such as rewards, recognition, physical work environment, leadership style, communication, employee engagement, happiness and work-life balance need to be considered carefully in these organizations because of their potential impact on employee productivity.

REFERENCES

- Afrianty, T. W., Artatanaya, I. G., & Burgess, J. (2022). Working from home effectiveness during Covid-19: Evidence from university staff in Indonesia. *Asia Pacific Management Review*, 27(1), 50–57. <https://doi.org/10.1016/j.apmr.2021.05.002>
- Al-Ammary, J., & Hamad, S. (2012). Information Technology for Enhancing NGOs' Performance in The Kingdom of Bahrain. *International Journal of Electronic Commerce Studies*, 3(1), 111–120.
- Alghaithi, A., & Sartawi, K. (2020). Improving Remote Employees' Organizational Productivity – Practical Guidelines for Identifying and Managing Bottlenecks in Today's World. *IOSR Journal of Business and Management*, 22(2), 63–74. <https://doi.org/10.9790/487X-2202046374>
- Allen, D., Golden, D., & Shockley, M. (2015). How effective is telecommuting? Assessing the status of our scientific findings. *Psychological Science in the Public Interest*, 16(2), 40–68
- Aropah, V. D., Sarma, M., & Sumertajaya, I. M. (2020). Factors Affecting Employee Performance during Work from Home. *International Research Journal of Business Studies*, 13(2), 201–214. <https://doi.org/10.21632/irjbs.13.2.201-214>
- Atatsi, E. A., Stoffers, J., & Kil, A. (2019). Factors affecting employee performance: a systematic literature review. *Journal of Advances in Management Research*, 16(3), 329–351. <https://doi.org/10.1108/jamr-06-2018-0052>
- Awada, M., Lucas, G., Becerik-Gerber, B., & Roll, S. (2021). Working from home during the COVID-19 pandemic: Impact on office worker productivity and work experience. *Work*, 69(4), 1171–1189. <https://doi.org/10.3233/wor-210301>

- Bell, E., Bryman, A., & Harley, B. (2019). *BUSINESS RESEARCH METHODS 5E* (5th ed.) [E-book]. Oxford University Press.
- Benamati, J., & Lederer, A. L. (2001). Coping with rapid changes in IT. *Communications of the ACM*, 44(8), 83–88. <https://doi.org/10.1145/381641.381664>
- Bougie, R., & Sekaran, U. (2019). *Research Methods for Business* (8th Edition) [E-book]. Wiley.
- Chaudhary, V., Mohanty, S., Malik, P., Apsara Saleth Mary, A., Pai Maroor, J., & Nomani, M. (2022). Factors affecting virtual employee engagement in India during Covid-19. *Materials Today: Proceedings*, 51, 571–575. <https://doi.org/10.1016/j.matpr.2021.05.685>
- CIPD. (2020, September). *Embedding new ways of working: implications for the post-pandemic workplace*. Chartered Institute of Personnel and Development. https://www.cipd.co.uk/Images/embedding-new-ways-working-post-pandemic_tcm18-83907.pdf
- CIPD. (2021, September). *Planning for hybrid working*. Chartered Institute of Personnel and Development. <https://www.cipd.co.uk/knowledge/fundamentals/relations/flexible-working/planning-hybrid-working#gref>
- Curran, P. J., West, S. G., Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29.
- Dawson, C. (2009). *Introduction to Research Methods: A Practical Guide for Anyone Undertaking a Research Project* (4th ed.) [E-book]. How To Books.
- Diamantidis, A. D., & Chatzoglou, P. (2019). Factors affecting employee performance: an empirical approach. *International Journal of Productivity and Performance Management*, 68(1), 171–193. <https://doi.org/10.1108/ijppm-01-2018-0012>
- Diana, I. N., Supriyanto, A., Ekowati, V. M., & Ertanto, A. H. (2021). Factor Influencing Employee Performance: The Role of Organizational Culture. *Journal of Asian Finance, Economics and Business*, 8(2), 545–553. <https://doi.org/10.13106/jafeb.2021.vol8.no2.0545>
- Ellinger, A. E., Ketchen Jr., D. J., Hult, G. T. M., Elmadag, A. B., Richey Jr., R. G. (2008). Market orientation, employee development practices, and performance in logistics service provider firms. *Industrial Marketing Management*, 37(4), 353–366.
- Galanti, T., Guidetti, G., Mazzei, E., Zappalà, S., & Toscano, F. (2021). Work From Home During the COVID-19 Outbreak. *Journal of Occupational & Environmental Medicine*, 63(7), 426–432. <https://doi.org/10.1097/jom.0000000000002236>
- Gamal Aboelmaged, M., & Mohamed El Subbaugh, S. (2012). Factors influencing perceived productivity of Egyptian teleworkers: an empirical study. *Measuring Business Excellence*, 16(2), 3–22. <https://doi.org/10.1108/13683041211230285>
- General Administration of Public Affairs' and Non-Governmental Organization*. (2022). Ministry of Interior and National Security. Retrieved May 21, 2022, from <https://ngo.moi.gov.ps/>
- Given, L. M. (2008). Research setting. In *The SAGE encyclopaedia of qualitative research methods* (pp. 788-788). SAGE Publications, Inc., <https://dx.doi.org/10.4135/9781412963909.n398>
- Green, N., Tappin, D., & Bentley, T. (2020). Working From Home Before, During and After the Covid-19 Pandemic: Implications for Workers and Organisations. *New Zealand Journal of Employment Relations*, 45(2), 5–16. <https://doi.org/10.24135/nzjer.v45i2.19>
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Sage Publications, Inc.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., Tatham, R. L. (2019). *Multivariate Data Analysis*, 8th ed. Pearson Prentice Hall, Upper Saddle River, NJ.
- Hair, J. F., Page, M., & Brunsveld, N. (2020). *Essentials of Business Research Methods* (4th ed.) [E-book]. Routledge.
- Henderson, M., & Argyle, M. (1985). Social support by four categories of work colleagues: Relationships between activities, stress and satisfaction. *Journal of Organizational Behavior*, 6(3), 229–239. <https://doi.org/10.1002/job.4030060306>
- Kivunja, C., & Kuyini, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, 6(5), 26. <https://doi.org/10.5430/ijhe.v6n5p26>
- Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., Bamberger, P., Bapuji, H., Bhawe, D. P., Choi, V. K., Creary, S. J., Demerouti, E., Flynn, F. J., Gelfand, M. J., Greer, L. L., Johns, G., Keesebir, S., Klein, P. G., Lee, S. Y., . . . Vugt, M. V. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, 76(1), 63–77. <https://doi.org/10.1037/amp0000716>
- Koekemoer, L., de Beer, L. T., Govender, K., & Brouwers, M. (2021). Leadership behaviour, team effectiveness, technological flexibility, work engagement and performance during COVID-19 lockdown: An exploratory study. *SA Journal of Industrial Psychology*, 47. <https://doi.org/10.4102/sajip.v47i0.1829>
- Koopmans, L., Bernaards, C., Hildebrandt, V., van Buuren, S., van der Beek, A. J., & de Vet, H. C. (2012). Development of an individual work performance questionnaire. *International Journal of Productivity and Performance Management*, 62(1), 6–28. <https://doi.org/10.1108/17410401311285273>
- Mitchell, A. (2021). The Best of Both Worlds: 5 Steps for Hybrid Work Success. *Cutter Business Technology Journal*, 34(7), 100866. <https://www.cutter.com/article/best-both-worlds-5-steps-hybrid-work-success>
- Monteiro, N. P., Straume, O. R., & Valente, M. (2019). Does Remote Work Improve or Impair Firm Labour Productivity? Longitudinal Evidence from Portugal. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3507262>

- Mustajab, D., Bauw, A., Rasyid, A., Irawan, A., Akbar, M. A., & Hamid, M. A. (2020). Working From Home Phenomenon as an Effort to Prevent COVID-19 Attacks and Its Impacts on Work Productivity. *TIJAB (The International Journal of Applied Business)*, 4(1), 13. <https://doi.org/10.20473/tijab.v4.i1.2020.13-21>
- Mustajab, D., Bauw, A., Rasyid, A., Irawan, A., Akbar, M. A., & Hamid, M. A. (2020). Working From Home Phenomenon As an Effort to Prevent COVID-19 Attacks and Its Impacts on Work Productivity. *TIJAB (the International Journal of Applied Business)*, 4(1), 13. <https://doi.org/10.20473/tijab.v4.i1.2020.13-21>
- Neves, P., & Eisenberger, R. (2012). Management Communication and Employee Performance: The Contribution of Perceived Organizational Support. *Human Performance*, 25(5), 452–464. <https://doi.org/10.1080/08959285.2012.721834>
- Newman, S. A., & Ford, R. C. (2021). Five Steps to Leading Your Team in the Virtual COVID-19 Workplace. *Organizational Dynamics*, 50(1), 100802. <https://doi.org/10.1016/j.orgdyn.2020.100802>
- Nunnally, J.C. (1978). *Psychometric Theory*. 2nd Edition, McGraw-Hill, New York.
- Nunnally, J.C., & Bernstein, I. H. (1994). *Psychometric Theory* (3rd ed.). New York: McGraw-Hill.
- OECD. (2020, September). *Productivity gains from teleworking in the post COVID-19 era: How can public policies make it happen?* The Organization for Economic Co-operation and Development. https://read.oecd-ilibrary.org/view/?ref=135_135250-u15liwp4jd&title=Productivity-gains-from-teleworking-in-the-post-COVID-19-era
- Pawirosumarto, S., Sarjana, P. K., & Muchtar, M. (2017). Factors affecting employee performance of PT.Kiyokuni Indonesia. *International Journal of Law and Management*, 59(4), 602–614. <https://doi.org/10.1108/ijlma-03-2016-0031>
- Prodanova, J., & Kocarev, L. (2021). Is job performance conditioned by work-from-home demands and resources? *Technology in Society*, 66, 101672. <https://doi.org/10.1016/j.techsoc.2021.101672>
- Ramaswamy, S., Das, G., & Singh, S. (2021). Employee Engagement: Probable Solutions to Challenges Posed During Covid-19 Outbreak with Reference to Indian It Sector. *Vidyabharati International Interdisciplinary Research Journal*, 12(2), 316–323. <http://www.viirj.org/vol12issue2/50.pdf>
- Ramos-Villagrasa, P. J., Barrada, J. R., Fernández-del-Río, E., & Koopmans, L. (2019). Assessing Job Performance Using Brief Self-Report Scales: The Case of the Individual Work Performance Questionnaire. *Revista de Psicología Del Trabajo y de Las Organizaciones*, 35(3), 195–205. <https://doi.org/10.5093/jwop2019a21>
- Ravichandran, T., Lertwongsatien, C., & Lertwongsatien, C. (2005). Effect of Information Systems Resources and Capabilities on Firm Performance: A Resource-Based Perspective. *Journal of Management Information Systems*, 21(4), 237–276. <https://doi.org/10.1080/07421222.2005.11045820>
- Rietveld, J. R., Hiemstra, D., Brouwer, A. E., & Waalkens, J. (2021). Motivation and Productivity of Employees in Higher Education during the First Lockdown. *Administrative Sciences*, 12(1), 1. <https://doi.org/10.3390/admsci12010001>
- Rizwan, M., Tariq, M., Hassan, R., & Sultan, A. (2014). A Comparative Analysis of the Factors Effecting the Employee Motivation and Employee Performance in Pakistan. *International Journal of Human Resource Studies*, 4(3), 35. <https://doi.org/10.5296/ijhrs.v4i3.5873>
- Salin, D. (2003). Ways of Explaining Workplace Bullying: A Review of Enabling, Motivating and Precipitating Structures and Processes in the Work Environment. *Human Relations*, 56(10), 1213–1232. <https://doi.org/10.1177/00187267035610003>
- Saunders, M., LEWIS, P., & THORNHILL, A. (2019). *Research Methods for Business Students* (8th Edition) [E-book]. PEARSON.
- Schindler, P. (2022). *Business Research Methods* (14th Edition) [E-book]. McGraw Hill.
- Sekaran, U. (2003). *Research Methods for Business: A Skill-Building Approach*. 4th Edition, John Wiley & Sons, New York.
- Staples, D. S., Hulland, J. S., & Higgins, C. A. (1999). A Self-Efficacy Theory Explanation for the Management of Remote Workers in Virtual Organizations. *Organization Science*, 10(6), 758–776. <https://doi.org/10.1287/orsc.10.6.758>
- Taylor, F. (1919). *The Principles of Scientific Management* [E-book]. Harper and Brothers Publishers.
- Taylor, F. (1997). *The Principles of Scientific Management* [E-book]. Dover Publications.
- Taylor, F. (2016). *The Principles of Scientific Management* [E-book]. In J. Shafritz, S. Ott, & Y. Jang (Eds.), *Classics of Organization Theory* (8 Edition, pp. 66–77). Cengage Learning. <https://en.my1lib.org/dl/5553600/a90f6d>
- Tinio, V. & UNDP Asia Pacific Development Information Programme. (2003). *ICT in Education* [E-book]. E-ASEAN Task Force. https://digitallibrary.un.org/record/524544/files/Eprimer-edu ICT_in_Education.PDF
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2020). Achieving Effective Remote Working During the COVID- 19 Pandemic: A Work Design Perspective. *Applied Psychology*, 70(1), 16–59. <https://doi.org/10.1111/apps.12290>