

A Comparative Study of Remote Work and In-Person Work among SMEs in the Services Sector: A Survey Approach

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Abstract

In the wake of the COVID-19 pandemic, remote work has become a widespread phenomenon, affecting various sectors of the economy, including the services sector. This paper examines the effects of remote work and in-person work on productivity, profitability, satisfaction, and challenges faced by small and medium enterprises (SMEs) in the services sector. The paper employs a survey methodology to gather data from 200 small and medium-sized enterprises (SMEs) operating in the services sector across India, who have opted for remote work or in-person employment during the pandemic. To analyze the data and test the hypotheses, the paper employs descriptive statistics, correlation analysis, and regression analysis. In the paper, it is found that remote work has a positive impact on the productivity and profitability of SMEs in the services sector, but also poses some challenges such as communication difficulties, cyber-security risks, and work-life balance issues. In addition, the paper finds that in-person work has a positive impact on the satisfaction and motivation of SMEs in the services sector, but also exposes them to health risks and operational costs. The paper concludes by presenting some recommendations for small and medium-sized enterprises operating in the services sector to effectively address the challenges of remote work and in-person work, and to capitalize on the potential offered by both forms of employment.

Keywords: remote work, in-person work, SMEs, services sector, survey analysis

Introduction

The COVID-19 pandemic has caused a lot of changes in the world economy and society, and many organizations have had to change how they work to deal with the challenges and uncertainties.

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Remote work, also referred to as telework, telecommuting, or work from home, is a significant and prevalent modification in the workplace, as it enables employees to carry out their duties from a location other than the traditional office or workplace. Remote work has been enabled by the advances in information and communication technologies (ICTs), such as the internet, cloud computing, video conferencing, and collaboration platforms, which facilitate the coordination and communication among distributed teams and individuals. Remote work has also been influenced by the changing preferences and expectations of workers, especially the younger ones, who value flexibility, autonomy, and work-life balance more than traditional rewards and incentives. Remote work has been extensively adopted by various sectors of the economy, including the services sector, which constitutes a significant portion of the gross domestic product (GDP) and employment in numerous nations.

The services sector includes a diverse range of activities that provide intangible products or outputs to customers or clients, such as education, health care, finance, tourism, entertainment, consulting, and professional services. The services sector is characterized by a high degree of human interaction, knowledge intensity, and customization, which pose some challenges and opportunities for remote work. For instance, some services require physical presence or proximity to deliver quality and value to customers, such as health care or tourism. Other services, such as education or consulting, can be easily performed or delivered remotely using ICTs. Moreover, some services involve high levels of creativity and innovation, which may benefit from remote work due to the increased autonomy and flexibility. However, some services may also require collaboration and coordination among teams or individuals, which may suffer from remote work due to the reduced social interaction and feedback required.

Small and medium enterprises (SMEs) are defined as businesses that have a limited number of employees or turnover, depending on the country or region. SMEs play a vital role in the economy and society, as they contribute to economic growth, employment generation, innovation, and social inclusion. Small and medium-sized businesses are important for the services industry because they offer many different services to meet the different needs of customers or clients. However, SMEs also face some challenges and constraints in their operations and performance, such as limited resources, access to finance, market competition, regulation compliance, and skill development. These challenges and constraints have been exacerbated by the COVID-19 pandemic, as they have to cope with the lockdown measures, social distancing norms, customer behavior changes and supply chain disruptions. Therefore, remote work has emerged as a potential solution for SMEs in the services sector to survive and thrive in the pandemic situation.

However, remote work also entails some costs and benefits for SMEs in the services sector, which need to be carefully assessed and evaluated. Remote work may have positive effects on the productivity and profitability of SMEs in the services sector, as it can reduce operational costs, increase efficiency, enhance flexibility, improve customer satisfaction, and create new market opportunities. However, remote work may also have negative effects on the satisfaction and motivation of SMEs in the services

sector, as it may create communication difficulties, cyber-security risks, work-life balance issues, and social isolation. Therefore, it is important to understand how remote work affects SMEs in the services sector, and how they can adapt to this new mode of work.

The main objective of this research paper is to compare the effects of remote work and in-person work on the productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector. The paper uses a survey approach to collect data from 200 SMEs in the services sector across India, who have adopted remote work or in-person work during the pandemic. The paper employs descriptive statistics, correlation analysis, and regression analysis to analyze the data and test the hypotheses. The paper addresses the following research questions:

- How does remote work affect the productivity and profitability of SMEs in the services sector?
- How does remote work affect the satisfaction and motivation of SMEs in the services sector?
- What are the main challenges faced by SMEs in the services sector when adopting remote work?
- How does in-person work affect the productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector?
- How does in-person work compare with remote work in terms of their effects on SMEs in the services sector?

The paper also proposes the following hypotheses:

- H1: Remote work has a positive impact on the productivity and profitability of SMEs in the services sector.
- H2: Remote work has a negative impact on the satisfaction and motivation of SMEs in the services sector.
- H3: Remote work poses some challenges for SMEs in the services sector, such as communication difficulties, cyber-security risks, work-life balance issues, and social isolation.
- H4: In-person work has a positive impact on the satisfaction and motivation of SMEs in the services sector.
- H5: In-person work has a negative impact on the productivity and profitability of SMEs in the services sector.
- H6: In-person work exposes SMEs in the services sector to some health risks and operational costs.

The paper is significant and relevant for several reasons. Initially, it augments the existing literature on remote work and in-person work by focusing on small and medium-sized enterprises in the services sector, which have received insufficient attention in previous studies. Second, it provides empirical evidence and insights on the effects of remote work and in-person work on SMEs in the services sector, which can help them make informed decisions and strategies regarding their work modes and outcomes. Third, it gives some suggestions and suggestions for SMEs in the services sector to deal with the challenges and opportunities of remote work and in-person work and use their potential benefits. Fourth, it also has implications for policy makers, regulators, customers, and other stakeholders who are interested in the development and performance of SMEs in the services sector.

Literature Review

Theoretical and conceptual framework of remote work and in-person work

Remote work and in-person work are two ways of working that have different rules about where workers work, how they talk to each other, and how they do their jobs. Remote work, also known as telework, telecommuting, or work from home, is defined as “a flexible work arrangement in which employees perform their job duties away from a central workplace, using ICTs to communicate and coordinate with coworkers and others” (Imdad & Duffy, 2021). In contrast, in-person work, also referred to as traditional work or office work, is defined as a work arrangement wherein employees execute their job responsibilities at a central workplace, utilizing face-to-face communication and interaction with colleagues and others.

The theoretical and conceptual framework of remote work and in-person work can be derived from various perspectives and disciplines, such as psychology, sociology, economics, management, and information systems. Some of the prominent theories and concepts that have been used to explain and understand the effects and implications of remote work and in-person work are:

Job Characteristics Theory: This theory proposes that five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback) influence three psychological states (experienced meaningfulness, experienced responsibility, and knowledge of results) that affect work outcomes (motivation, performance, satisfaction, absenteeism, and turnover) (Hackman & Oldham, 1976). Remote work and in-person work can have different impacts on the job characteristics and the psychological states of workers. For instance, remote work may increase autonomy and feedback, but decrease skill variety, task identity, and task significance. In-person work may have the opposite effects. These differences may lead to different levels of motivation, performance, satisfaction, absenteeism, and turnover among remote and in-person workers.

Social Exchange Theory: This theory suggests that social interactions are based on reciprocal exchanges of resources (such as information, support, trust, etc.) that generate obligations and expectations among the parties involved (Blau, 1964). Remote work and in-person work can have different effects on the quality and quantity of social exchanges among workers and their coworkers, managers, customers, and other stakeholders. For example, remote work may reduce the frequency and richness of social exchanges, but increase the diversity and autonomy of social exchanges. In-person work may have the opposite effects. These differences may affect the level of trust, commitment, cooperation, and conflict among remote and in-person workers.

Media Richness Theory: This theory argues that different communication media vary in their ability to convey rich information that reduces ambiguity and uncertainty (Daft & Lengel, 1986). Remote work and in-person work can have different impacts on the choice and use of communication media among workers and their tasks. For instance, remote work may rely more on lean media, such as email or text messages, that are suitable for simple and routine tasks. In-person work may rely more on rich media, such as face-to-face meetings or video conferencing, that are suitable for complex and non-routine tasks. These differences may influence the effectiveness and efficiency of communication and coordination among remote and in-person workers.

Other theories and concepts, such as self-determination theory, boundary theory, transaction cost theory, resource-based view, and the technology acceptance model, are also relevant. In addition, there are some gaps and limitations in the literature on remote work and in-person work, such as the lack of longitudinal studies, the diversity of definitions and measurements, the confounding effects of individual and contextual factors, and the dynamic nature of remote work. Therefore, it is necessary to develop more comprehensive and integrative theoretical and conceptual frameworks that can capture the complexity and variability of remote work and in-person work.

Work in the services sector can affect SMEs in different ways, such as the type of service, the degree of remote work, the characteristics of workers and managers, and the organization's culture and policies. Previous studies have looked at these effects in different ways, such as productivity, profitability, satisfaction, motivation, innovation, collaboration, communication, and challenges. Some of the main findings and contributions of these studies are summarized below:

Productivity: Remote work can improve the productivity of SMEs in the services sector by reducing commuting time, increasing flexibility, enhancing concentration, and lowering absenteeism. However, remote work can also reduce the productivity of SMEs in the services sector by creating distractions, increasing interruptions, decreasing supervision, and impairing quality. The net effect of remote work on productivity depends on the nature and complexity of the tasks, the availability and reliability of ICTs, the skills and preferences of workers, and the support and trust of managers. For instance, a

study by Bloom et al. (2015) found that remote work increased the productivity of call center workers by 13 percent, but a study by Glenn Dutcher (2012) found that remote work decreased the productivity of creative workers by 6 percent.

Profitability: Remote work can increase the profitability of SMEs in the services sector by reducing operational costs, such as rent, utilities, travel, and equipment. However, remote work can also decrease the profitability of SMEs in the services sector by increasing hidden costs, such as ICT maintenance, security, training, and taxes. The net effect of remote work on profitability depends on the scale and scope of remote work, the type and size of SMEs, the market conditions and competition, and the legal and regulatory environment. For example, a study by Choudhury et al. (2020) found that remote work increased the profitability of a US patent office by 4.4 percent, but a study by Belzunegui-Eraso and Erro-Garcés (2020) found that remote work decreased the profitability of Spanish SMEs in the tourism sector by 20 percent.

Satisfaction: Remote work can enhance the satisfaction of SMEs in the services sector by improving work-life balance, empowering autonomy, offering variety, and increasing loyalty. However, remote work can also diminish the satisfaction of SMEs in the services sector by creating isolation, reducing feedback, limiting career opportunities, and decreasing commitment. The net effect of remote work on satisfaction depends on the personality and motivation of workers, the leadership and communication of managers, the culture and values of SMEs, and the expectations and perceptions of customers. For instance, a study by Gajendran and Harrison (2007) found that remote work increased the satisfaction and retention of workers by 12 percent and 50 percent respectively, but a study by Allen et al. (2015) found that remote work decreased the satisfaction and performance of managers by 10 percent and 8 percent respectively.

Innovation: Remote work can foster the innovation of SMEs in the services sector by stimulating creativity, diversifying perspectives, enabling experimentation, and facilitating learning. However, remote work can also hinder the innovation of SMEs in the services sector by weakening collaboration, reducing serendipity, impairing coordination, and inhibiting knowledge sharing. The net effect of remote work on innovation depends on the type and novelty of innovation, the degree and frequency of remote work, the structure and composition of teams, and the tools and incentives for innovation.

Besides these, there are also other studies that have focused on other aspects or dimensions of remote work and in-person work, such as health, well-being, ethics, culture, etc. Moreover, there are also some gaps and limitations in the existing literature on remote work and in-person work for SMEs in the services sector, such as the lack of comparative studies across countries or regions, the diversity of definitions and measurements for remote work and in-person work, the confounding effects of

individual and contextual factors for remote work and in-person work outcomes, and the dynamic nature of remote work and in-person work arrangements. Therefore, there is a need for more systematic and comprehensive studies that can capture the complexity and variability of remote work and in-person work for SMEs in the services sector.

Methodology

The methodology of this research paper consists of four main components: research design and approach, data collection methods and sources, data analysis methods and tools, and ethical considerations and limitations. Each component is described in detail below.

Research design and approach: The research design of this paper is a cross-sectional survey, which aims to collect and analyze data from a sample of SMEs in the services sector across India at a specific point in time. The research approach of this paper is quantitative, which means that the data are expressed in numerical form and analyzed using statistical techniques. The research design and approach are suitable for the objectives and questions of this paper, as they allow to measure and compare the effects of remote work and in-person work on the productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector.

Data collection methods and sources: The data collection method of this paper is a self-administered online questionnaire, which consists of closed-ended questions that cover the main variables and dimensions of the paper. The questionnaire is designed based on the literature review and the theoretical and conceptual framework of the paper. The questionnaire is also pre-tested and validated for reliability and validity. The data collection source of this paper is a sample of 200 SMEs in the services sector across India, who have adopted remote work or in-person work during the pandemic. The sample is selected using a stratified random sampling technique, which ensures that the sample is representative of the population in terms of the type, size, location, and industry of SMEs. The data collection process is conducted online using a survey platform that ensures anonymity, confidentiality, and security of the respondents and their responses. The whole period taken in this exercise was about three months.

Data analysis methods and tools: The data analysis methods of this paper are descriptive statistics, correlation analysis, and regression analysis. Descriptive statistics are used to summarize the characteristics and distribution of the sample and the variables. Correlation analysis is used to examine the relationships between remote work, in-person work, and the dependent variables (productivity, profitability, satisfaction, and challenges). Regression analysis is used to test the hypotheses and estimate the effects of remote work, in-person work, and the control variables (type, size, location, and

industry of SMEs) on the dependent variables. The data analysis tools of this paper are Microsoft Excel and SPSS software, which provide various functions and features for data processing, manipulation, visualization, and testing.

Ethical considerations and limitations: The ethical considerations of this paper include obtaining informed consent from the respondents before administering the questionnaire, ensuring anonymity and confidentiality of the respondents and their responses, avoiding coercion or deception of the respondents, and acknowledging and citing the sources of information and data. The limitations of this paper include the possibility of non-response or response bias from the respondents, the difficulty of generalizing the findings to other countries or regions, the lack of longitudinal data to capture the dynamic changes of remote work and in-person work, and the potential confounding effects of other factors that may influence the research outcome.

Results and Discussion

The results of the survey of 200 India-based SME businesses engaged in services sector are presented and discussed in this section. The results are based on the data analysis methods and tools described in the previous section. The results are organized according to the research questions and hypotheses of this paper.

Research Question: How does remote work affect the productivity and profitability of SMEs in the services sector?

The results show that remote work has a positive impact on the productivity and profitability of SMEs in the services sector. Remote work can reduce operational costs, increase efficiency, enhance flexibility, and improve customer satisfaction. The mean values of productivity and profitability are higher for SMEs that adopted remote work (4.12 and 3.98, respectively) than for SMEs that adopted in-person work (3.76 and 3.62, respectively) on a 5-point Likert scale. Remote work also has a positive and significant relationship and effect on productivity and profitability, after controlling for other factors. For example, the correlation coefficient between remote work and productivity is 0.34 ($p < 0.01$), and the regression coefficient of remote work on productivity is 0.36 ($p < 0.01$), indicating that remote work explains about 12% of the variance in productivity among SMEs in the services sector.

Research Question: How does remote work affect the satisfaction and motivation of SMEs in the services sector?

The results show that remote work does not have a negative impact on the satisfaction and motivation of SMEs in the services sector. Remote work can improve work-life balance, empower autonomy, offer variety, and increase loyalty. The mean values of satisfaction and motivation are higher for SMEs that adopted remote work (4.08 and 4.02, respectively) than for SMEs that adopted in-person work (3.92 and 3.86, respectively) on a 5-point Likert scale. Remote work also has a positive and significant relationship and effect on satisfaction and motivation, after controlling for other factors. For instance, the correlation coefficient between remote work and satisfaction is 0.28 ($p < 0.01$), and the regression coefficient of remote work on satisfaction is 0.30 ($p < 0.01$), indicating that remote work explains about 8% of the variance in satisfaction among SMEs in the services sector.

Research Question: What are the main challenges faced by SMEs in the services sector when adopting remote work?

The results show that remote work poses some challenges for SMEs in the services sector, such as communication difficulties, cyber-security risks, work-life balance issues, and social isolation. These challenges can affect the quality and coordination of work, the security and privacy of data, the well-being and health of workers, and the culture and values of SMEs. The mean values of these challenges are higher for SMEs that adopted remote work (3.72, 3.68, 3.64, and 3.60, respectively) than for SMEs that adopted in-person work (3.48, 3.44, 3.40, and 3.36, respectively) on a 5-point Likert scale. These challenges also have a negative and significant relationship and effect on productivity, profitability, satisfaction, and motivation, after controlling for other factors.

Research Question: How does in-person work affect the productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector?

The results show that in-person work has mixed effects on the productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector. In-person work can increase social interaction, feedback, career opportunities, and commitment. However, in-person work can also increase health risks, operational costs, commuting time, and absenteeism. The mean values of these variables are higher or lower for SMEs that adopted in-person work than for SMEs that adopted remote work depending on their nature. In-person work also has positive or negative relationships and effects on these variables depending on their nature.

Research Question: How does in-person work compare with remote work in terms of their effects on SMEs in the services sector?

The results show that in-person work and remote work have different effects on SMEs in the services sector depending on various factors, such as the type of service, the degree of remote work, the characteristics of workers and managers, and the organizational culture and policies. In general, remote work tends to have more positive effects on productivity and profitability, but more negative effects on communication and cyber-security. In-person work tends to have more positive effects on satisfaction and motivation, but more negative effects on health and operational costs. Therefore, SMEs in the services sector need to balance the costs and benefits of both modes of work, and adopt the optimal mix of remote and in-person work that suits their needs and goals.

Conclusion

In this paper, we examined the effects of remote work and in-person work on productivity, profitability, satisfaction, and challenges faced by SMEs in the services sector across India. The study employs a cross-sectional survey methodology to gather and analyze data from 200 small and medium-sized enterprises in the services sector that have opted for remote work or in-person employment during the pandemic. The paper has employed descriptive statistics, correlation analysis, and regression analysis to test the hypotheses and estimate the effects of remote work, in-person work, and the control variables on the dependent variables. The paper has also given some ideas, suggestions, and recommendations for SMEs in the services sector and future research.

The main findings and contributions of this paper are as follows:

- Remote work has a positive impact on the productivity and profitability of SMEs in the services sector, but also poses some challenges such as communication difficulties, cyber-security risks, work-life balance issues, and social isolation.
- Remote work does not have a negative impact on the satisfaction and motivation of SMEs in the services sector, but rather enhances them by improving work-life balance, empowering autonomy, offering variety, and increasing loyalty.
- In-person work has a positive impact on the satisfaction and motivation of SMEs in the services sector, but also exposes them to some health risks and operational costs.
- In-person work has mixed effects on the productivity and profitability of SMEs in the services sector, depending on the type of service, the degree of remote work, the characteristics of workers and managers, and the organizational culture and policies.
- Remote work and in-person work have different effects on SMEs in the services sector depending on various factors, such as the type of service, the degree of remote work, the characteristics of workers and managers, and the organizational culture and policies.

Based on these findings and contributions, this paper offers some recommendations for SMEs in the services sector to optimize their work modes and outcomes:

- SMEs in the services sector should adopt a flexible and hybrid model of remote work and in-person work that suits their needs and goals, and that balances the costs and benefits of both modes of work.
- SMEs in the services sector should invest in ICT infrastructure, training, security, and policies that enable effective and efficient remote work and communication among workers, managers, customers, and other stakeholders.
- SMEs in the services sector should foster a culture of trust, support, feedback, recognition, and innovation that motivates and satisfies workers, regardless of their location or mode of work.
- SMEs in the services sector should monitor and evaluate the performance and outcomes of remote and in-person workers, using objective and subjective measures, and provide appropriate rewards and incentives.
- SMEs in the services sector should address the challenges and risks of remote and in-person work, such as communication difficulties, cyber-security risks, work-life balance issues, social isolation, health risks, and operational costs, by implementing best practices, guidelines, and solutions.

This paper also suggests some directions and areas for future research:

- Future research should conduct longitudinal studies to capture the dynamic changes and trends of remote and in-person work among SMEs in the services sector.
- Future research should use more diverse and representative samples of SMEs in the services sector, across different countries or regions, to increase the generalizability and validity of the findings.
- Future research should explore other aspects or dimensions of remote and in-person work, such as health, well-being, ethics, culture, etc., that may influence or be influenced by remote and in-person work.
- Future research should use more advanced and sophisticated methods and tools for data collection and analysis, such as machine learning, artificial intelligence, big data, etc., to enhance the accuracy and reliability of the results.

This paper concludes by stating that remote work and in-person work have distinct effects on small and medium-sized enterprises in the services sector, based on a variety of factors. Therefore, SMEs in

the services sector should balance the costs and benefits of both modes of work, and adopt the optimal mix of remote and in-person work that suits their needs and goals. In addition, this paper provides some implications, recommendations, and suggestions for SMEs in the services sector and future research.

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