

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Management



Master's Thesis

**Impact of the remote working trend on employee productivity in the IT
sector of the UK**

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Parshad Kikani

Systems Engineering and Informatics
Informatics

Thesis title

Impact of the remote working trend on employee productivity in the IT sector of the UK

Objectives of thesis

This thesis aims to analyze the positive and negative impact of the remote working trend on employee productivity in the IT sector of the UK.

To explore the ways to reduce the negative impacts of remote working trends influencing the productivity of IT employees in the UK

Methodology

This thesis consists of theoretical and practical parts. The theoretical part includes the literature review of sourced journals and articles. The secondary qualitative method will be used.

The practical part consists of real data collection from Google scholar, reliable websites and online news articles. The thematic analysis method will be used for data analysis by identifying the codes and themes from collected secondary data.

The proposed extent of the thesis

60-80 pages

Keywords

Employee productivity, Remote work, IT industry, work from home, Remote staff

Recommended information sources

- Etheridge, B., Wang, Y. and Tang, L., 2020. Worker productivity during lockdown and working from home: Evidence from self-reports (No. 2020-12). ISER Working Paper Series.
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-

Expected date of thesis defence

2022/23 WS – FEM

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Declaration

I declare that I have worked on my master's thesis titled " Impact of the remote working trend on employee productivity in the IT sector of the UK" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 30.11.2022

Acknowledgement

I would like to thank my supervisor Ing. Richard Selby, Ph.D. for his supervision, valuable advice, and overall assistance.

Impact of the remote working trend on employee productivity in the IT sector of the UK

Abstract

The thesis aimed at study the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. The literary work stated that the benefits of remote working on productivity of staff are flexible working, no commuting time needed, the cost of commuting saved, work-life balance and no risk of COVID – 19. The collaboration problems, ineffective work-life balance, internet connectivity, etc. are barrier to remote working. Interpretivism philosophy, action-based research strategy inductive approach, mono-qualitative method, thematic analysis method, etc to be used as a part of research methodology. The productivity level of IT employees is subjective due to the organisational policies and support to employees and managers. The trained line manager helped in handling the remote employees efficiently and productively. The women employees were able to ensure the work-life balance by managing the child, home as well as professional work. The wellbeing of male employees was also enhanced. Remote employees are facing loneliness as well as a lack of interaction which directly affects productivity. The lack of training for managers, work-life imbalance, as well as an ineffective wellbeing program led to a decrease in the productivity of IT employees. In order to enhance productivity, the ways that were identified through the thesis include wellbeing program, support from the organisation, improved communication, promote the flexibility for work-life balance.

Keywords: Productivity, remote working, IT, Information Technology

Dopad trendu práce na dálku na produktivitu zaměstnanců v IT sektoru ve Spojené království

Abstrakt

Diplomová práce se zaměřila na studium dopadu trendu práce na dálku na produktivitu zaměstnanců v sektoru informačních technologií ve Spojeném království. Literární práce uvádí, že výhodami práce na dálku na produktivitě zaměstnanců jsou flexibilní práce, není potřeba doba dojíždění, ušetřeny náklady na dojíždění, rovnováha mezi pracovním a soukromým životem a žádné riziko COVID – 19. Problémy spolupráce, neefektivní rovnováha mezi pracovním a soukromým životem, připojení k internetu atd. jsou překážkou pro práci na dálku. Filozofie interpretivismu, akční výzkumná strategie induktivní přístup, monokvalitativní metoda, metoda tematické analýzy atd. jako součást metodologie výzkumu. Úroveň produktivity zaměstnanců IT je subjektivní vzhledem k organizační politice a podpoře zaměstnanců a manažerů. Vyškolený liniový manažer pomohl efektivně a produktivně manipulovat se vzdálenými zaměstnanci. Zaměstnankyně dokázaly zajistit rovnováhu mezi pracovním a soukromým životem při zvládnutí dětské, domácí i profesionální práce. Zlepšila se i pohoda mužských zaměstnanců. Vzdálení zaměstnanci se potýkají s osamělostí a nedostatkem interakce, který přímo ovlivňuje produktivitu. Nedostatek školení pro manažery, nerovnováha mezi pracovním a soukromým životem i neefektivní wellness program vedly ke snížení produktivity IT zaměstnanců. Za účelem zvýšení produktivity byly v práci identifikovány způsoby, jakými jsou program pohody, podpora ze strany organizace, zlepšená komunikace, podpora flexibility pro rovnováhu mezi pracovním a soukromým životem.

Klíčová slova: Produktivita, práce na dálku, IT, informační technologie

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1. Introduction

During the COVID - 19 outbreak, most IT (Information Technology) companies allowed their employees to work remotely in the UK. The remote work trend gave an opportunity to IT employees to work from home. The productivity of employees is influenced by management support, access to require technologies and connectivity. It is observed that many employees are having positive as well as negative impacts of remote working. The main purpose of this thesis is to study the impact of remote work on IT employees' productivity in the United Kingdom. This chapter will be included detailed background of the thesis topic. The research problem will be stated in this chapter. It will include the research aim, objectives and research questions. The rationale and significance of the thesis will be presented along with the structure of the dissertation.

1.1 Background

Employee productivity is described as the total output that is produced by an employee in a particular timeframe (Thuda, Sari and Maharani, 2019). Productivity is essential as it helps the employees to complete their work before the given time and can work on another project or task. In IT companies, the productivity of employees is measured using software of productivity. Productivity is also explained as the amount of the given work completed by the employee. The main advantages that the companies have due to the higher productivity of employees are that the business gets profitable and it grows. The demand of consumers can be met timely and ensure competitiveness with the high productivity of employees. In order to measure the productivity of an employee, it is necessary to have four elements that are objectivity, availability, comparability and quality & control (Thuda, Sari and Maharani, 2019). Thus, employee productivity is of major significance for the organisation's success. Even distraction has a major role in reducing productivity. The employees working from remote areas have fewer restrictions which leads to the use of mobile phones and frequent breaks, which leads to a decrease in productivity.

Remote working can be described as the method of working that involves employees working in different remote areas or places rather than workplace settings. The employees are not required to commute to the office as the employee can work at their convenient place. It gives the opportunity to employees to work with flexibility. During the initial stage of the

pandemic, remote working led to stress among employees as COVID - 19 risks prevailed. Even the load of remote working employees having children increased as they were required to take care of their children. It is observed that mental stress impacts employees' productivity. The initial remote working led to mental health and wellbeing challenges. The productivity of IT employees in the UK may impact by the lack of required infrastructure at home. The increased level of distraction at home while working led to a decreased level of productivity (World Economic Forum, 2020). Some employees do find comfort while working at home as they feel that the home environment is quieter than the office environment, which directly impacts their performance and productivity. There are different impacts of remote working on the employee's productivity. Women employees have both positive and negative impacts of remote working as commuting time is decreased and increased flexible working and productivity (Lund, et. al., 2020). Remote employees do face the problem of ensuring the work-life balance. In order to ensure the work-life balance for female employees is challenging. Some companies had Human Resource professionals who communicated and asked about the mental health of their remote employees, which motivated the remote workers and enhanced their productivity during the work from home during the lockdown. Thus, there is a need for checking-in initiatives or practices by HR or managers to encourage the employees to give their best to enhance their productivity level with enhanced motivation level (Como, Hambley and Domene, 2021). Thus, support from the company is very necessary for enhancing motivation and productivity. The major challenges that remote employees face during work from home are collaborating and communicating in an effective manner, ensuring work-life balance and organisation of time. Even developing a bond with their colleague was difficult for remote employees (Flores, 2019). Thus, these challenges directly affect the employee's daily productivity.

After the pandemic outbreak in the year 2020, the number of employees working from home increased in the UK. About 44 per cent of employees between the age of 30 to 49 years worked from home in the month of July 2021 due to the coronavirus pandemic (The Home Office Life, 2020). In the IT sector, it is observed that the working hours of employees were increased during the work from home. It is also observed that the employees who work from home have been facing a weak peer effect as there is a lack of face-to-face interaction and low-level interaction. The wellbeing of employees working from home is found to be low. People in the IT sector are more likely to shift to work from home as it gives them the

opportunity to work from anywhere. The job that has a low need for collaboration as well as coordination, has shown increased productivity and maintenance of quality work. The virtual team are effectively using remote working (Gibbs, Mengel and Siemroth, 2021). Thus, WFH has provided more flexibility to employees in the IT sector.

According to research conducted by Prasad, et. al. (2020), remote working helps to enhance the productivity of employees. The increased productivity enhances the performance of employees in the IT sector. Even in the research on IT companies like Baidu, it is found that the consistency in the increasing productivity was not there and the remote working is not having a positive impact on every employee. About two-thirds of Information Technology employees stated that their productivity had increased while working from home as they are using the saved time of commutation in an effective manner (Patanjali and Bhatta 2020). The female employees' productivity can be increased in the long run if the organisation provides childcare facilities and flexible working for them (Alon, et. al., 2020).

1.2 Aim

This thesis aims to study the impact of the remote working trend on employee productivity in the IT (Information Technology) sector of the United Kingdom (UK).

1.3 Research Questions

The research questions of this thesis are as follows -

1. What are the positive impacts of the remote working trend on employee productivity in the Information Technology industry of the United Kingdom?
2. What are the negative impacts of the remote working trend on employee productivity in the Information Technology industry of the United Kingdom?
3. How to deal with the negative impacts of remote working trends influencing the productivity of IT employees in the United Kingdom?

1.4 Research Problem

The major problem that IT employees are facing due to remote working or WFH is maintaining their productivity level. The thesis will explore the problem of how remote

working is impacting the productivity of IT employees in the UK. There are studies that show the positive impact as well as the negative impact of remote working on the productivity of employees in the IT sector. Even there are very limited studies that focus on the impact of remote on employees' productivity in the UK's IT industry. There are very limited pieces of evidence to show the positive and negative influences of working from home, especially associated with the IT sector. Even there is limited knowledge or studies that show the ways by which the IT employees' productivity can be increased during remote working. So, this research will deal with a problem to reduce the negative impacts of remote working trends affecting the productivity of IT employees in the UK. This will help to increase productivity, efficiency and job satisfaction among the remote employees in the UK's IT industry.

1.5 Rationale of Research

It is explored that there is very limited research that is specific to the UK's IT industry that evaluates the impact of remote working on the IT employee's productivity. The previous researches state that remote working employees' productivity differs based on diverse factors such the support from the organisation, accessibility to required resources as well as the home environment. This thesis was conducted in order to identify how the trend of remote working or working from home has influenced IT employees' productivity in the UK. This thesis will help to explore how to increase the remote IT staff's productivity in the UK by exploring the factors that can increase performance, efficiency and productivity, as well as eliminating the factors that reduce productivity. The outcomes of this thesis will be useful to the IT sector companies based in the UK that promote remote working. The gap explored is that the UK's IT sector studies are very limited and focus on the WFH staff's productivity. Through this dissertation, both the negative and positive impacts of the remote working culture on the IT sector employees' productivity will be analysed.

1.6 Significance of Research

This thesis is very important as it will help the UK's IT companies and their management to know the reason for decreasing productivity of remote employees and ways to deal with it. The outcome of this thesis will guide the IT companies in the UK to maintain

remote employees' productivity by ensuring that there are motivating factors. It will assist the IT sector organisation in the UK with the remote working trend and why employees are shifting to work from home. The thesis will be helpful to the UK's IT organisations to explore the reasons for decreasing or increasing the productivity of IT employees during remote work. By identifying the reason for decreasing productivity of the UK's IT organisations, the human resource team or the management can make the required changes to boost the productivity and efficiency of its staff while remote working.

1.7 Structure of dissertation

This dissertation on the impact of the remote working trend on employee productivity in the IT sector of the United Kingdom will involve about six diverse chapters which help to gain to meet the research objectives. In chapter one, the overview of the research topic will be provided with the pieces of evidence along with the aim of the thesis, its objectives and research questions. This chapter will also describe the research problem, the rationale of the thesis and its significance, along with the layout of a dissertation. In chapter two, the literature review will be conducted by exploring several published journals as well as articles related to the research topic. In chapter three, the research methodologies to be used in the research will be stated with the justification for selecting a particular methodology. This chapter will include the methods of collecting data and the method to be used in the analysis of data. The ethical issues that are to be considered for this research will be stated. In chapter four, the major findings explored from the collected secondary data will be presented using the thematic analysis method. In chapter five, the discussion will be included, which shows the connection between the literature review and the findings of this thesis. The last chapter will be of conclusion and recommendations, which involves the summary of the entire dissertation and findings along with the suggestions. The recommendations will be provided to the IT companies that are operating with remote employees in order to enhance productivity and deal with the factors that reduce the employees' productivity. The limitations and future scope of the thesis will be presented in this chapter.

2. Objectives and Methodology

2.1 Objectives

The research objectives of this thesis are as follows -

1. To analyse the positive and negative impact of the remote working trend on employee productivity in the IT sector of the UK
2. To explore the ways to reduce the negative impacts of remote working trends influencing the productivity of IT employees in the UK

2.2 Methodology

2.2.1 Chapter Introduction

A research methodology means a strategy related to the thesis developed to meet the research aim. The explanation of research designs to be included and the best-suited research design will be selected to find the effect of the trend of remote working on the IT employees' productivity in the UK's Information Technology industry. Hereby, the concept of research onion is to be elaborated in order to explain how this chapter is designed to choose the appropriate strategies using the research approach, research philosophy, research methodological choice and research strategy. The data collection strategy and method to be discussed and its rationale to be provided. The data analysis strategy and method are to be discussed, along with its rationale.

2.2.2 Description of Research Onion

Research onion has six coatings or layers, which every researcher needs to follow before conducting the practical study. The foremost outer layer is the philosophy which presents pragmatism, positivism, interpretivism, post-positivism or critical realism. The second outermost layer is of approach, which presents induction, abduction or deduction. The third coat is of methodological choice, which presents multi-method quantitative or qualitative, mixed method complex or simple, as well as mono-method quantitative or qualitative. The fourth coat is of strategies that present survey, archival research, case studies, experiment, action research, narrative inquiry, ethnography & grounded theory. The

fifth layer is of time horizon are cross-sectional & longitudinal (Sahay, 2016). The innermost core is the data collection procedure & technique and data analysis procedure & technique.

2.2.3 Research Design

A plan or roadmap of a study that is to be formed is usually explained as a research design. The main research designs that various researchers are applying in research consist of descriptive, diagnostic, experimental, explanatory, and correlational. A correlational study design is good for a study that is designed to study the quantitative method, and it involves the use of statistical methods to analyse data. A descriptive study design is beneficial to get a theoretical understanding of the topic by exploring theories. An experimental study design is advantageous when two or more factors are analysed to know the cause and effect. The diagnostic study design is beneficial when an evaluation of any circumstance or topic is to be conducted to get the right solution. The exploratory study design is advantageous when the exploration of the situation, its reason and cause or process is required to be explored with respect to the study's topic (Sileyew, 2019). Herewith, an exploratory study design is to be used to find the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. It would be helpful to know the negative or positive effects on employees' productivity due to the remote working trend in the UK's Information Technology industry. The ways of reducing the negative effects on employees' productivity due to the remote working trend in the UK's IT sector will be explored.

2.2.4 Research Philosophy

A researcher's views & beliefs at the time of performing the study are known to be research philosophy. This philosophy has a direct influence on the gathering process of the relevant data for the study, the choice of data sources and the analysing process of the chosen data. This has also a direct impact on the study outcome. Pragmatism, positivism, interpretivism, post-positivism or critical realism are the research philosophies. Positivism philosophy usually has a direct relationship with the research led by objective, and the reality can be investigated with it. This method also has assumptions of control & likelihood for the future. Interpretivism philosophy also makes presumptions regarding the coming future's erratic nature. Herewith, the interpretivism philosophy is to be used to find the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. It is good for this study as it will support the qualitative study. It will assist

in gaining descriptive outcomes through data analysis. It will help in making research valid and reliable as well as gain the solution to research questions.

2.2.5 Research Approach

A method assisting in finding the right data collection tool research approach to conduct a study is known to be the research approach. A researcher has the option to choose between induction. The deductive approach means that the collected data is tested to find its accuracy of it. Physical augmentation is part of this approach. In comparison, the inductive approach focuses on controlling the data and structural augmentation, as well as consists of categorising (Woiceshyn and Daellenbach, 2018). Herewith, an inductive approach is to be used to find the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. The rationale for choosing this method is that it promotes flexibility and support when the literature sources are found to be limited. This approach would be best suited to gain qualitative data. By using the deductive approach, this study may not be effective as hypotheses are not being used.

2.2.6 Research Strategy

Researchers are able to get the direction to achieving the research objectives with the help of effective research strategies. It is explained as the organised approach to gaining quality results. The survey, archival research, case studies, experiment, action research, narrative inquiry, ethnography & grounded theory are the main strategies that are undertaken by the researcher. Case studies investigate real cases to explore the answer to research-related questions. Grounded theory is beneficial to predict or state a behaviour linking it with the associated theories (Tarozzi, 2020). Action-based research is a method that is applied to explore an issue that involves various complications, and its solution is needed. This study will involve the approach of action-based research application as it will identify the effect of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. The solutions to deal with the negative influences of working from home or remotely will be explored. This thesis will assist IT companies in the UK to improve productivity while working from home. Even the positive influences of working from home or remotely to be identified to know how the productivity is improved of remote IT employees.

2.2.7 Research Methodological Choice

Through the understanding gained from the research onion, the methodological research choice is very significant as the data collection is based on it. The key research methodological choices are multi-method quantitative or multi-method qualitative, mixed method complex or mixed method simple and mono-method quantitative or mono-method qualitative. The mono method uses either a qualitative or quantitative research method. The multi-method uses either two or more forms of qualitative or quantitative research methods; for example, a qualitative study has interview and observation methods for data collection, and a quantitative study has a survey and experiments. The mixed method uses qualitative as well as quantitative research methods on a single study (Tarozzi, 2020). The qualitative study comprises of using textual data, and the quantitative study comprises of using numerical, graphical as well as statistical data. The method that is selected for this thesis is the mono-qualitative method because it is effective to explore complex issues and topic that is not explored. The method will help to neutrally analyse and find the overall influence of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. Even it is a cost-efficient approach which is essential for this research as the thesis is not sponsored. This approach is also used to explore similar kinds of themes or patterns among collected and chosen data sets to know how the different factors led to the increase or decrease in productivity of the IT sector's remote employees in the UK and ways to deal with factors negatively affecting productivity. The descriptive or theoretical data will be helpful meet the objectives of conducting a study.

2.2.8 Data collection approach and method

A procedure that comprises finding the necessary data using any particular approach is usually referred to as data collection. The method of data collection is an approach used to gather the required data, which can be the primary or secondary method. The secondary method of collecting data can be referred to as the process of gathering the data which actually collected earlier by another person. It is usually comprised of collecting past data. The key sources of secondary data are books, journals, reports of government, website information, articles, etc. The primary method of collecting data can be referred to as the process of gathering the first-hand data that researchers collect by themselves. It usually comprises collecting real-time data. The key sources of primary data comprise surveys, one-

to-one interviews, experiments, observations as well as questionnaires. The recommended approach for data collection in this thesis is the secondary data method because this method's process is quicker, more economical as well as easier compared to the primary method (Olabode, Olateju, and Bakare, 2019). The use of the primary method of data collection is a very involved process as well as expensive because of that it cannot be used. The secondary data collection approach is to be used over the primary data method because it comprises a short time period to gather the data, and it will not consume a longer duration of the study. Even the secondary data are available in the refined form. Though, there is a possibility that the reliability and accuracy of the secondary data might be relatively less compared to the primary data collection approach. The data set will be collected by searching the data associated with the topic by finding the keywords such as 'productivity', 'positive impact on productivity, 'negative impact on productivity, 'remote working', 'Work-from-home', 'WFH', 'IT industry', 'UK', etc. on search engines such as 'Google' or 'Google Scholar'. The data to be used in this thesis are the books, journals, reports of government, website information, articles and conference papers as the sources of the secondary data and explore how the productivity of IT remote employees influenced in the United Kingdom. The inclusion criteria of this study will be that it must be based on the UK employees' productivity, the UK's remote employees, pertaining to the IT industry or IT employees. It is also necessary the data describing the factors influencing the productivity of the remote staff in a positive or a negative way. The study will include the selection of the data that help to understand how the negative factors influencing the productivity of the IT remote staff can be reduced. The recent data between the years 2019 to 2022 be considered as an increase in remote working observed more after the outbreak of the COVID - 19. The exclusion criteria of this thesis will be the data before the year 2019, as well as a thesis focusing on the productivity of the employees working from the office. The data not presenting the detail about the productivity of remote staff in the UK to be avoided.

2.2.9 Data Analysis approach and method

Thematic analysis is the technique that assists in analysing the descriptive, textual or qualitative data, which comprises searching from the total gathered data set for recognising, analysing as well as reporting the patterns that are repetitive. This method is chosen as it helps in explaining and interpreting the data in a process to be done to choose codes and construct themes. This method is reinforced by diverse conceptual as well as philosophical

assumptions. A researcher usually explores the meaning of the identified themes and similar patterns to get clear answers to the research-related questions. It is helpful in exploring the implicit as well as explicit meanings of data sets. The initial step is coding, which helps to develop the different themes by exploring the terms that are of analytic interest from the data set, and the label of each code is provided. This method can be used in both inductive as well as deductive studies (Neuendorf, 2018). By using this method for analysing, the themes can be effectively associated with the data. The benefit of using this approach in this study is that it will help to fragment the large data collection and connect the similarities among these to know the positive as well as the negative impact of remote working on the IT employees in the industry of Information technology. The process this study will be used to analyse the data is initially trying to gain familiarity with the collected data with the open mind reading for which the text will be read to understand the data, the meaning of it will be understood as well as identify the novel as well unique sides of the data. Then, the meanings, as well as themes, will be identified by searching its meaning, marking it, describing those meanings in limited words and noting them and based on it, the differences & similarities among meanings will be compared and organised. Then, the themes are to be organised and presented in a written format as a finding section by describing themes. The advantages to being gained through the application of this method are that multiple theories can be used, and it goes effectively with data sets that are of large size. The reliability can be ensured with the coding table and it will act as evidence of the used method to identify the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK and ways to deal with the negative influences.

2.2.10 Ethical Considerations

In a study or research, the lack of ethical considerations raised questions on the research's reliability as well as validity because it is significant rules or guidelines concerning the study that a researcher is required to follow. In the primary study, there are more ethical considerations such as voluntary participation, the need for participants' informed consent, ensuring the privacy of participants, ensuring anonymity of participants, ensuring the safe storage of data, ensuring the sensitive data is not shared with the third party etc. But in secondary research, there is a need to acknowledge the other authors' work by using the right citation and referencing style stated by the dissertation handbook or guidelines. It is essential ethical consideration as this may develop the chances of plagiarism because the other

person's work showed as work by oneself. Even though there are possibilities that the interpretation and analysis of data can be biased, so it is necessary to be open-minded and have a higher level of objectivity while analysing as well as discussing the data. The selection of data must be from authentic as well as reliable sources because that may affect the reliability and authenticity of the findings. It is also important to ensure that there should be no sensitive data that may affect anyone. The research-related guidelines are required to be followed to ensure the ethical approach towards the study.

2.2.11 Research Limitations

The major drawback or limitation that has been identified in this thesis was that the current data was not to be collected as the secondary research method is applied. Even qualitative research is performed. So, there are chances that the interpretation must vary for the researcher. This thesis does not involve primary and quantitative data research methods. The study duration was very limited, which led to conducting the secondary data. This thesis is not sponsored, which resulted in the restraint of the budget to conduct a primary study as it is expensive to gather data using primary methods like surveys and questionnaires. The study design could have a correlational research design if the quantitative data was collected but not using this research design might affect the study outcome to know the overall influence of each factor related to remote working on the IT staff in the United Kingdom. The quantitative research method might help to present the negative and positive influence of remote work on the IT staff working in the UK through the chart and the percentages. By using the secondary method, this thesis may lack a high level of reliability like the primary research. Even though the data is collected from the year 2019 to 2022, the impact of the pandemic is also studied on remote working and employees' productivity. The data will not be able to provide the impact of remote working employees' productivity without the negative influence of COVID - 19 on mental health and the increased responsibilities of the employees to take care of children and their education. The mixed method might be a good approach to provide better insight into the research objectives, but it was not included as it needs more effective research skills.

2.2.12 Chapter Summary

So, the research methodology is a very necessary part of any study because it helps in planning and designing and to choose the appropriate strategies and approaches to meet the research aim of exploring the effect of the trend of remote working on employee productivity in the UK's IT industry. The explanatory research design will help in exploring the situation and its rationale with respect to the research topic. A research onion is the only model that is used to design the study and choose the right strategies to deliver the best research outcomes by the researcher. The study will apply the interpretivism philosophy to be used to gain descriptive outcomes through data analysis. An inductive approach is used as it involves the pre-set objectives and aim of the study, and it is a flexible approach and supports when the past literary sources are limited. Action-based research strategy is chosen because it is good to find the answer to a topic that has complexity like the different employees have different products, and it is based on the organisation's policies also. The mono-qualitative method is also supportive of the complex issue like exploring the influence of the remote working-related trend on the productivity of employees in the UK's IT industry, as many past studies are showing the different impacts on the employees of different demographics, such as the age, gender, employees with children, etc. The secondary method will be used to collect the data, and those collected data will be analysed using thematic analysis in order to find the relevant answers to study questions.

3. Literature Review

3.1 Chapter Introduction

This chapter incorporates the literature review. The published journals and articles will be analysed and reviewed from the year 2016 to the year 2022. This chapter will be based on past studies that will be evaluated to gain a clear insight into the identified research problem and research topic. The literature review will help to thesis the impact of the remote working trend on employee productivity in the Information Technology sector of the United Kingdom. It will include an analysis of the IT sector of the UK and the employees working in it. A detailed review will be done on the trend of remote working and the reasons for increasing working from home or remote working in the UK's IT sector. The benefits and drawbacks of remote working for IT employees will be explored in the previous research. Insight into employee productivity and factors influencing the productivity of IT employees will be gained through journals and articles. The relationship between Remote working and employees' productivity will be identified as evidence for further study. This dissertation also focuses on an exploration of the ways used to enhance remote working employees' productivity in the IT sector.

3.2 Overview of the IT sector in the United Kingdom

The IT (Information Technology) sector can be described as the industry that incorporates software development as well as hardware. The IT sector of the UK is growing and providing employment opportunities to people. Many start-up IT companies are operating in the Information Technology market of the United Kingdom. The companies such as TCS and SAP have been working in the UK. According to Higginbotham (2021), during the pandemic of COVID - 19, the IT sector of the United Kingdom showed continuous growth with the help of its skilled staff. About 3 million people were employed in the UK's IT companies in the year 2020. According to the report of Statista (2022a), the IT sector revenue project for the year 2022 is 83.17 billion US dollars. The market of IT sector services can be segregated into four diverse segments that are IT outsourcing, IT consulting and implementation, Business Process Outsourcing as well as other IT services.

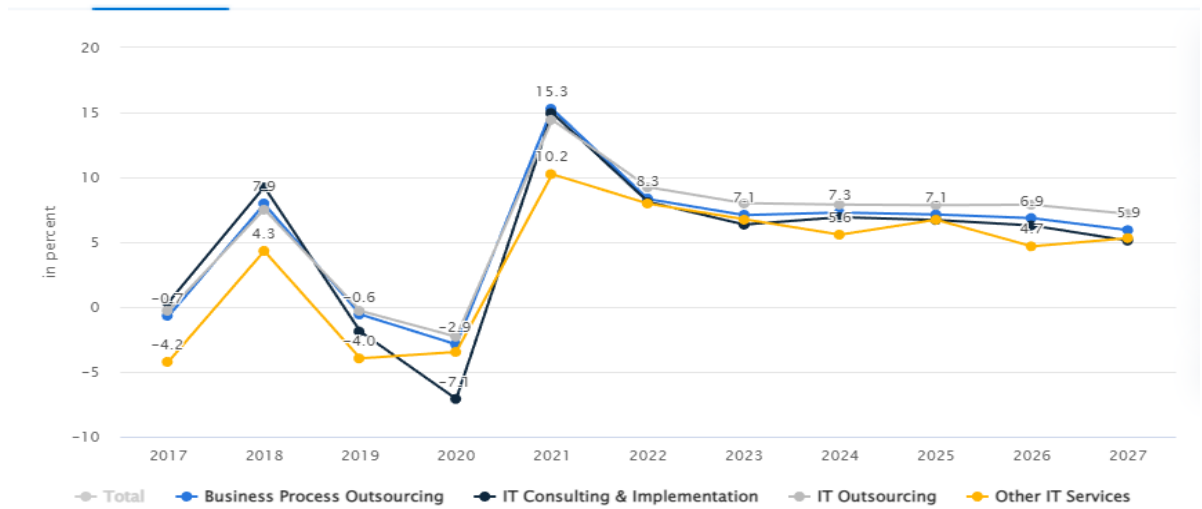


Figure 1 - Revenue By segment in the IT industry

Source - Statista (2022a).

The above figure shows that the revenue of the IT industry has drastically increased between the year 2020 to 2021 (Statista, 2022a). There is a demand for the services of IT consulting, IT outsourcing, and business process outsourcing (BPO). The revenue of these services in the IT industry will be between 5 to 8.3 % from the year 2022 to 2027.

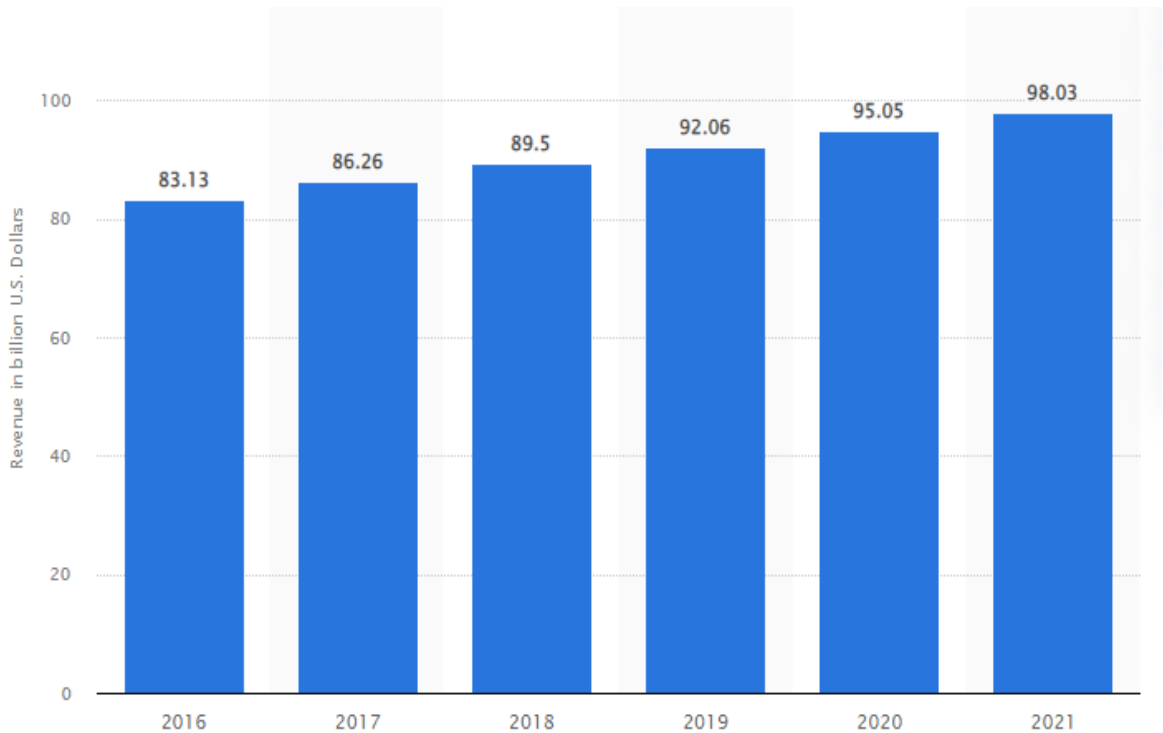


Figure 2 - Revenue of IT market in the UK between the years 2016 to 2021

Source - Statista (2022b).

The above graph depicts the gradual increase in the revenue of the IT market in the UK between the year 2016 to 2021 of the main segment of the Information Technology sector are IT services, software as well as IT equipment. In the UK, the turnover generated by the IT market was 89.5 billion USD in the year 2018. For the year 2021, the project was about 98 billion USD. In the year 2020, it was around 95.05 billion USD and 98.03 billion USD in the year 2021. (Statista, 2022b). Thus, the IT company is profitable and growing gradually in the UK, despite COVID - 19. The effect of the pandemic was not negative for the IT business as it was booming with the remote working staff in the UK and worldwide.

3.3 Overview of IT employees in the UK

The knowledge and other technical skills required in the UK's IT employees are app development, cyber security, IT sales, data analytics, computer forensics, hardware engineering, technical support, web designing, website development, information management, etc. (Higginbotham, 2021). The employees working in the IT sector also involve the management staff, admin staff, IT staff, technicians, sales staff, etc. With the increase in innovation and research & development, the demand for IT employees is increasing.

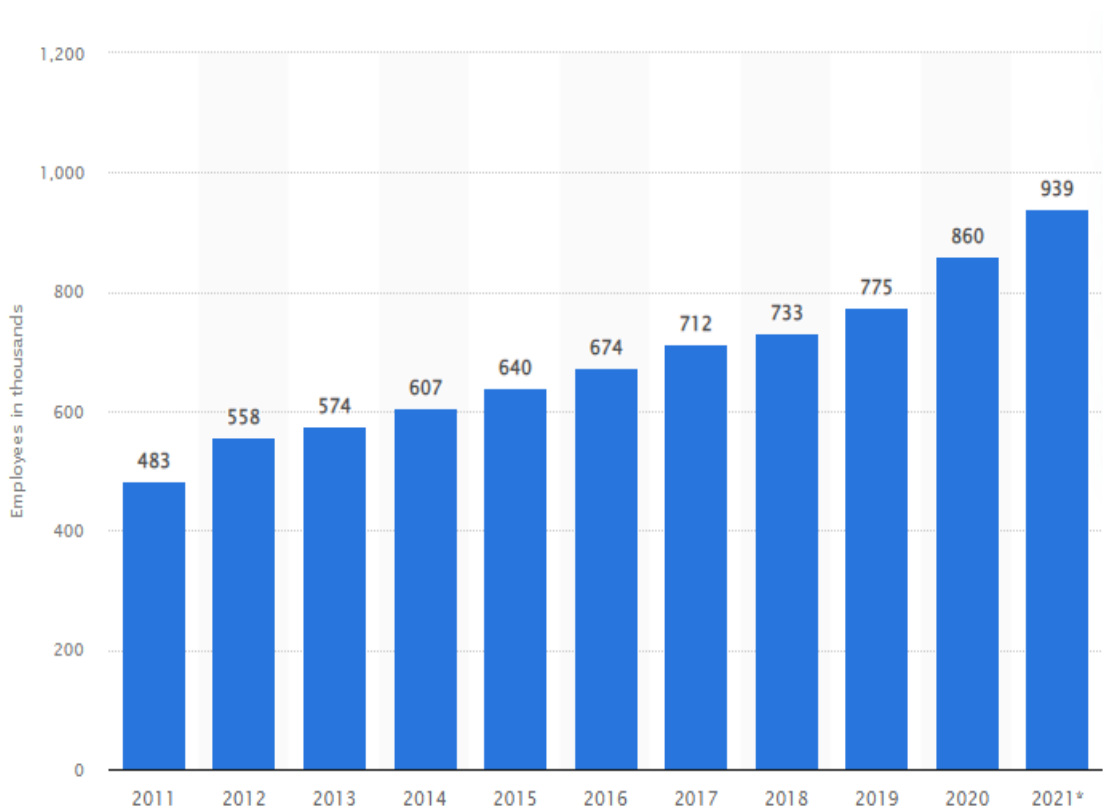


Figure 3 - Number of employees in the UK's IT, computer services and software from the year 2011 to 2021

Source - Statista (2022c).

The above graph shows the increase in the number of employees in the IT sector from the year 2011 to 2021. In the year 2011, there were about 483 thousand employees in the UK, which raised gradually and reached 939 thousand in the year 2022. In the year 2020, the number of employees in the UK's IT sector was around 860 thousand. Around 940 thousand employees joined the UK's IT, computer services and software companies in the month of September 2021 (Statista, 2022c). Thus, IT companies in the UK are hiring more employees every year, which is increasing more jobs. Even the demand for IT products and services is across the globe, which led to an increase in the Information Technology businesses.

3.4 Remote working and its trend in the IT sector of the UK

According to a study by Kłopotek (2017), remote working can be defined as the organisational work that employees do outside the office space. Remote working gives

flexibility to IT employees to work from any location. In order to work from home, it is significant to depict strong self-discipline as well as motivation in order to work remotely or from home. Remote working is a way of working that allows employees to work from a remote location or home rather than the office. Due to the outbreak of COVID - 19, the remote working trend was observed as many companies allowed their employees to work from their homes as offices were closed during the lockdown. People started to prefer remote work as it has in reducing commuting time and gives protection from infection during travelling to the office (Phillips, 2020). The employees are really concerned about their health and the risk of COVID - 19.

In the Information Technology (IT) sector, the companies have contributed to better communication of their remote workers in order to transfer as well receive information. For remote working, the employees are required to have technical skills in order to deal with troubleshooting issues (Flores, 2019). Even many companies in the IT sector are investing in the employee's welfare as well as skills development of their remote working staff. Even the company are providing the necessary equipment and technologies to efficiently work from home so that the performance and productivity of employees do not decrease.

In the coming future, the trend will be of hybrid working, and it will encourage the employees to do the job from home or from the office alternatively. The new normal will encourage a hybrid working culture in the IT sector. The trend of remote will not be widespread, though it gives the opportunity for flexible working, especially for female employees, as they can manage their work and family together (Farooq and Sultana, 2021). Flexible working can be described as the arrangement for employees to select the time for starting and winding their work. This assist in managing the work-life balance, enhances the employees' job satisfaction as well as decrease employee stress. Many IT companies have started to call back their employees to work from their offices. This shows that there is potential that the permanent remote working trend may not continue in the IT sector. Though, there are chances of a hybrid working model for IT employees.

3.5 Reasons for increasing remote working in the IT sector and the UK

According to Felstead and Reuschke (2021), the rise in home working has been seen after the COVID - 19 pandemic in the United Kingdom. About eight times the homeworking increased in the UK after the pandemic. It also observed that the employees stated that their

productivity did not affect negatively. In the IT sector, the remote working trend increased because of the COVID - 19 pandemic. Due to the lockdown worldwide and UK companies implemented the policy of working from home (Shankar, 2020). There was the risk of being infected by the coronavirus as well as the government policies restricted the employees from working at the office in order to prevent the spread of the coronavirus. During the lockdown due to COVID - 19, transport was also stopped, and this forced IT companies to shift to work from home. Even after the lockdown restrictions were removed, the government has restricted the gathering and introduced policies of working with a certain per cent of the organisational staff by ensuring social distancing, proper sanitisation as well as compulsory wearing of a mask. The cost of IT companies has decreased due to remote work.

According to the report by Abrams (2019), remote working gives employers an opportunity to hire employees or talent that is located in different geographical locations and helps them to reduce their overhead expenses. This encourages IT employers, to promote remote working. Similarly, the employees find various advantages such as reduced childcare costs, transportation costs, flexibility in work, and saving their time. However, these benefits can impact the productivity and morale of employees in a positive way. In the new normal, IT companies are also encouraging hybrid working, which involves alternate working from their home as well as an office on an alternate basis. Thus, remote work is still being used after relaxation in the lockdown and COVID - 19 related restrictions. Even many employees prefer to work from home rather than visit the office. This led to increased remote work in the UK and globally. The IT sector employees are getting the required support from the management and their manager, which encourages remote working. According to a study by Reuschke and Felstead (2020), 88.2 per cent of employees who were working from home during lockdown want to continue WFH and do not want to go to the office. About 50 % of the homemakers want to work from their homes. Around 65.5 % of the employees stated that they had more productivity while working from home during the lockdown. Thus, these are the reason for increasing the trend of remote working.

3.6 Benefits of Remote working for IT employees

There are various benefits that employees have gained while working from home, which is promoting the trend of remote working in the IT sector. According to Flores (2019), remote working has several benefits in large companies as it promotes flexible working

hours in order to manage productivity. It helps in increasing the output by remote employees' contribution. It also helps in decreasing the employees' cost of commuting and saves their time used in commuting. Even other studies support these advantages stated by Flores. Based on a study by Kłopotek (2017), the advantages that the youth explored of remote working are flexible working hours and saving their travelling time. Remote working also gives the freedom from any kind of interruption. Employees working from home have higher satisfaction and enhanced overall productivity. According to the research by Jacks (2021), the concerns related to child care have reduced due to remote working. Even the use of the latest technologies and innovation has enhanced because of remote working. The employees who ensured the work-life balance during WFH states that their morale has improved along with their job satisfaction (Mustajab, et. al., 2020). Thus, the employees are seeing the positive impact of remote working that helps them to work effectively. According to Sungheetha and Sharma (2020), the merits of remote working are decreased air pollution, time spent with family increased, health problems improved, productivity of staff enhanced maintenance, and the cost the employers decreased.

Benefit	Distribution	Prevalence	Importance	Delta
B1 Less time on commute		96	82	0.31
B2 Spending less money		84	66	0.42 (*)
B3 Flexible work hours		81	82	0.40 (*)
B4 Closer to family		81	85	0.34 (*)
B5 More comfortable clothing		80	48	0.37 (*)
B6 Reduced health risks		72	88	0.24 (*)
B7 Better focus time		62	93	1.15 (*)
B8 Less distractions or interruptions		55	87	1.03 (*)
B9 More time to complete work		52	80	0.78 (*)
B10 More breaks		52	64	0.02
B11 Better work life balance		50	95	0.59 (*)
B12 Better work environment		48	81	1.06 (*)
B13 More efficient meetings		46	87	0.59 (*)
B14 More control over work		37	87	0.68 (*)
B15 More physical activity		34	91	0.54 (*)

Figure 4 - Benefits of working from home

Source - (Thorstensson, 2021)

According to a study by Thorstensson (2021), the main top three benefits that employees working from home are experiencing are that there are decreased commuting time, less spending of money and flexible working hours. Other benefits that remote employees are experiencing are staying close to family, wearing comfortable clothes, reduced level of health risks, fewer interruptions, work-life balance and more breaks. The

above figure shows the importance of each benefit that employees working from home are experiencing.

Remote work benefits the employees as well as employers. According to a study by Jalagat and Jalagat (2019), employees working remotely are happier and have more productivity compared to conventional working employees. By working from home, the employees are saving their time, travelling efforts and money. Because of remote working, the employers are not required to have rented offices which saves their money. If the employees are more productive by working from home, then it also help the employers to grow their business with the help of its employees' contribution and skills.

3.7 Drawbacks of Remote working to IT employees

According to the study conducted by Yang, et. al. (2022), communication and collaboration issues are the major issues that employees are facing while working from home during COVID - 19. This affected the information sharing among the employees and team. A decrease in the productivity of women employees with children is observed due to working from home due to the pandemic. The cost of communication, as well as the cost of coordination, has increased as the employees are communicating from different places. The communication is restricted to only a few people, and the employees do not get one-to-one coaching due to the work from home. Some remote employees maintain productivity by working for long hours, but this has a negative impact on their wellbeing, physical health as well as mental health (Gibbs, Mengel and Siemroth, 2021). The increased working hours led to physical health issues such as back pain, muscle strain due to less movement as well as eye strain among the remote working employees. Mental health issues are raised due to the increased workload and work-related stress among remote IT employees. Even continuous working from home for many months can lead to fatigue among remote employees working in the IT sector (Patanjali and Bhatta, 2022).

According to Flores (2019), collaborating and communicating with others is a major challenge for remote employees. It is difficult to maintain the balance between work life and personal life for employees while working from home. The research also reported on the problem of ineffective organisation of their time. From these identified challenges, the respondent ranked work & home as the most difficult, followed by forming a relationship with their colleagues. Even gaining guidance and feedback from reporting managers is a

difficult task during remote work. The lack of communication led to confusion and delay in the work, which affected the productivity and performance of IT employees. According to Sungheetha and Sharma (2020), the demerits of remote working are improper work environment for employees, issues in concentration, productivity might be at risk, and retention reduces.

According to a study by Malecki (2020), the security risk is a major concern in remote working. Cybercrime has increased during the pandemic, which enhanced the security risk. It has become necessary for remote employees to have the right equipment of, IT and proper connectivity in order to work efficiently and effectively from their homes. It has become significant for remote employees to have a secure and safe online environment. It is required to have backup and protection against data breaches. According to Kłopotek (2017), the youth explored the different advantages of remote working, such as managing their personal life and professional life separately and experiencing social isolation. By working from home, physical fitness remains minimum as well as the need for concentration is higher with self-control. If employees do not get the proper environment for work, then their performance reduces, which leads to low productivity. According to a study by Jacks (2021), there is a negative side to the rising remote working trend. Remote working is heading towards the male-domination. There is a need for more investment by companies to provide a better infrastructure to their employees while working from home. According to a study by Mustajab, et. al. (2020), WFH has diverse negative impacts, such as the disturbances and disruption caused by the working media affecting the employees' productivity. Even multitasking during WFH can result in a decreased level of the employees' performance and motivation level.

Challenge	Distribution	Prevalence	Impact	Delta
C1 Missing social interactions		83	49	-0.62 (*)
C2 Lack of work-life boundary		78	48	-0.52 (*)
C3 Poor ergonomics		70	52	-0.47 (*)
C4 Less awareness of colleagues work		65	36	-0.65 (*)
C5 Less physical activity		65	51	-0.40 (*)
C6 Difficult to communicate with colleagues		57	34	-0.67 (*)
C7 Insufficient hardware		57	40	-0.38 (*)
C8 Connectivity problems		54	35	-0.38 (*)
C9 Poor work life balance		51	45	-0.45 (*)
C10 Too many meetings		51	43	-0.09
C11 More distractions or interruptions		49	37	-0.99 (*)
C12 Lack of a routine		47	38	-0.67 (*)
C13 Fewer breaks		44	35	-0.09
C14 Friction with collaboration tools		44	22	-0.38 (*)
C15 Lack of motivation		42	36	-0.90 (*)
C16 Blocked waiting on others		40	28	-0.39 (*)
C17 Poor home work environment		40	34	-0.84 (*)
C18 Lack of dining options		33	24	-0.34 (*)
C19 Lack of childcare		27	58	-0.37 (*)
C20 Less time to complete work		24	36	-0.72 (*)

Figure 5 - Challenges related to working from home

Source - (Thorstensson, 2021)

According to Thorstensson (2021), the top three challenges or drawbacks of working from home are less social interaction, no boundary of work-life and inefficient ergonomics. Other challenges that remote working employees face are the low level of physical activity, connectivity issues, improper hardware, lack of routine, reduced motivation, lack of required childcare and collaboration tools friction. According to Khare and Yadav (2021), social isolation and cut-off have been experienced by the employees due to working from home. Physical health is affected by remote working as it can result in back pain, neck pain and irritation in the eyes. The work stress has increased of remote staff due to long hours of working and lack of fixed working schedule.

3.8 Employees' productivity and Factors affecting the IT employees' productivity

The productivity of employees can be described as the assessment of employees' efficiency. The productivity of IT employees working remotely can be evaluated by exploring the employee's output in specific time duration. According to a study by Prasad, et. al. (2020), work productivity is an employee's proficiency in a particular task involved in

the work. The productivity of employees can be assessed by discipline level, ability level as well as spontaneous & innovative behaviour. Employee productivity means the total output or work that a particular employee produced in the time duration. According to a study by Kitagawa, et. al. (2021), the employees' productivity of work-from-home (WFH) employees decreases if there are communication problems or poor levels of WFH arrangements. If the organisation promotes the health as well as the wellbeing of employees, then the level of productivity decreases. The employees aged 30 to 40 are having difficulty adapting to the WFH as they are not used to IT technologies which directly leads to a loss in productivity. The distraction at home or stress can affect the employees' productivity. The lack of IT infrastructure at home can develop a barrier to completing the work, which reduces the remote work of IT employees' overall productivity. Even the lack of a work-life balance can influence the productivity of the employees while working from home. Based on a study by Abrams (2019), the productivity of IT employees can be easily monitored as they work using a laptop.

Based on the research by Seva, Tejero and Fadrihan-Camacho (2021), if there is a lack of effective management support or work environment, then performance will be affected negatively. So, it is essential to have an environment in the organisation in which the manager supports their employees during remote working. If the employees are empowered and autonomy is given to them, it can help in increasing the productivity of employees working from their homes. Even the lack of fair opportunities for growth can influence the productivity of employees negatively. If the employee is well-equipped while working from home, then productivity will influence positively. Thus, it can be stated that the factor that influences productivity are employee empowerment, autonomy, fair opportunities for growth and being well-equipped at home (Patanjali and Bhatta, 2022). According to Bulińska-Stangrecka, Bagińska and Iddagoda (2021), the wellbeing of remote employees is affected by isolation and insecurity during the pandemic. The disruption in the work-life balance has been observed, which is directly influencing the mental health and productivity of employees. It has become difficult to separate work and home responsibilities due to working from home. As per Lund, et. al. (2020), while working from home, the employee's female employees do face more challenges compared to male employees. But the flexibility and the saved travelling time help to enhance their productivity.

3.9 Relationship between Remote working and employees' productivity

Based on the research by Escudero and Kleinman (2022), the Information Technology service organisations use the tracking system for employee activity and found that employee productivity decreased by 8 % to 19 % because of the COVID - 19 pandemic. Despite working for a long period, the productivity is less as the output did not change. Even if it is observed in a small project, the pandemic impact on productivity was positive, but in large projects, the overall impact on productivity was not positive. According to Gibbs, Mengel and Siemroth (2021), while working from home, many employees experienced an increase in their working hours and a decrease in productivity by 8 to 19 per cent. The number of working hours and the decrease in productivity are majorly observed among the employees having children and working from home. The employees working from home also experience that the time in meetings and coordination has increased with affect the productivity.

According to a study by Etheridge, Wang and Tang (2020), examining the remote employees' self-reported productivity in the United Kingdom during the COVID - 19 lockdown states that productivity has increased among people who started working from home. But the women employees' productivity was highly affected at the time of lockdown. The decreased productivity affected the mental wellbeing of remote employees. In the IT sector, productivity has increased as there was less requirement for direct interaction. The productivity changed because of rearrangement in work. Based on a study by Galanti, et. al. (2021), it is explored that the social isolation and the family-work conflict of employees have a negative relation to the productivity of WFH employees. At the same time, autonomy and self-leadership have a positive association with the productivity of WFH employees. The employees working from home were the fear of being infected by COVID - 19, which resulted in increased productivity as well as engagement of employees. The employees of higher age have reported having low productivity as they found problems and difficulties in dealing with the technological tools as well as adapting to the change. Based on a study by Patanjali and Bhatta (2022), while working from home, the productivity of employees can be ensured by empowering the employees, giving autonomy to staff, and giving independence to remote employees.

According to a study by Mustajab, et. al. (2020), employee productivity was found to be decreasing among work from employees because of improper facilities to do work like internet networks and computers. Even the psychological distance has affected the WFH employees as they fear being infected by the coronavirus. Compared to the remote female employees, the productivity of male employees is higher. Even the negative impact on the health influenced the productivity of employees while working from home. Based on research by Thorstensson (2021), working from home has both negative and positive impacts on IT managers' & project coordinators' productivity. The productivity of IT managers & project coordinators was found to be enhanced based on this study. Based on a study by Farooq and Sultana (2021), the productivity of working from home employees is affected by improper connectivity, lack of remote collaboration as well as ineffective data allocation. Though the productivity of remote employees of more productive and happier. So, there are low chances that they will back in the organisation to work. Women have both work responsibilities and home or family responsibilities, so they got the flexibility with the WFH. The research stated that the overall impact of remote working is negative on the productivity of employees. Even the supervision is low at home, which leads to reduced productivity.

Based on a study by Prasad, et. al. (2020), there is a lack of clarity on whether productivity and performance increase or decrease while working from home. The reason of decreasing productivity of remote staff that are identified were boredom in working in the same environment as home, improper net connection, lack of work system and the restrictions in social life due to social distancing and risk of COVID - 19. The long hours working by remote staff led to a conflict between their work and family life. However, some employees are satisfied as they can work as per their flexibility. It is also explored that work flexibility help in enhancing the productivity of the remote staff and motivates them. Though the work-life balance was not effectively implemented in the remote working culture at the time of the pandemic, which negatively influenced the productivity of employees.

3.10 Ways used to increase the remote working employees' productivity in the IT sector

According to a study by Toscano and Zappalà (2020), social isolation is being faced by remote employees, which leads to increased stress and directly affects productivity as well as the level of job dissatisfaction. Therefore, some companies' HR officers and

managers provide support to employees working remotely. Employment engagement can help to motivate and increase job satisfaction among remote employees in the IT sector. It is also important to empower the remote staff and help them to grow. Even providing recognition for their performance can encourage remote staff to increase their productivity. It is also vital to allow remote employees in the IT sector to select the working environment in which they feel convenient to work and enhance their level of performance. The manager must discuss productivity and performance with the employees and motivate them. Even the interaction between remote employees and employers must be encouraged. Even the use of the hybrid model help to increase the productivity of IT employees. It is necessary to make the work non-monotonous and interesting for remote employees in the IT sector. The individual development program for the IT remote staff can be used to motivate them. The virtual meeting and interaction among the team can enhance the performance and productivity of remote staff IT. An effective plan is required to be developed to ensure the work-life balance of the remote IT staff (Yadav, et. al., 2020). Even it is a difficult task to promote employee engagement among remote staff. But the employees who want to go to the office may have been facing issues while working at home, and there are chances that their productivity at home is lower compared to the office. Hence, it is necessary that the employer provide the necessary support and equipment for employees to work.

According to Patanjali and Bhatta (2022), in order to promote the better performance of remote employees in the IT sector, the management of IT companies needs to provide freedom, empowerment as well as autonomy to its staff. An effective administration by a Human Resource manager is required to link their performance and opportunities for growth in order to communicate this to remote employees. Women employees should be given flexibility based on their workload. Effective supervision, as well as working culture, is very necessary for the employee to enhance their productivity while working at home or office. It is also necessary for the managers, supervisors as well as leaders in the IT sector to invest their time in communication with their employees in work from home setting as this will motivate them to work efficiently. This leads to enhanced productivity among IT remote working employees.

According to Thorstensson (2021), the recommendations are provided to the project manager and project coordinators who are working from homes, such as developing a

workspace at home in order to reduce interruptions and distractions. The break can be taken by trying and exploring new things, doing meditation, or listening to music. For communication, video-conferencing should be used, the business meeting must be limited, and team interaction must be enhanced. The study also recommended the suggestion to IT organisations to enhance the productivity of their remote employees. It is suggested to provide the required equipment to employees, promote the wellbeing of remote employees as well as provide financial support for the childcare expenses and electricity bills. Communication needs to be improved, and trust is required to be developed among remote IT employees. It can be done through regular check-ins and daily meetings. This will directly contribute to the enhanced productivity of remote employees in the IT sector. According to a study by Kazi Turin Rahman and Arif (2020), by working from home, the employees are productive as their time of commuting decreases. It is necessary to have the proper guidelines in order to protect employees from overworking by motivating the remote employees to form a knowledge sharing plan, effective communication, ensuring social interaction and timely measuring of productivity (Farooq and Sultana, 2021). Thus, IT companies need to improve their approaches to enhance the productivity of remote staff in the UK.

According to Haridas, Rahul and Subha (2021), the productivity of IT remote staff is majorly affected by collaboration as well as communication. The managers or employers should focus on enhancing the communication with employees and among the employees as this will help to increase the collaboration in the team, which ultimately increases productivity. If the work stress of employees is high, then productivity will also decrease. The high level of satisfaction leads to a decrease in the employee's productivity. There is a negligible impact of income or gender of employees on this productivity while working from home. It explored in this study that the physical environment in which the employees are working has no major impact on the productivity of IT employees. The productivity of employees varies from industry to industry. IT industry is an industry that keeps on changing and adapting, so it was easier to adapt the remote working.

3.11 Literature Gap

From the past research, it has been identified that are very limited studies that only focus on the IT sector's remote employees. There is a shortage of literature that focuses on

the UK's IT market and its remote staff. There are various studies that helped to explore the negative and positive impacts of remote working, but there are few studies that show the direct impact of remote working on the employee's productivity. There is a lack of information about the productivity of the IT sector's remote staff in the United Kingdom. There are many journals and articles that focus on the remote working and productivity of the general remote employees of a particular nation. Even there are certain studies that do not consider any particular sector. It is explored that the scope of previous studies is wide, and the population is also wide. Thus, this study will help to focus on the limited area of study that is country UK and industries like Information Technology. Some studies are showing evidence that female employees' productivity has been positively increased due to remote working. At the same time, other studies also claim that the productivity of women employees is low. Even the studies do provide insight into the concepts such as flexible working hours as well as work-life balance, which are linked to remote working and the productivity of employees. Even the role of communication, as well as collaboration in productivity and remote working, is also depicted in these studies. The majority of studies claim that the employees are opting for remote working due to flexibility and saving the time of commutation. It was explored that there are diverse factors that impact the productivity of employees, such as the internet connection, hardware devices and support from the managers. But the explored studies do help to explore the ways the companies are using to deal with the negative impact of remote working. But there are very few studies that focus on enhancing the productivity of IT employees. This gives an opportunity to study the impact of remote work on IT employees' productivity in the United Kingdom to address the research aim. This study also helps to address the gap to explore the positive & negative impacts of the remote working trend on employee productivity in the IT industry of the United Kingdom. It also helps to identify the ways to deal with the negative impacts of remote working trends impacting the productivity of the UK's IT employees.

3.12 Conceptual Framework

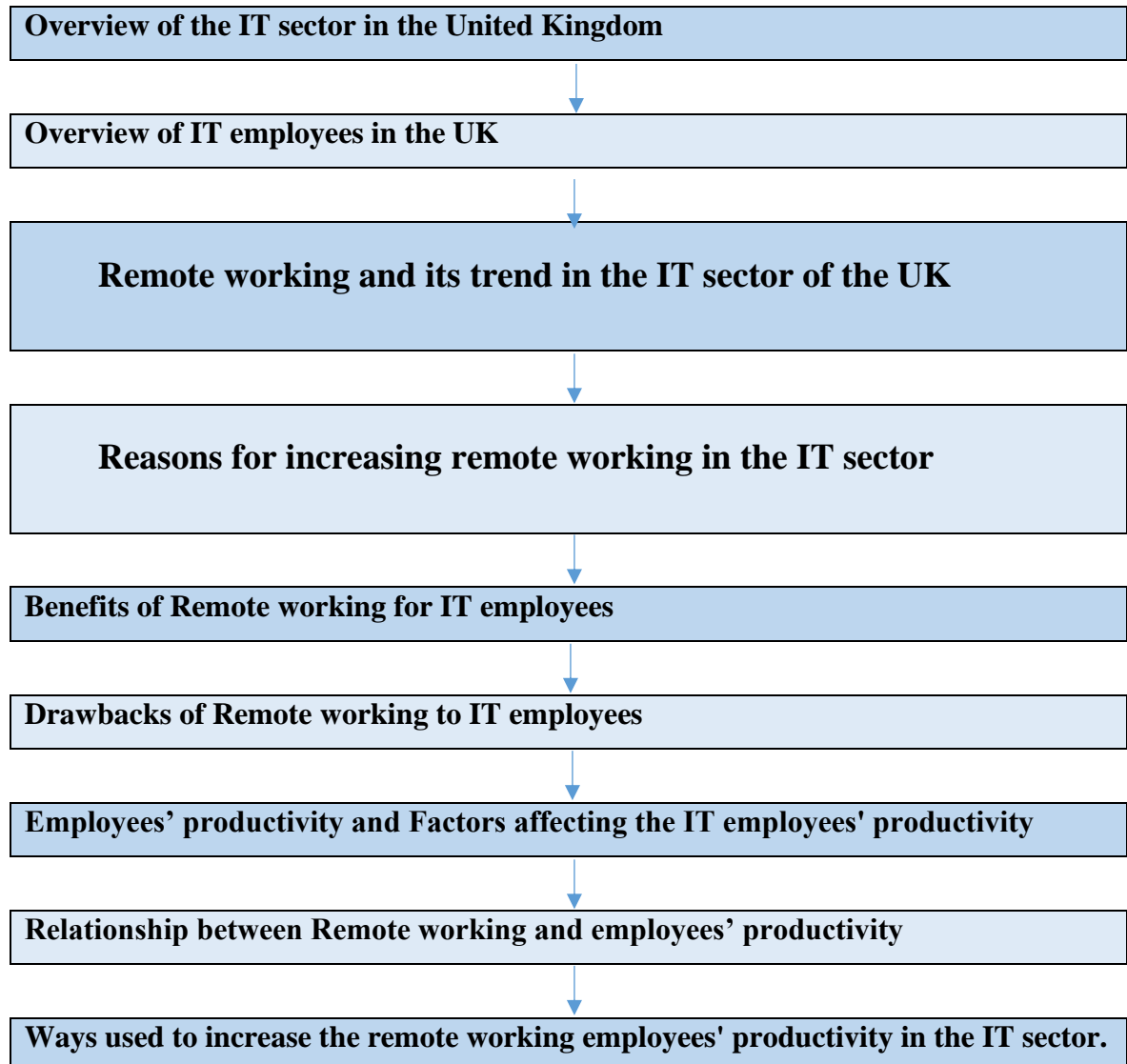


Figure 6 - Conceptual Framework

Source - Self-created

3.13 Chapter Summary

From the above literature review, it was explored that the IT sector of the UK is not influenced negatively because of the pandemic as the revenue is increasing. The IT industry can be divided into hardware, software and IT services. The IT sector consists of the services such as IT consulting, IT outsourcing, and business process outsourcing. The UK's IT industry has been hiring employees every year, which is generating employment in the UK. It was explored that the major reason for the increasing trend of remote working is the pandemic outbreak and the fear of being infected by COVID - 19. Even if there are changes in the future, the companies may introduce a hybrid working culture or model. Even the benefits that organisations and employees have experienced due to the pandemic are leading toward the culture of hybrid working in the future. The key benefits that remote working has provided to employees are flexible working hours, reduced commuting time, saving of the cost used in commuting, reduced childcare expenses, staying close to their family, ensuring the work-life balance and reduced risk of being infected by COVID - 19. The benefits that the companies are gaining from remote working are reduced in their overhead expenses as well as can find the best talent located in the distant location. The key drawbacks that were observed of remote working are communication issues at work, collaboration issues with colleagues and team, reduced social interaction, no limit between the work and personal life, lack of required ergonomics, internet connectivity issues, reduced motivation level, physical health issues and increased work stress.

The productivity of IT employees is influenced by the lack of IT infrastructure at home, work stress, inability to manage the work-life balance, lack of anatomy and lack of empowerment. A mixed impact on the female employee's productivity was found in diverse studies. Some studies state that women employees gain flexibility which helps to enhance productivity, but certain studies show that there is an issue with ensuring the work-life balance for female staff that reduces the productivity of female employees. Even the employees in the age group of 30 to 40 years are finding it difficult to use the technologies, which directly reduces their productivity level. Employee engagement needs to be improved for remote staff to increase the remote working employees' productivity in the IT sector. The managers and HR can help in motivating the employees to perform effectively. Motivation can be increased by providing recognition for productive employees. Even the use of a hybrid model can help to enhance the productivity of remote staff. The individual

development program and virtual meetings can enhance the productivity of the IT sector's remote staff by motivating them. It is also significant to provide freedom, empowerment & autonomy to remote staff for better productivity. Communication needs to be enhanced in order to ensure the remote staff are well-informed, which helps on enhancing the employees' productivity in the Information Technology sector. The growth opportunities for the employees are significant during remote work to encourage them to perform efficiently. Productivity is linked to various factors which are required to be considered by employers in order to encourage and motivate them to do well.

4. Practical Part

4.1 Findings

4.1.1 Chapter Introduction

The chapter will be regarding the analysis of the sourced data as a practical part of this thesis. The application of chosen research methodologies will be seen in this part to thesis the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK. A data analysis method called thematic analysis is to be applied. Thematic analysis is the method that assists in analysing the descriptive or qualitative data, which consists of searching from the whole data set to recognise, analyse as well as report the patterns that repeat more times. It helps in explaining and interpreting the data in a process to be done to choose codes and develop themes. By using this method, the secondary data will be sourced, then the same themes to be located from collected descriptive text data, and the code will be aligned to them. The three main themes are to be identified based on the research questions. The first theme to be explored will be the positive effects on employees' productivity due to the remote working trend in the UK's Information Technology industry. The second theme to be addressed will be the negative effects on employees' productivity due to the remote working trend in the UK's Information Technology industry. The third theme to be addressed will be the ways of reducing the negative effects on employees' productivity due to the remote working trend in the UK's Information Technology industry. A thorough analysis will be conducted of the findings to address the key objectives.

4.1.2 Theme - 1 - Positive effects on employees' productivity due to the remote working trend in the UK's IT industry

Based on a study of 'Work After Lockdown', it is found that about 88 per cent of employees stated that they worked more compared to before the lockdown. Thus, it shows that productivity has increased. The data from Office for National Statistics OPN published in the year 2022 states that around 52 per cent of remote working employees stated that they are able to complete the work more quickly. Around 53 stated that they have very few distractions while working from home, but this is reported by employees of the age group of

30 years or more. The research of CPID states that due to the remote working of staff, the productivity, as well as efficiency of companies, has increased (Mutebi and Hobbs, 2022). Thus, in the UK's IT sector, certain employees are experiencing that their productivity has improved while working from their homes. Therefore. It can be stated that there are more than half of employees find the advantage of WFH, but there are certain employees that face issues meeting the daily productivity in the IT sector in the UK.

From the collected data, it is found that working from home has enhanced productivity at the time of the pandemic. Many employers had the major benefit of net productivity over time. The productivity in the different organisations was found to be different because of training to line managers to handle the remote employees (CIPD, 2021a). Thus, the productivity level of IT employees is also subjective due to the organisational policies and support to employees and managers. A large organisation in the IT sector that has prepared its line managers to handle the remote staff found to succeed in enhancing the productivity of their team. But the companies that are not investing in the training of their line managers might have suffered to maintain productivity.

The youth employees are less likely to state or report the positive aspect of remote working compared to old-aged employees. There are very limited employees between the age of 16 to 29 years states that which enhances the work-life balance. It can be critically analysed that the youth employees are not having responsibilities like the female employees or the employees with kids, so there do not face any issue of work-life imbalance. Female employees are benefited from remote working as the study states that female employees feel that they are getting more time to do their work, and it reduces distraction for them. It also helps them to spend more time with the child and manage their work by ensuring the family's needs. The female employees have more time because of the reduced time of travelling to the office. While male employees also reported that working from home helped in enhancing their wellbeing. The male employee is able to spend more time with family and how helping them to save the time of travelling. Even male employees are able to generate new ideas while working from home. Organisations are benefitting from remote working as their overhead cost is reduced as well as enhanced productivity of the organisation and its employees. But that does not mean that the companies stop investing in the employees' training as well as the wellbeing of the staff working from a remote location. Below is the figure that shows that the key reason for businesses to enhance remote working is the

wellbeing of staff, reduction of overheads, enhanced productivity, hiring talented staff, reduce the level of sickness, etc. The wellbeing of the staff has a direct association with the increasingly high level of employee productivity. An employee with less stress and good mental health can focus on the work with a clear mind, and that enhances their productivity. Even the reduction in the level of sickness is also linked to an organisation's productivity. The illness usually results in the absenteeism of employees, so this is working in favour of the increased presence of the employee at work and delivering eh work. The illness rate of staff working from home in the UK was about 0.9 per cent in the year 2020, and the illness rate of staff not working remotely was about 2.2 per cent (ONS, 2021). Thus, employees of different age groups or genders are experiencing the different benefits of working from home, and it is influencing their productivity in different ways.

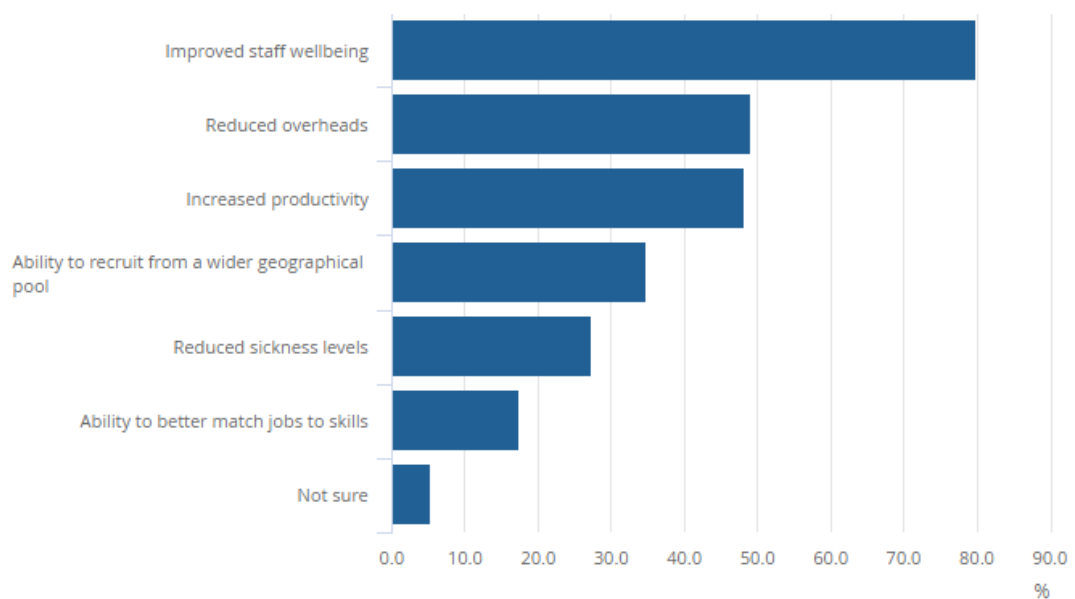


Figure 7 - Benefits of remote working and intentions for which organisations want to continue WFH in the UK

Source - (ONS, 2021).

Based on the survey taken by an IT company called Microsoft, the data was collected from more than 20 thousand people, and it was found that remote working from home led to increased productivity and efficiency (Taylor, 2020). This viewpoint of IT employees was found to be different from managers of this company. The employees are gaining more

benefits while working at home, so they are able to contribute more to the organisation. The perception of both managers and employees and the IT sector is different on productivity which is changed by setting effective performance management criteria.

Remote working in the UK's IT sector is helping to enhance the creativity of its staff. The employees' enhanced creativity leads to new ideas and increased productivity of the IT sector companies in the UK. Creativity is very significant for IT sector employees as it helps to satisfy the client's needs and avoid monotonous work. About 7.7 out of ten of the rating explored the productivity of remote teams in the UK, which is higher (6.5 out of ten) compared to employees working from an office in the IT sector of the UK. By critically analysing this finding, it can be stated that IT companies can enhance productivity with remote working as office working employees are giving lower productivity despite providing better infrastructure at the office. Around 67 per cent of employers in the UK stated their productivity enhanced with remote working compared to office working staff in the IT sector of the UK (Evolve, 2020). This study also confirms that employers are also finding the benefit of increasing productivity due to remote working or WFH. Therefore, productivity is influenced positively by WFH as employees find more comfort in doing work from home.

From the research, it was found that the employees have reported various benefits of remote working during the pandemic. Autonomy was gained by the employees working in the IT sector while working from home. This helped to develop confidence among the employees (Escudero and Kleinman, 2022). This helps the employee grow and improve their abilities. It also helps the employees to work independently with guidance. Remote employees do not have guidance throughout their working hours, so it is essential to provide the autonomy and capability to make decisions by themselves.

It was found that the use of technologies has increased by most employees due to working from home (Deloitte, 2021). Initially, there were limited technologies that employees used to use, but working from home has even forced non-IT employees working in IT companies to use more technologies for communication or other work.

It was explored that the mean work-from-home productivity has enhanced from 61 in the year 2020 to 78 in the year 2021. The employees who are engaged in remote working on a continuous basis have explored that their productivity enhanced over time (Morikawa, 2022). By critically analysing this data, it can be stated that remote working might bring a

more positive impact or influence on the remote employees of the UK's IT sector if they continue to work remotely for a longer time.

4.1.3 Theme - 2 - Negative effects on employees' productivity due to the remote working trend in the UK's IT industry

It was explored that due to remote working, the employees are experiencing that there is no clear limit between work and their personal life. Thus, the work-life balance is not maintained by the staff, which results in lower productivity of employees. The employees working from remote areas are pressured to be available online for work to check email, chat or calls. Even the employees are required to work in illness which is reducing their performance level and productivity level. The employee working from remote areas are also experiencing that there is increasing in overtime, and they are not paid for extra extended working hours. This led to demotivation and tiredness among employees, which resulted in dissatisfaction while remote working and reduced overall employee productivity. According to the survey of Office for National Statistics and Labour Force Survey and OPN, about 15 per cent of remote employees working from home stated that they experience a fall in their productivity (Mutebi and Hobbs, 2022). It was discovered that the reduction in productivity was experienced due to the reduced workload, involved in the care and schooling of children, no direct interaction or limited interaction with other employees or colleagues, lack of focus and motivation, restricted accessibility of resources of the organisation and experienced the major changes in the process of working after the restrictions of COVID - 19. It was also found that only the productivity of male and female remote employees of the UK without children had managed to maintain a high level of productivity compared to male and female remote employees of the UK with children. Thus, employees with children are facing issues in maintaining productivity in the UK. The youth working from the shared accommodation facilities were affected during the lockdown as they did not have a proper workspace to work in. Many managers and employees have reported that they were not having access to a conducive workplace or workspace, which negatively affected their wellbeing and productivity. For younger people living in shared accommodation during lockdowns, access to adequate workspace was difficult. Having access to conducive workspaces is an area of concern for some employees and managers who have raised concerns about productivity and

wellbeing. But the research of CPID states that many remote working staff reported that productivity was influenced negatively. Even the lack of training for line managers was observed in the organisation, where the employees' productivity was found to be decreased (Mutebi and Hobbs, 2022). Therefore, there are lack of resources and support at home affects the IT employees to work efficiently and ensure productivity. The lack of trained managers resulted in inefficient handling of employees, which reduced the positivity level (CIPD, 2021a). Thus, productivity has negatively affected the companies in the IT sector, failing to train managers to manage the new culture of remote working. It is explored from the collected data that the remote staff of the UK are suffering from balancing the increasing workload as well as maintaining the work-life balance in order to meet work-related commitment and professional commitments (CIPD, 2021b). All these are directly affecting remote employees' productivity because employees in the IT sector of the UK are not able to concentrate and focus on their work.

From the collected data, it was explored that even employees between the age of 16 to 29 years do report that working from home results in increased distractions for them. This might be because the youth do not have the ability to focus on one work at a time, which leads to distraction. It was found from the data that female employees do face a barrier to generating new ideas while working from home. This might be because of the monotonous work of handling home and company work; they do get time to explore new things. It is observed that about 20 per cent of businesses in the UK came across the issue of reduced communication level, reduction in productivity level as well as negatively influencing the work culture (ONS, 2021). Therefore, the existence of certain barriers, like a distraction at home and lack of effective communication, develop a productive work environment. In order to make the IT companies' project work successfully, when the IT team need to interact and communicate on a continuous or regular basis, the communication can result in the failure of the project and reduce the productivity of IT teams.

It was found from the gathered data that about 80 per cent of the managers disagreed with this claim of the survey taken by an IT company called Microsoft, stating that working from home results in increased productivity and efficiency (Taylor, 2020). There exists a discrepancy between the view on productivity between employees and managers working in the UK's IT sector. This is really a major issue as it can develop a difference between the managers and the team. The managers are able to continuously monitor the employee

performance while working from home, so it creates the ideology among the managers that the employees are not working at their best.

From the data, it was explored that around 26 per cent of employees in the UK's IT sector felt a lack of informal socialisation with their colleagues, which led to a cut-off with the social group. This discourages the employees from working productively. About 30 per cent of employees in the IT sector in the UK felt loneliness because they needed to work at home alone and had no one to communicate with personally. The lack of technology at home for effective working was a challenge for employees working in the IT sector of the United Kingdom (Evolve, 2020). The lack of group or colleague interaction is essential for employees to divert minds and reduce loneliness. In order to spend long working hours productively, it is essential to have people to interact and talk about other than the work. It also works as a distraction from work stress.

From the gathered data set, it was found that digital skills, the wellbeing of employees as well as inclusion have been influenced because of the pandemic. The UK's remote working employees survey was taken in May 2020. It was found that 38 per cent of employees explored that their wellbeing has been influenced in a negative way as people felt the fear of infection, loneliness, increased stress, job insecurity, etc. So, there is a risk of emotional distress for the employees who are working from home, which impacts in a negative way on the IT employees' productivity. About 25 per cent of employees reported that their colleagues were not productive enough as they had been prior to the pandemic lockdown. The employees working from are missing social interaction with colleagues or customers. Even collaboration has decreased, and networking is not easy anymore (Deloitte, 2021). Collaboration is essential for working efficiently on IT projects for employees. The increased distance due to the remote working among the IT employees of the UK affected the network among the team as well as colleagues. The duration of the communication has been increased, which affects productivity.

It was that in the IT sector, there are many companies that invested in remote employees' wellbeing as well as training in the last two years. It was explored that there is a need to meet the employees' needs to be productive. But the technology-related glitches with the laptop as well as smartphones resulted in a disruption in the employees' productivity

(Comptia, 2022). It is necessary to have a better IT infrastructure for employees to work efficiently. Their lack of knowledge to deal with the technical and technology glitches affects the performance as well as productivity of the remote employees.

4.1.4 Theme - 3 - Ways of reducing the negative effects on employees' productivity due to the remote working trend in the UK's IT industry

It was explored that the explored negative impact of working from home can be tackled if the organisation uses the below-identified measures sourced from the secondary data. The productivity of employees can be enhanced with the training of line managers to manage the remote and WFH staff. Investment in training can help IT companies to have a productive staff. Even focusing on the health and wellbeing of staff working in a remote area can help in enhancing their wellbeing as it reduces the mental stress due to isolation. It is necessary that the company provide the necessary support to employees, and this can be done with the help of better human resource policies. It is also important to develop collaboration among the remote staff to enhance interactions as well as cooperation. Communication is also significant among the organisation's line managers as well as its employees while working from home. So, communication tools need to be improved, and collaboration needs innovation and upskilling. Mass communication can result in the failure of the task and may result in an ineffective project. It is explored that to deal with work-related stress, an effective stress-tackling program or stress reduction program must be developed by the companies. The work duration must involve certain stress-controlling activities for remote employees. It is significant for remote employees to provide financial support so that they can assess the resources as well as required equipment to work from home. Organisations are required to focus on promoting autonomy in order to avoid delays in work or decision-making. A promotion of flexibility for remote employees assists in ensuring the work and life balance in the life of remote staff (Mutebi and Hobbs, 2022). Thus, it is necessary for IT organisations to focus on remote staff needs to improve their productivity. It is discovered that the use of a holistic approach for ensuring work-life balance is needed for the IT remote staff in order to overcome the negative influences on productivity because of working from home. This can be possible with the arrangement of flexible working, as remote employees can manage their work as well as their personal life (CIPD, 2021b). So, it is essential to promote a flexible working culture that helps the

employee to give their time to family's care and children's care as well as manage work commitments. If the employees are able to separate their personal life and professional life, then they are able to enhance their work productivity and happy personal life. The productivity of remote employees does influence by the working hours, bonus as well as promotion (ONS, 2021). If IT organisations focus on enhancing employee bonuses and give them opportunities to grow by promotion, the employee productivity level can be enhanced. It is also essential to give pay for extra working hours to employees.

The measures that the IT sector companies in the UK can take is to provide the resources and technologies to employees to work efficiently from home. It will also help in promoting flexibility for employees as they can manage their work related to their home. It is also important for managers to focus on employee engagement in order to deal with loneliness and the lack of interactions with colleagues. It also is also necessary that the managers support their remote team by motivating and providing support or guidance. It is essential to have efficient and clear communication (Evolve, 2020). Thus, managers have a significant role in order to enhance productivity by guiding and supporting remote employees. The employees working from home need technical support, communication as well as emotional support. Thus, IT companies need to focus on better employee support and employee engagement net teams.

The gathered data analysis also explores that in the IT service sector, it was explored that productivity decreased by 8 to 19 per cent, and the employees were working for long hours at the time of COVID - 19 due to remote working. The large projects in the IT sector were highly affected by the employees' productivity compared to small projects during the pandemic. This affected the planning, execution as well as implementation of the projects. The impact of WFH on the IT employees was observed to be affected by the project's characteristics, such as its type, programming language, duration, size, etc. Thus, every project was influenced in different ways and affected the product of IT employees in the UK. The social isolation and issues in reconciliation with family were observed by the IT employees because they did not have direct interaction with their friends or colleagues during the pandemic. Even the increased time spent on work or workstations by IT employees was observed to be increased (Escudero and Kleinman, 2022). This result in health issues as well as work-life imbalance in the IT sector. It is necessary that the project type be analysed and the IT companies give the required resources and support.

It is found that in the IT sector of the UK, remote working employees can be trained by promoting innovation and adaptation of the latest technologies. Thus, change management is essential for organisations to adapt the unexpected changes like WFH because of COVID - 19. Even companies need to invest in the skills development of their remote employees to use technologies efficiently. Even the organisation needs to improve the employees' flexibility for effective work-life balance in the IT industry of the UK for remote employees (Escudero and Kleinman, 2022). The flexibility will help the remote employees to plan their work based on their time and handle the daily family work. There is a need for high investment in developing the infrastructure for remote working as well as learning of employees. The productivity of remote working can be enhanced by the learning effect (Morikawa, 2022). The learning environment is required to be developed for the remote staff to adapt to new things and prepare for future challenges.

4.1.5 Chapter Summary

Thus, it can be concluded from the research findings that remote working has assisted IT companies' employees to effectively manage their work during the lockdown. The productivity of the employees working from home in the UK IT industry was influenced in both positive as well as negative manner. It helps the employees to complete the work more quickly. The productivity level of IT employees is subjective due to the organisational policies and support to employees and managers. The trained line manager helped in handling the remote employees efficiently and productively. The women employees were able to ensure the work-life balance by managing the child, home as well as professional work. The wellbeing of male employees was also enhanced. Remote employees are facing loneliness as well as a lack of interaction which directly affects productivity. The communication gap can also be seen among the team and decrease productivity. The distraction is also decreasing the productivity of youth employees. The lack of support and technical glitches do influence productivity in a negative way. The lack of training for managers, work-life imbalance, as well as an ineffective wellbeing program led to a decrease in the productivity of IT employees. In order to enhance productivity, the ways that were identified through the study include wellbeing program, support from the organisation, improved communication, promote the flexibility for work-life balance. The infrastructure of WFH is also required to be improved.

5. Results and Discussion

5.1 Chapter Introduction

This chapter of discussion will include the findings' interpretation and explanation for each of them that are explored for this thesis. The similarities between the thesis' findings and the reviewed literary work will be clearly stated for each theme. The interpretation will help to explore what are the negative as well as positive influences on the productivity of remote working that the employees employed in the IT industry of the UK are experiencing. The approaches that can help in reducing or controlling the negative influences on the productivity of the remote working of IT employees in the United Kingdom will be interpreted as well as evaluated based on the literature review and the findings to have better clarity on the findings and its relationship with the past studies.

5.2 Theme - 1 - Positive effects on employees' productivity due to the remote working trend in the UK's IT industry

Based on the evaluation of the similarities of both literary work and the research findings, it is found there had been a very positive influence on most of the remote staff's productivity in the IT sector of the UK. It was explored that the efficiency level is also improved because of remote working. By interpreting the findings gained from Mutebi and Hobbs (2022) and ONS (2021), it is found that female employees are more beneficial due to remote working having a work-life balance and flexibility is gained. This led to a positive impact on female employee productivity in the IT sector. The female employees who are involved in WFH experience that they are able to handle their family and professional job efficiently. However, the organisations that supported their remote employees by providing the necessary support and resources found that productivity was enhanced as employees were able to complete their work quickly.

Thorstensson (2021) and Mutebi and Hobbs (2022) also analysed that some of the IT remote employees felt that the reduction in distraction at home helped them to give their best to work. This also helps to enhance the productivity level of the project coordinators as well as project managers. The reduction in interruptions, as well as distraction, might be more at the workplace compared to home. But the study by ONS (2021) showed that a reduction in

distraction was observed by the female employees as well as the employees above the age of 30 years. This is because these age groups of gender are more focused compared to youths.

The literary work by Galanti, et. al. (2021) and Patanjali and Bhatta (2022) & the findings from Escudero and Kleinman (2022) are supporting the claims that the autonomy given to remote employees helped to enhance productivity. This is effective for forming self-leadership among the IT companies' remote staff. This results in staff empowerment and independence among IT employees. The remote employees were able to work easily without the need for guidance or order. This help to do the work continuously and enhance productivity.

Even it was interpreted from the study that productivity was positive when the managers were trained to handle the remote staff. The male employees also experienced an improvement in their wellbeing, which contributed to increased productivity while working from their homes. Even the level of employee sickness was found to be reduced with remote working, which is an added advantage as sick leave or absenteeism is reduced, and employee productivity is enhanced (ONS, 2021). Most IT companies reported that remote had enhanced the productivity level of remote staff. Even the study stated over time, productivity to be increased if the employees kept working from home.

5.3 Theme - 2 - Negative effects on employees' productivity due to the remote working trend in the UK's IT industry

Both literary works, as well as findings, helped to understand how productivity decrease employees involved in remote working. Many employees are who are aged and use limited technologies were not used to technology, and that has developed a barrier for employees as daily productivity found to be reduced. Farooq and Sultana (2021) and (CompTIA, 2022) have similarities as both emphasise the issue associated with technology-based glitches or lack of better connectivity required at home to work efficiently. The employees working from home have the IT department available at all times. The unexpected technology-related problem may result in no work and no productivity of employees for a certain time.

As the IT sector involves different IT professionals working on the project, the absence of collaboration among remote staff can result in the project's delay or failure. The ineffective collaboration among remote IT employees working on a project usually results

in less communication among team members as well as reduces the productivity of employees. However, the findings analysed by Deloitte (2021) support the literature of Farooq and Sultana (2021), as both stated that remote working affected the collaboration among the employees and team in a negative manner. The reduced collaboration affects the work or project of the IT team.

The similarities explored or analysed between Mutebi and Hobbs (2022) and Gibbs, Mengel and Siemroth (2021) are that the productivity of remote employees has decreased because of the work-life imbalance and responsibilities towards the children's care. These employees are experiencing that there is no clear boundary between work and their personal life, because of which the duration of work has increased. The literature review from Prasad, et. al. (2020) also supports the findings analysed from CIPD (2021b), which states that the major problems faced by remote employees in balancing the increasing workload and maintaining the work-life balance. The existence of ineffective work-life balance in the cultural environment of remote working during the pandemic has decreased productivity. So, these factors have a negative influence on the working productivity of WFH employees.

The literary work finding gained by Mustajab, et. al. (2020) is highly supportive of the findings found by Mutebi and Hobbs (2022) and Evolve (2020) because they describe that productivity decreases because of inaccessibility of the resources as well as technologies at home for working. If the employees at home are not having better internet facilities or computer, then they will not be able to work efficiently on time in the industry of Information Technology of the UK.

The findings analysed from ONS (2021) support the research by Kitagawa, et. al. (2021), as it is found that the communication barriers are influencing remote employees' productivity. The communication gaps were also observed by IT employees while remote working. Moreover, communication influences the IT project as the coordination problems are identified by the team that results in failure and delay of the project. By having good communication between the remote employees of IT companies in the UK, productivity will be improved as everyone with informed or aware of IT projects or work.

The study by Bulińska-Stangrecka, Bagieńska and Iddagoda (2021) supports the recent finding identified by Evolve (2020), which explains that isolation and loneliness are highly experienced by employees working from home or remote locations. It also decreases the productivity of employees as they feel that there is no one with whom to talk or interact.

This led to increased stress and negatively influenced the mental health of the employees. This also directly impacts the work-life imbalance and the inability to concentrate on work.

However, it was also explored that the productivity of employees is negatively influenced because employees need to work for extended hours as well as required to work when they are not even well. The female employee with family and children were affected by the increased workload to handle home, child and work. Even if the motivation level is low of remote employees, they do not have more opportunities for growth. The employees who are responsible for children-related duties have an issue with maintaining a level of productivity in the UK (Mutebi and Hobbs, 2022). The negative impact of each employee is different, and it is on personal and professional duties. The youth IT employees have more distractions when they work from their homes (ONS, 2021). The reason might be that there is no direct supervision at home. Moreover, the managers working in the IT sector do not believe that productivity is boosted because of remote working. Many employees are working long hours, and it affects their health and productivity in a negative way.

5.4 Theme - 3 - Ways of reducing the negative effects on employees' productivity due to the remote working trend in the UK's IT industry

However, there was no single finding that only stated that remote working only resulted in a positive influence on the productivity of every employee in the IT sector. There is a different impact on the productivity of male employees, female employees, employees with children, middle-aged employees and young employees who are working from home. So, there exists a negative influence on the productivity which IT remote staff, and that need to be handled. While some of the approaches are supported by the literature review explored for this study. Work-life balance is necessary for the positive influence on the employee's mood which makes the mindset broad and enhances the energy as well as the interest of employees. It also helps in enhancing the performance of remote employees, which ultimately results in enhanced productivity. Moreover, the findings explored by Mutebi and Hobbs (2022) and CIPD (2021b) are similar to Yadav, et. al. (2020), that stated that remote working employees could enhance productivity when the organisation can implement an effective policy of work-life balance. However, it is very tough to do for remote staff as they need to manage the daily chores at home as well as the organisational work together. If there is a clear border that restricts work and personal life, merging can help remote IT employees

to focus on work during working hours, and they can manage their personal life after working hours. It is necessary that the working hours are not extended, and they must be paid for the overtime.

The past study by Patanjali and Bhatta (2022) backs the findings by Escudero and Kleinman (2022) regarding autonomy which can help to improve the productivity level. The UK-based IT companies are required to focus on the training as well as skill development of remote employees. Even it is necessary to have flexibility for the female staff working from their home in order to manage the workload and personal life. The approach of flexible working by Mutebi and Hobbs (2022), CIPD (2021b) and Evolve (2020) is in alignment with the study by Patanjali and Bhatta (2022). So, it has become necessary for IT companies to have flexible working hours as well as a flexible working arrangement to support remote employees. This will help to enhance the efficiency as well as productivity of employees and ensure organisational growth in the long run.

The previous study by Thorstensson (2021) stated to have ways to reduce the distraction faced by remote IT employees, which was the issue explored while analysing the data stated by Mutebi and Hobbs (2022). The distraction can be tackled by providing the proper workspace arrangement for remote employees. Even financial support can help to develop better working space for IT employees like IT project coordinators as well as IT project managers.

The improvement in communication, as well as social interaction, are very significant for IT companies with remote staff in the UK. This approach helps in dealing with the reducing productivity because communication is highlighted in the previous study by Kazi Turin Rahman and Arif (2020), and it is also explored through analysis from the current data presented by Mutebi and Hobbs (2022) and Evolve (2020). Communication can help the employees to work efficiently and ensure no delay in the work. In remote working, there are possibilities of delay in work due to improper communication or no interaction with the people. So, the communication tools and channels need to be improved over time for remote employees as it can enhance their productivity level in the UK. Communication can also help to improve the collaboration that is lacking between remote employees. It also helps in reducing the feeling of isolation among employees as they will be engaged with different people through communication tools and mediums. Remote employees' feeling of

isolation can be managed by ensuring that the organisation encourage employee engagement activities and giving support through the wellness program.

Thereby, the major ways to tackle the reduced productivity of remote staff in the UK's IT sector are to have trained managers to handle the remote employees, invest in the remote staff's wellbeing, provide technical support and financial support, improve collaboration, enhance communication, promote the staff autonomy and flexibility, promoting work-life balance, improved accessibility of the need resources to work at home, etc. It is very significant for the UK's IT companies to understand the requirements of every remote-working employee. Even IT organisations might be facing different problems related to the productivity issues of remote employees, so interaction between the organisation and its employees is essential. The pandemic had made a drastic change, but every sector and organisation were not ready to adopt the change WFH. Therefore, it is necessary for IT companies in the UK to consider the training of project managers or leaders in order to coordinate and operate the work with remote employees. Even the IT company can organise a stress reduction program as well as promote a wellbeing program to help in dealing with the health-related issues of remote staff. Even there is a significant need to use the holistic approach to promote a culture of work-life balance for the employees that are involved in WFH. It needs to have a flexible working culture for remote staff in order to encourage the employees to work by managing child care, household work and office work. It is necessary engagement and motivates the remote staff, so the organisation can focus on increasing employee bonuses as well as providing promotions to productive employees as well as efficient employees (ONS, 2021). The employees need technological resources, technical support as well as office resources related to work. It is necessary that the employees feel that the organisation is not supporting them; when the organisation meets the needs of the employees, satisfaction increases and motivates them to work harder. In order to deal with the issue of lack of infrastructure of resources to work from home, the UK's IT companies to develop the infrastructure for remote staff for efficient and productive work.

5.5 Chapter Summary

This chapter can be summarised by stating that there is high relevance between the past studies and the findings of this research which focuses on finding the effect of the trend of remote working on IT employees' productivity in the UK's Information Technology

industry. Most employees in the IT sector experienced work-life balance and flexibility while working, which helped to enhance productivity, majorly for female employees. The IT companies that provided the training to their line managers have helped in improving productivity. Male employees' ability enhanced to explore new ideas while working from home. The support from the organisation also helped to improve the productivity of remote staff. IT employees do experience a reduction in distraction at home while working efficiently and productively. The employees who are getting the resources related to work have experienced good productivity. While facing unexpected technology-related problems influenced the work and reduced the productivity of employees. The ineffective collaboration and communication do affect remote IT employees as it reduces their productivity of employees. Some employees are experiencing that there is no clarity about the line that separates their professional work life and personal life. They are able to manage the work, which leads to reduced productivity. Isolation and loneliness feeling are experienced by remote employees, which influences their mental health and affects their productivity in a negative way. A remote female employee in the IT industry has family and child responsibilities were affected their productivity because of handling home, child and work together. The similarities discovered among the literature review and findings can help in controlling and reducing the negative factor affecting the employee's productivity of remote staff in the UK's IT sector. The training of managers is needed to manage remote IT employees. The IT sector companies of the UK are needed to focus the remote staff wellbeing for better mental and physical health, which directly help in enhancing productivity. If the improvement is carried out through collaboration as well as communication, the employees' time in unnecessary work can be saved, and employees can focus on the work. It is also necessary for better productivity that remote staff have staff autonomy and flexibility. A good work-life balance also works effectively for employees. The resources needs must be met of the employees to have better working resources to support work productivity.

6. Conclusion

6.1 Final conclusion

Therefore, it can be concluded the productivity of the UK's IT remote staff for different types of employees was found to be different. Even the organisation's support and the employee demographic play a significant role in productivity. Some of the employees working in the UK's IT industry are facing different issues such as work-life balance problems, distractions, wellbeing issues, feeling of loneliness, lack of support and required resources from the organisation, long working hours, technical issues, ineffective arrangement to work from home, etc. All these factors are impacting the IT employees' performance and resulting in a decline in productivity. At the same time, it is also explored that some employees, such as females, find remote working fruitfully because they are able to manage the work and their child. Even the support and initiatives of the IT sector companies of the UK are also helping the employees to enhance their productivity by providing flexible working as well as technological resources to work from home. Companies that have trained their employees or managers to effectively work from home are able to work in a productive manner compared to those that did not train their managers to handle remote staff. Companies that have invested in the wellbeing of the staff working from their home is also able to ensure excellence in staff productivity. Productivity seems to be reducing the remote staff in the UK because of no clear definition of professional as well as personal boundaries, and employees were spending more time on the workstation at home. Even the employees having children were majorly affected because the responsibilities towards children as well as work were required to be managed at the same time. Various remote employees also experienced that the communication with colleagues and team members in the IT sector was not good, which impacted the work and reduced productivity in a negative way. Even the collaboration issues were experienced by remote staff that affected the trust and effective working with a team on any IT projects. The remote staff do not have anyone to have direct interaction which also developed the feeling of being isolated and less productivity. Though there are certain employees that felt that distraction has been reduced because of remote working, so the employees are able to work with concentration and improved productivity. The existence of technical glitches while working at home is high and that also influences the employees' work. IT companies in the UK can have

effective remote working with high productivity by implementing a wellbeing program for remote employees and focusing on providing both financial as well as resource support. Organisations are also required to have an effective work-life balance policy and employee engagement policy for the remote staff because that can have a very positive impact on employee satisfaction as well as productivity. Even the employee is required to be provided with flexibility and autonomy in order to work productively. Communication and collaboration also need to be enhanced by using the appropriate communication tools.

6.1.1 Linking with the objectives

Objective - 1 - To analyse the negative and positive impacts of the remote working trend on employee productivity in the IT sector of the UK.

The objective of exploring the effect of remote working on the IT sector employees' productivity has been met because there are data from which both positive as well as negative factors influence the remote IT staff's productivity. Moreover, most of the studies showed more of a positive influence on IT remote employees' productivity. The factors related to remote working-related trends that helped the IT staff to work efficiently with increased or maintained a level of productivity. The female employees gained more advantages because of remote working, which also helped to enhance productivity. But there are some female employees that feel that it becomes a problem to manage their work and home at the same time. However, there are many IT companies that give the required support and help to their staff for remote work, such as technical support, technologies as well as final support. It was explored that the training to the managers was found to be effective for managing the staff. Many employees found that the distraction that was faced in the office were reduced because of that the remote employees were able to work properly and improved their level of productivity. There are many employees that experienced that they got flexibility in the work while working at home, and that led to increased satisfaction with the work as well as improved productivity. Even the organisation's wellbeing policy is also benefiting the employees, which leads to improved mental health and physical health, which motivates the employees to contribute to the IT organisation's success with increased work productivity. The sick leaves of employees were found to be reduced after the remote working culture.

Moreover, there are negative impacts on the employees' productivity because of the remote working culture. Productivity was found to be reduced by the IT remote staff in the

UK because of the inability to differentiate their professional or personal lives. Even the employees are also spending more time on the workstation at home because they are not able to complete their work during office hours. The employees have more time on communication is spent as the team is located remotely. There are many employees who are working from home and have experienced a work-life imbalance which results in a productivity reduction. The ineffective untrained managers are influencing the IT team's productivity, and the work is not effectively handled by the team. The communication issue as well as collaboration are major concerns related to the productivity of remote employees. The increasing distraction is also affecting the work and daily productivity of employees. Even the employees' feeling of the lack of socialisation also affects their satisfaction level and productivity as the remote staff experiences loneliness. Even the lack of resources as well as technical issues is also experienced by employees, which delays the work and increases the duration of the work with less productivity.

Objective - 2 - To explore the ways to reduce the negative impacts of remote working trends influencing the productivity of IT employees in the UK.

The objective of exploring the ways to handle the negative effect of remote working on the IT sector employees' productivity has been met because the different methods have been identified. The IT sector companies in the UK are required to train managers to handle the team or employees that are working from different locations. The wellbeing and health of staff need to be handled by IT companies through the policies and initiatives addressing the needs of remote staff. Even the collaboration among teams needs to be enhanced to improve employee interaction as well as cooperation. Communication is also required to be enhanced with the help of effective tools of communication. Effective techniques of stress reduction can help in controlling the remote staff's work stress that reduces productivity. The flexibility in the work also needs to be improved as it can help the remote staff to manage and balance their work and personal life. It is significant to give financial support to the employee for different purposes like access to technologies for work. A work-life balance can be improved by using a holistic approach where the employees are able to work productively with satisfaction in the balance of personal and professional work and goals. The employees can be encouraged to work effectively by giving the timely employee bonus as well as giving the promotion to production staff. The technologies and resources are

required to be given to staff to staff to work without any hindrance. Employee engagement is also necessary to motivate employees to give their best at work. Even the infrastructure is also required to develop the infrastructure staff at home.

6.1.2 Recommendations

The main recommendations to the IT sector's remote employees and companies are discussed in detail below -

- a. Remote employees are required to divide their personal time and work using the scheduling or timetable.
- b. It is necessary for employees to avoid the distraction caused because of mobile, noise or other things at the time of work by working at a silent place at home and avoiding the use of mobile phones.
- c. It is also suggested that the IT companies in the UK focus on developing new policies for remote staff because the existing policies are only effective for office employees.
- d. The productivity assessment software must be used for the remote staff as it will update employees when their productivity is found to be reducing. The employee is able to find out why their productivity has been reduced by analysing the day and the work.
- e. It is also suggested that the UK's IT companies have a work-life balance policy specially designed for remote staff. It is necessary to consider the factors such as the age group, employees having children, accessibility of work resources at home, etc.
- f. It is recommended that the UK's IT companies have employee engagement activities on video calls as well as encourage events for gathering at a certain place to reduce the lack of socialisation.
- g. It is essential that remote employees gain the support of their families in order to manage their work and personal life.

6.1.3 Limitations of the thesis

The various limitations are identified by analysing and conducting the overall thesis on finding the influences on the productivity of remote working on the employees employed in the IT industry of the UK. It is found that the thesis is wide in nature because of

considering all IT companies in the UK. This thesis can be limited to large IT companies in the UK. Another limitation is that this thesis has used a secondary source of data, so the primary data could have made this thesis more reliable or relevant to the current situation. Even this research has not collected the primary data because of the main limitations, such as the limited time for conducting the thesis, and this study was not sponsored because of the financial constraint observed. There is also a chance that the secondary data might not be authentic or reliable like the primary data, and that may influence the result and discussion of the study. This thesis has used qualitative data, so it may have a chance of biases in interpreting the data. This could have been avoided by the use of quantitative data. The responses of the remote employees working for the UK-based IT companies are not taken for this thesis which is also the biggest limitation.

6.1.4 Future scope for research

The future of scope is based on the impact of the remote working-related trend on the productivity of employees in the Information Technology sector of the UK based on the explored limitations. There is a great scope for studying the positive as well as negative influences on remote employees working impact on the IT sector employees by focusing on one specific IT company in the UK. Even the research can be conducted using the survey or interview as a part of the primary study in the future. It will also ensure that reliable, authentic as well as real-time data is used to find the answers to the research questions. There is also a scope to explore the IT industry of underdeveloped countries. Even there is a scope for exploring more factors that are affecting the productivity of the remote staff in the UK.

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Appendix

Coding Table

Data Sources	Theme 1 - Positive effects on employees' productivity due to the remote working trend in the UK's IT industry	Theme 2 - Negative effects on employees' productivity due to the remote working trend in the UK's IT industry	Theme 3 - Ways of reducing the negative effects on employees' productivity due to the remote working trend in the UK's IT industry
(Mutebi and Hobbs, 2022)	<ul style="list-style-type: none"> • Eighty-eight per cent of employees stated that they worked more compared to before the lockdown; thus, remote working increased productivity. • Very few distractions while working from home. • Able to complete the 	<ul style="list-style-type: none"> • Remote employees are experiencing that there is no clear limit between work and their personal life. • The problem in balancing the work and life balance that lowering the productivity of employees. • Employees are under pressure to be available online for work. 	<p>Training to line managers</p> <p>Improving the health and wellbeing of staff working remotely.</p> <p>Improve collaboration by increasing interactions & cooperation.</p> <p>Enhance communication through innovation and upskilling.</p> <p>Program for work-related stress reduction</p> <p>Financial support</p>

	<p>work more quickly.</p> <ul style="list-style-type: none"> • The research of CPID states that due to the remote working of staff, the productivity, as well as efficiency of companies, has increased. 	<ul style="list-style-type: none"> • Employees are required to work in illness which is reducing their performance level and productivity level. • Increase in overtime and employees are not paid for extra extended working hours. • A survey by Office for National Statistics and Labour Force Survey and OPN states that 15 per cent of remote employees working from home has reported a reduction in productivity. • Reduction in productivity is 	<p>Promote flexibility and autonomy to staff</p>
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		<p>seen because of reduced workload, children care, no direct interaction with colleagues, lack of focus and motivation, restricted accessibility of company resources and experiencing the major changes in the process of working after the restrictions of COVID - 19.</p> <ul style="list-style-type: none"> • Employees with children are facing issues in maintaining productivity in the UK. • Youths working from the shared accommodation had no proper space to work. 	
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(CIPD, 2021a)	Improved productivity at the time of the pandemic. The training made a difference in the productivity of different companies.	The lack of trained managers resulted in inefficient handling of employees, which reduced productivity levels.	
(CIPD, 2021b)		The problem in balancing the increasing workload The problem in maintaining the work-life balance	Holistic approach for ensuring work-life balance Promote flexible working
(ONS, 2021)	Enhances the work-life balance Reduces the distraction for female employees and employees above 30 years of age Enhanced wellbeing of male employees Reduce the overhead cost of the organisation Increased productivity of the organisation The organisation can hire talented staff	Increased distraction for an employee between 16 years to 29 years old Reduced communication level Reduction in productivity level Negatively influencing the work culture	Enhance the employee bonuses Give them opportunities to grow through promotion

	Reduced the level of sickness		
(Taylor, 2020)	A survey by Microsoft stated that employee productivity increased with WFH	But 80 per cent of managers disagree with the result of a survey by Microsoft	
(Evolve, 2020)	Enhanced creativity About 7.7 out of ten of ratings are explored on the productivity of remote teams in the UK, which is higher compared to employees working from an office in the IT sector of the UK. Sixty-seven per cent of employers in the UK stated that productivity is enhanced with remote working.	Twenty-six per cent of employees in the UK IT sector felt the lack of informal socialisation with their colleagues. 30 per cent of employees in the UK IT sector felt the loneliness Lack of technology at home for effective work	Provide resources and technologies to employees to work efficiently from home. Promote flexibility Employee engagement Managers support Efficient and clear communication
(Escudero and Kleinman, 2022)	Autonomy was gained by employees through WFH.	In the IT service sector, it was explored that productivity reduced by 8 to 19 per cent has been reduced despite long working hours	Promote innovation and adaptation of the latest technologies in order to train employees

		<p>because of COVID - 19.</p> <p>Large projects in the IT sector were highly affected by the employees' productivity compared to small projects during the pandemic.</p> <p>The impact of WFH on IT employees was affected by project characteristics such as its type, programming language, duration, size, etc.</p> <p>Social isolation and issues in reconciliation with family.</p> <p>Increased time spent on work or workstation.</p>	<p>Investment in skills development</p> <p>Improve the employees' flexibility</p>
(Deloitte, 2021)	Increased the use of technologies by many employees	<p>Negative influence on wellbeing</p> <p>Reduced productivity after the lockdown</p> <p>Reduced social interaction</p> <p>Reduced collaboration</p> <p>Difficulties in networking</p>	
(CompTIA, 2022)		Technology glitches have a negative impact	

		on employee productivity.	
(Morikawa, 2022)	Productivity improved in the year 2021 compared to 2020 remote employees.		High investment in developing the infrastructure