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THE IMPACT OF REMOTE WORKING ON EMPLOYEE PRODUCTIVITY THE MODERATING ROLE OF JOB LEVEL

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ABSTRACT

The COVID-19 pandemic has led the remote work to skyrocket. The purpose of this study is to examine the various elements that influence the productivity (PR) of employees who work remotely in the IT sector software house in Pakistan, city Karachi. The data is collected through the utilization of adopted questionnaires where 193 IT sector employees and managers respond to questions related to remote work productivity. The analysis of the collected data is based on the method of structural equation modeling (SEM) of the Smart PLS, which helps to estimate the direct and moderating factors. The findings point out that the direct indicators including workload (WKL), work life balance (WLB) and social support (SS) have positive influence on the employee PR in the IT sectors of Pakistan. However, the study of the moderating variable indicates that job level (JL) is not significant variables. It provide support for social exchange theory. The findings of this study will help businesses of various domains in a variety of industries to understand the core factors that should be considered to enhance the overall PR of their employees while working from home. This paper answers the question remote working creates a positive impact on employees PR emerging market in Pakistan. This research enhances the existing body of literature by consolidating variables from previous studies into one comprehensive analysis and incorporating job level as a moderating factor.

Keywords: *Remote-working, Productivity, Pakistan, IT sectors, work-load, job satisfaction, work-life balance, social-support, job level.*

INTRODUCTION

1.1 Background

WHO considered the COVID-19 outbreak as an event of major global concern on January 30th (World Health Organization, 2020). During the pandemic, several governments worldwide decided to enact measures that would either make it mandatory for or encourage citizens to quarantine themselves to stop the spread of the virus. This resulted in an unexpected and widespread change traditional working to work from home. COVID-19 pandemic established remote work as the new norm for millions of employees worldwide (Caligiuri et al., 2020; OECD, 2021). In Pakistan, measures were put in place by the Government to accommodate the dramatic change. Consequently, there was a significant 71% of participants reported that they had a chance to work from home, (Zh. Khan, Yu & Maria, 2021).

Hence it can be argued that advancement in technology especially in the area of communication and the enhanced use of internet has enhanced the growth of remote working. Some of the most used platforms in communication are Skype, Zoom, slack, and Microsoft Teams, among others that allow

individuals and employees to perform their duties and connect remotely. Microsoft, the developer of Microsoft Teams, refers to it as "a collaboration app designed for hybrid work, helping teams stay informed, organized, and connected in one platform" (Microsoft, 2023). Businesses across the globe are harnessing the advantages of these digital solutions to conduct meetings, workshops, and seminars remotely, with internet access being the only requirement. As technology has advanced, remote work has steadily grown in popularity among both companies and employees (Waters, 2022)

Besides this study has investigated and identified a wide range of impacts of remote working on employees' Productivity. Thus, this study aims to examine the impact of working remotely on employee PR using possible variables such as WKL, JS, WLB, and (SS), while using job level (JL) as a moderator for the direct relationships of the above variables with employee PR. It is noteworthy that JL has seldom been used as a moderator variable in prior research, enhancing the importance of the current study. Furthermore, analyzing applicants answers regarding their remote work experience will add valuable insights to existing research on the efficiency of remote working. This study aims to explore the effect of remote work on employee productivity by examining the relationships between workload (WKL), job satisfaction (JS), work-life balance (WLB), and social support (SS). While prior research has individually examined these variables, no study has yet incorporated all of them into a single analysis or considered the moderating influence of job level (JL).

1.2 Problem Statement

Remote work has sparked considerable debate as it challenges traditional business structures and practices (Allen, Golden & Shockley, 2015). Prior to the pandemic, remote work was limited to certain sectors and high-income roles. However, the COVID-19 pandemic necessitated widespread adoption of remote work as companies sought to sustain operations (OECD, 2021; Dingel & Neiman, 2020). Since the peak of the pandemic, remote work has persisted, leading organizations to navigate new options: continuing remote work for those who prefer it, adopting hybrid models, or requiring employees to return to the office full-time. The ongoing discussion revolves around whether this shift benefits all stakeholders (Gutiérrez-Crocco, Martin-Caballero & Godoy 2023; Fan & Moen, 2023).

The pandemic has demonstrated that work can be efficiently completed without physical office presence (Strack et al., 2021). Employees have reported increased productivity and satisfaction with remote work, with some willing to accept lower salaries to retain these benefits (Barrero, Bloom & Davis, 2021; Bloom et al., 2023). Additionally, a significant majority of employees prefer the option to work remotely, either part-time or full-time (Felstead & Reuschke, 2021). Despite these advantages, many employers remain resistant (Bloom et al., 2023), with some managers questioning the productivity gains and expressing concerns about remote work's impact on performance.

Pre-pandemic reluctance to remote work stemmed from fears about teamwork and supervision, which were believed to diminish productivity (Felstead & Reuschke, 2021). While remote work offers operational and financial benefits, these are not always sufficient to justify its implementation. Successful remote operations require appropriate conditions to sustain or boost productivity (Baruch, 2000; Galanti et al., 2021). The rapid shift to remote work often lacked necessary investments, leading to increased IT and communication demands, data security concerns, and potential legal issues (Sharit et al., 2009). Certain industries may not be well-suited to remote work, with challenges related to performance evaluation and trust between managers and employees (Baruch, 2000; Parker, Knight & Keller, 2020; Phillips, 2020).

In Pakistan, a December 2022 report by the Boston Consulting Group (BSG) highlighted that flexibility in remote work led to reduced development, delayed projects, and increased costs for some companies. This study found that companies experiencing the worst performance since remote work began were particularly affected. As employee productivity influences organizational performance (Chatterjee, Chaudhuri & Vrontis, 2022), the future approach to remote work will significantly impact organizational growth, employment, and societal welfare. Given the lack of comprehensive research on this topic,

addressing this knowledge gap is a key objective of our study.

1.3 Gap Analysis

Furthermore, a noteworthy gap exists in the preceding literature, as employee PR has not been testing using "job level" as a moderating variable (MV). Thus, this study endeavors to address the gap in the literature by containing JL as a moderator to determine its importance for the relationship between WKL, JS, WLB, SS, and employee PR. This enhances the significance of this study as it will help businesses understand the PR of their employees functioning at diverse levels in the IT sector software house.

Conducting a gap analysis on the effect of distant working on employee productivity involves several steps, conducting surveys and collecting feedback from employees of the IT sector regarding their remote working experience. Analyze feedback on aspects like productivity, job satisfaction, work-life balance, workload, and social-support. Determine the productivity levels achieved during remote working. Set desired productivity levels based on industry standards or company goals. Clear productivity goals for remote working. Establish optimal productivity in remote work environment. Identify specific areas where productivity has increased, remained the same, or decreased. Root Cause Analysis gaps, such as lack of effective communication tools, inadequate home office setups, or distractions at home. Develop an Action Plan and Propose solutions to address identified productivity gaps, such as providing better remote work tools, enhancing communication channels, and offering training for remote work best practices. Further research explores the impact of hybrid work arrangements, the contribution of technology in facilitating remote work, and approaches to address the obstacles related to remote work and employee performance.

1.4 Research Objective

Telecommuting has sparked debate, with both advantages and disadvantages highlighted from both the employee and employer perspectives. Various research papers address specific aspects of our study, including a study conducted in Lithuania by Raisiene et al. (2022), one in Russia by Toscano et al. (2022), and one in Japan by Morikawa (2021), but to our information, no study examines how remote work affects the performance of the employee's and job level is the moderating role in Pakistan IT sector. The aim and purpose of this study are to inspect the relationship between employee performance and remote working and the factors which are a direct effect on productivity PR such as social support (SS), work life balance (WLB), job satisfaction (JS), workload (WKL), job-level (JL) as controlling affecting on employee productivity. The study inquiries we would like to further explore are:

1.5 Research Questions

1. How does remote working affect employee productivity?
2. How does job satisfaction influence employee productivity in a remote working environment?
3. How does work-life balance affect employee productivity in a remote work setting?

1.6 Significance of Study

Studying the impact of remote working on employee productivity is significant for several reason. We need to Understand the pros and cons that help organizations make decision-making about implementing and managing remote work policies. Insights of this study can help in developing strategies to enhance productivity (PR), job satisfaction (JS), work-life balance (WLB), workload (WKL), social support (SS), job level (JL), and employee well-being in remote work settings. Future Workforce Planning as remote work becomes more prevalent, studying its impact helps in planning for the future workforce and addressing potential challenges. Policy Development organizations can use research findings to develop policies that support effective remote working environments. Employee Satisfaction toward remote work affects productivity and well-being and can lead to initiatives that improve employee satisfaction and retention. In summary, studying the impact of remote working on employee productivity is crucial for optimizing work practices, enhancing employee well-being, and preparing for future workforce trends.

CHAPTER 2: LITERATURE REVIEW

Remote working, also referred to as distance working, involves employees performing their job

duties away from the office, whether from home or another location. In this research, employees working remotely exhibit self-discipline and motivation, often opting for remote work to be near their families or to address concerns related to social distancing. However, common challenges faced in remote work include difficulties with time management, feelings of isolation from coworkers, and disruptions to daily routines. Additionally, balancing work hours at home can strain family relationships (Elshaiekh et al, 2018). The concept of working remotely is not new and has been practiced for many years, with several studies preceding the 2019 pandemic. Remote work was first introduced in the 1970s during the oil crisis when Jack Nilles and his team published a report highlighting the potential savings from reduced commuting (Golden et al, 2008). Since remote staffs are not physically present with their managers, their supervision and assessment differ from that of on-site employees. Previous studies indicate that remote workers experience fewer influential controls than their direct counterparts (Elshaiekh et al. 2018). Recently, a study by Bhatta and Patanjali (2022) involving 526 respondents from the IT business in India found that nearly two-thirds of IT workforces report higher productivity while working from home. The authors attributed this result to various factors, including the Hawthorne effect, increased working hours, and a better working atmosphere (because of fewer meetings, more flexible working hours, and a better WLB).

The researchers found that working from home can have positive effects on productivity, creativity, and job satisfaction. The study involved collecting daily electronic diaries from staffs in the HR section of a New York bank. The results showed that working from home was especially beneficial for tasks that required independence and minimal collaboration.

In a recent study published in New Technology, Work and Employment, the author examines the impact of remote working on effort, well-being, and work-life balance. The study aims to assess the growth of remote working and its consequences. The study was conducted titled "Assessing the Growth of remote working and its consequences for Effort, well-being, and work-life Balance". The study was published in New Technology, Work and Employment, Volume 32, pages 195-212. The study examines the growth of remote working and its belongings on variables such as work-life balance, effort and well-being. This article provides a critical evaluation of the belief that an increasing amount of work is becoming detached from physical locations, and that this arrangement is mutually beneficial for both employers and employees. Felstead ed al. (2023). This article highlights the trade-offs of remote working linked to increased organizational commitment, job satisfaction, and job-related well-being.

The majority of employees of the IT sector were happy to work from home, The study titled "The impacts of remote working on workers' performance" was conducted by Elshaiekh et al. in 2022. Remote working can vary based on factors such as the preferences of the workers, the place and the nature of the work, the work atmosphere, and the intended purpose. Based on the reviews, remote working have been found to have both positive and undesirable effects on worker's routine. Some of the positive impacts include increased job happiness, performance, revenue intent, and reduced role strain. Impact of work from the home model on the productivity of employees in the IT industry", International Journal of Innovative Research in Technology. The author Subha, K., Rahul, P.R., and Harides, P., in a recent study published in the International Journal of Innovative Research in Technology, Volume 8, Issue 2, pages 662-670, researchers studied the impact of the work from home model on employee productivity in the IT industry which indicate that job satisfaction in employees who work remotely

CHAPTER 3: CONCEPTUAL MODEL AND HYPOTHESIS

3.1 Relationship between Workload (WKL) with Employee Productivity

Subsequently prior studies such as Matli (2020), Dick et al. (2020) and Wang et al. in 2021, this study explores the impression of WKL on employee productivity. This study investigates the effect of workload (WKL) on employee productivity (PR), with WKL being one of the factors used to observe the effect of remote working. Chen and Wu in 2020 studied the impact of working from home on PR and WKL. The authors presented outcomes from a countrywide survey evaluating the productivity (PR)

and workload (WKL) of employees working from home. The conclusions indicated that an additional three hours of work per week leads to decreased PR due to increased pressure and stress. Felstead and Henseke in 2017 observed that employees working remotely often tend to put in extra effort and longer hours. These workers were found to be more dedicated to their organizations, showed greater enthusiasm for their roles, and reported higher job satisfaction. As a result, they demonstrated increased effort, which aligns with social exchange theory (p. 200). Additionally, Wang et al. (2021, p. 33) noted that employees with heavier workloads or those under stricter supervision were less likely to procrastinate when working from home, leading to improved performance. The two selected statements aim to explore the connection between telecommuting and workload during remote work conditions. Based on the above conversation and in line with the provision of time and social exchange concepts, we propose the following hypothesis.

Hypothesis H1: Work-load significantly affects the employee productivity during remote working.

3.2 Relationship between Job Satisfaction with Employees Productivity

Past studies have applied the expectation disconfirmation theory (EDT) across various fields, including tourism, hospitality, information technology, education and marketing (Carraher-Wolverton 2022). Carraher-Wolverton (2022) recently applied to EDT for remote-work. The author recommended that EDT can provide insights into remote workers' satisfaction levels and their intentions to continue remote work. Working from home, a key aspect of teleworking, is linked to job satisfaction (JS) as it offers employees greater flexibility and freedom, typically leading to higher JS and consequently, productivity (PR). For example, Kowalski et al. (2022) and Bartel et al. (2007) discovered that remote employees report greater JS levels compared to those working face to face. Numerous studies have confirmed the positive relationship between remote working and JS (Wu and Yu 2021; Jawabri et al. 2022; Carraher-Wolverton 2022). Additionally, Dubrin in 1991found that home-workers are more creative than in-house staff. Similarly, Bousinakis and Halkos (2010) analyzed data from 425 workers in Greece's public and private divisions, revealing that JS positively influences employee PR. Remote work has grown increasingly popular and refers to employees opting to perform their duties outside of the conventional office environment. This shift is largely driven by its advantages, such as greater flexibility and reduced costs in terms of both time and money due to reduced commute, increased job satisfaction, and an increase in productivity. Pokojski ed al. (2022). The alternative to work remotely are favored by employees who work in the IT section. Studies propose that the employee's willingness to work remotely has a encouraging impact on productivity and performance (Bloom et al, 2015). The flexibility in working lead (SJ). There is a strong correlation between remote work and higher levels of job satisfaction, regardless of the role (Golden & Veige, 2005). Employees who report greater satisfaction and morale tend to perform better, making this an essential factor for employee productivity (Pattnaik & Jena, 2020; Mihalca, Irimias & Brendea, 2021). Those who work from home often have established social networks, families, or are at the higher end of the income scale. However, remote work doesn't suit everyone and isn't always preferred, as evidenced by the Chinese company, Ctrip. While employees who opted for remote work saw a 13% boost in productivity, some decided to return to the office due to personal preferences (Bloom, 2014; Bloom et al., 2015). The COVID-19 pandemic forced companies to adopt remote work to maintain operations, regardless of employees' willingness. Positive outcomes were noted in Ctrip's remote work setup (Bloom et al., 2015; Anderson & Kelliher, 2020; Palumbo, 2020). Preceding research has revealed that employees who work-remotely have a high level of job satisfaction which creates a positive impact on productivity. In this study employees were questioned to express their level of agreement on two declarations to measure JS of remote working based on the above discussion and dependable with the EDT, we advise the following hypothesis.

Hypothesis H2: Employee productivity during remote work is greatly influenced by job satisfaction.

3.3 Relationship between Work life Balance with Employees Productivity

Clark (2000, p. 751) defines work-family balance (WLB) as "satisfaction and good functioning at work and at home with minimal role conflict." Clark's work-family border theory (W-FBT) posits that 'family' and ‘work’ are distinct domains that effect each other (p. 750), offering valuable understandings into the relationship between remote working and WLB. Additionally, Hasan et al. (2021) suggested that when employee feel independent, they achieve improved work-life balance and show greater commitment to their groups, based o\n the social exchange theory (SET). Gainey and Feldman (1997) noted that employees often select telework to use more time with their families and maintain WLB, increasing their preference for teleworking and prompting them to seek jobs offering this option. Mahammad and Shareena in 2020 establish that remote working offers time flexibility, predominantly by saving commuting time, which can be spent with family, enhancing WLB. Kramer and Amabile in 2013 also determined that remote working saves travel time, which can be used for individual matters, thereby improving PR. Recently, Bhatta and Patanjali in 2022 showed that working from home fosters a better work atmosphere and WLB, leading to improved employee performance (also see Haridas et al 2021). During the COVID-19 pandemic, many corporations in Pakistan and around the world moved from face-to-face working to telecommuting to improve WLB. Undoubtedly, family and work life are the two most crucial areas of human activity. Following years of prioritizing professional careers as the key to success, individuals have started to recognize that an imbalance between work and personal life impacts not only workplace productivity but also overall happiness and life satisfaction.

The Work-Life Balance (WLB), sometimes also called the work-family Balance idea was created in the United States in the 1970s. The theory of work-life balance is complex and lacks a universal definition, prompting researchers to examine its various aspects. However, most studies emphasis on the programs, consequences, causes and actions that promote WLB. A review of various studies on work-life balance highlights that it involves the ability to seamlessly integrate different aspects of life, such as work, family, home, social activities, and personal hobbies (Burke et al, 2004). Achieving balance means experiencing fulfillment in all life areas, which requires the careful distribution of personal resources like time, energy, and dedication across these domains. Clark (2000, p. 349) similarly defines work-family balance as functioning well and feeling satisfied both at work and home, with minimal conflict between roles. Building on this, Carlson and Grzywacz in 2007 view work-life balance as meeting role-related expectations, which are mutually understood and negotiated between an individual and their work and family partners. Work-life balance WKL in terms of satisfaction balance work and family in terms of division between work and leisure. People feel relaxed when they spend the exact amount of time at work and the right amount of time with their family and other social commitments. Conversely, time conflict arises when the time demands of family compete with those of work. Separating and viewing these areas of life as conflicting can result in frustration, where one feels they are either working excessively or not fully living. Hence, when seeing for a balance in life and work it should be treated as balancing to each other, Skorska, ed al. (2005). Achievement of the balance is preferred by their harmonious combination, permitting for a rise in life fulfilment. In this study, workers were questioned to express their level of agreement on two declarations to measure WLB from remote working. Drawing on the above debate and in accordance with social exchange concepts and work-family border, we propose the following hypothesis:

Hypothesis H3: Work-life balance has a substantial impact on employee productivity when working remotely.

3.4 Relationship between Social Support with Employees Productivity

Despite the progressions in technology and technological development, telecommuters still miss the "social support". According to social exchange concept, companies can enhance employee’s commitment and satisfaction by demonstrating support and care for their family lives (Hasan et al 2021). Bentley et al in 2016 found that organizational social support (SS) during teleworking reduces social isolation, thereby boosting performance and job

satisfaction (JS). Koehne et al in 2012 showed a comprehensive study to recognize the numerous challenges that telecommuters face throughout remote working. The study revealed that the lack of face-to-face communication and social support (SS) negatively impacts employees' productivity (PR). This proposes that offering SS to telecommuting employees can greatly enhance their PR. Park et al in 2004 conducted a analysis of 240 staffs in a public hospital in the United States of America and established that SS has a direct positive influence on PR. Additionally, Baruch-Feldman et al in 2002 identified a positive association between social support (SS), productivity (PR) and job satisfaction (JS). More recently, Raisiene et al in 2020 surveyed 436 Lithuanian remote workers and found that the lack of sociability throughout telework amid the COVID-19 pandemic negatively affected employee PR in both public and private areas. Some types of work are obviously more appropriate for remote working. Certain industries and tasks may not be well-suited for remote work, as virtual collaboration often cannot fully replicate the efficiency of in-person teamwork (Phillips, 2020; Gibbs et al, 2021). According to Golden and Gajendran (2019), jobs in IT sectors that involve high complexity and require deep focus could benefit from remote work, as it reduces distractions typically present in an office environment. In their study of employees in the IT depart at the director level, and managerial level such as senior software developer, assistant software developer, and supervisor, entry levels of work jobs that were highly multifaceted or did not to a high degree require collaboration were better accomplished remotely.

To measure SS, employees of the IT sector were asked questions to share their experience of remote working opinions on the importance of social support. Building on the earlier discussion and aligned with social exchange theory (SET), we propose the subsequent hypothesis:

Hypothesis H4: Social support has a significant impact on employee productivity while working remotely.

3.5 Job Level Moderates the Relationship between SS/WLB/JS/WKL and Employee Productivity

In IT sector has different operational levels including junior web developers, senior software developers, team leaders, managers, and directors. Given that each employee's involvement is vital for achieving companies business goals, companies must evaluate employees at all levels. Consequently, job level (JL) has gained importance in latest industry research. Evaluating employees accurately for their responsibilities, roles and productivity (PR) can significantly impact the general success of businesses across different sectors. JL has been used as a moderator factor in numerous studies. For example, Malik and Nguyen in 2022 investigated its controlling effect on the association between AI satisfaction, artificial intelligence (AI) service quality and job satisfaction (JS), finding that AI service quality effects AI satisfaction only in nonsupervisory groups, though it affects JS across all levels. Despite evidence that JL influences employee PR during remote work (Spagnoli et al 2020; Matli 2020; Wang et al. 2021; Dick et al. 2020), the restraining role of JL on the association between employee PR and other variables has established little attention in the literature (i.e SS, WLB, JS and WKL). Previous research has investigated job level (JL) in relation to its direct effect on employee performance (Sariathi and Skitmore, 2003; Ilies et al, 2007; Choo and Lee, 2011; Namasivayam and Zhao, 2012; Mihelic, 2014; Lu et al, 2016). Additionally, some studies have focused on the various conflicts employees encounter at different job levels (Sariathi and Skitmore, 2003; Johns, 2006; Padmaja and Bhar, 2014). Thus, there is a scarcity of literature observing the controlling role of job level (JL), as highlighted by previous studies. Following the proposal of aforementioned investigation, this study integrates JL as an MV to observe its effect on the relationship between the other variables discussed above and employee PR. The present paper reflects different JLs in IT sectors. Based on the preceding discussion, we have formulated the succeeding four hypotheses.

Hypothesis: H5 – H8. Job level serves as a moderating factor in the relationship between workload, job satisfaction, work-life balance, social support and employee productivity in the context of remote work.

3.6 Employees Productivity (PR)

Numerous studies have examined the impact of remote working on productivity (PR). Baudot et al in 2020 conducted an extensive study among Amazon workers in the United States of America to evaluate PR during mandatory teleworking amid the COVID-19 lockdown. The investigation found that both employees' and their subordinates' PR improved with telework. Additionally, employees were enthusiastic to devote more time on job responsibilities due to the time saved from commuting. Moreover, when allowed the opportunity to choose the working mode, the respondents preferred the remote working mode. It is crucial to note that numerous study results have emerged over the past few years. For instance, Toscano and Zappala in 2020 examined the impact of remote working on employee PR from multiple viewpoints, collecting statistics from 265 respondents from diverse backgrounds. They establish that employee PR reduced while working remotely throughout the pandemic. Conversely, further studies, including those by Bhatta and Patanjali (2022) and Prasetyaningtyas et al in 2021, have demonstrated that working from home boosts employee PR. Again, it has been stated earlier that remote working culture has not been actively implemented before the COVID-19 outbreak and thus lacks sufficient research. Nevertheless, the emergence of new forms of work, particularly the implementation of remote work, has led several researchers to focus on its effects on productivity and performance (Felstead, 2022).

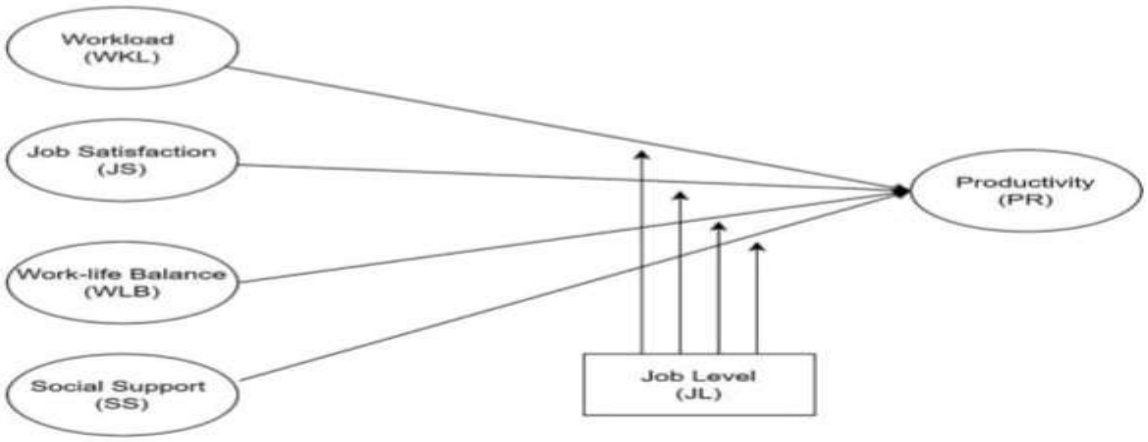
The study has looked at one of the significant outcomes of an experiment by NASDAQ listed firm, Ctrip in China where permission was given for 6 employees to work from home instead of having to go into the office. When the result of experiment was analyzed, there was an improvement of 13% in performance. The employees accomplished more in their shift, had less time off, and took less time off due to illness. In addition, the employees stated higher job satisfaction and this positive change reduced job attrition by half as indicated in Bloom et al in 2015.

In addition, Zhang Gerlowski & Acs in 2021 have done a study in the United States of America with regard to how small businesses have been impacted by remote work in the course of COVID-19 pandemic. From literature, it is clear that the attitudes towards working from home have a positive impact on smaller organizations as a result of increased actual work, reduced the amount of sick leave, better work-life balance, reduced stress and short time spent on the commuting to work.

To measure employee PR in the IT sector employees were asked two questions about remote working impact on their performance. Based on the literature evaluation and aligned with foundational philosophies like work-family border theory, expectation disconfirmation theory and social exchange theory, we suggest the following conceptual framework (see Figure 1).

Figure 1

Conceptual framework



CHAPTER 4: RESEARCH METHODOLOGY

This chapter emphases on the research design and methodology of the study. It includes research paradigm, research design, target population, pilot testing, normality testing, data sampling research instrument, data collection system, and data analysis method, validity, and reliability.

4.1 Research Paradigm

The examination paradigm for this study appears to be primarily positivist. This is indicated by the structured methodology, the use of quantitative data collection through surveys, and the emphasis on statistical analysis. Positivism relies on observable, measurable facts and typically uses structured tools such as questionnaires to gather data.

4.1.1 Research Design

The research design for this study is a cross-sectional survey design. This design involves gathering data at a single point in time from a model that is demonstrative of a larger population. The goal is to gather quantitative data to understand the relationship between variables such as work-life balance, job satisfaction, productivity, social support and workload among individuals working remotely in IT sector software house.

4.1.2 Research Instruments

In this study, the primary research instrument used was a structured questionnaire. The survey was generated and distributed using Google Forms and it was shared with participants via WhatsApp. The questionnaire included a statement ensuring participants that their responses would be treated confidentially and not shared with any third parties. Consent was implied by the completion and submission of the questionnaire. The Segment of the questionnaire included 10 items related to various constructs such as Job satisfaction (JS) 3 items, Work-life balance (WKL) 2 items, Productivity (PR) 2 items, Workload (WKL): 2 items, social support (SS) 1 item. Section 2 Included 4 items related to the respondents demographic profile and job levels (JL). Measurement used in the study A five-point Likert scale was used to assemble answers, with options ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Table: 1
Measure Utilize

Constructs	Code	Item	Source
Workload	WLK	2	Wu and Chen (2020)
Work life balance	WLB	2	Shareena and Mahammad (2020)
Job satisfaction	JS	3	Haloks and Bousinakis, 2010
Social support	SS	1	Baruch-Feldman and Park (2004).
Productivity	PR	2	Toscano and Zappala (2020)
Job level	JL	1	Nguyen and Malik (2022)

4.1.3 Pilot Testing

Before the final distribution, a pilot test was conducted with 20 respondents who work is IT sector software house to confirm the validity and reliability of the enquiries. The pilot test confirmed the respondents' understanding of the questionnaire. These instruments ensured that the data collected was relevant, reliable, and valid for analyzing the research questions related to remote working.

4.1.4 Normality Test

When the observations are normally distributed, the variance is at the lowest and can be represented as below: That is why two most often utilized methods for checking the normality of the collected observations is the Shapiro-Wilk test and the Kolmogorov-Smirnov test, with the latter often used when dealing with a larger number of cases. In both tests, the p-value should be greater than the cutoff value of 0.05 to be considered 27 normally distributed. Besides this, it is also possible to find out the skewness and the kurtosis of the data that have

been collected. Since the numbers of samples in this study exceeds one hundred, the tests will be conducted in a bid to determine if the data follows a normal distribution in the analysis.

Table: 2

Name	No.	Excess kurtosis	Skewness
PR1	1	-0.863	-0.391
PR2	2	-1.062	-0.311
JS1	3	-0.642	-0.449
JS2	4	-0.778	-0.273
WLK1	5	-0.876	-0.405
WLK2	6	-0.951	-0.353
SS1	7	-1.252	0.118
WLB1	8	0.72	-0.948
WLB2	9	0.72	-0.948
JL	10	-0.308	-0.511

Normality testing is an important part of research that shows the data should be satisfied in order to maintain data legitimacy and strength of the regressed outcome of the research under the multiple reversion models.

4.1.5 Sampling and Data Collection

For this study, the data was obtained using Hashtag from the internet through Google Forms and the questionnaire was conveyed to the respondents through the use of a WhatsApp group. Prior to questionnaires distribution, participants were informed that their responses will remain continentally and will not be divulge to any third parties, as an ethical precaution. The questionnaire contained the following statement: "By completing and returning this questionnaire in full, in this instance only are you deemed to have given your consent and all replies will be used solely for this study." The study adopted a non-probability sampling technique namely the snowball sampling technique widely used in business research studies. First, we had a purposive sampling process whereby we invited certain participants that were considered to fit the study's criteria. The respondents were free to distribute the filled questionnaire to other people of the respondent profile who agreed to complete it. To determine the number of respondents for the study, distribution stopped once the sample size was achieved. In this study, respondents are working in IT sector software houses a demographic segment was incorporated in the survey to ensure that the respondents were working in IT companies. In this investigation, a whole of 193 respondents worked remotely. The sampling is believed suitable as similar research such as Haridas et al in 2021 used a sample of 100 respondents to observe the impact of teleworking on IT worker PR. All respondents in our study worked in the IT sector software house, in terms of JL, In IT sector has different operational levels it including (28%) junior web developers, (25.9%) senior software developers, (17%) team leaders, (20.7%) managers, (7%) directors. Almost 43% of participant were between the ages of 28 and 37 years.

4.1.6 Descriptive Analysis

The individual profiles of the respondents will be examined as per their age, gender, education, job level, and Years of experience at the IT sector software house. Descriptive statistics will be perform on the demographic variables as a means of labelling the respondents. In this personal profile analysis, we will find the percentage of male and female responses, their age, experience of work, and designation job level.

4.1.7 Assessment of Measurement Model

The structural equation modeling (SEM) method of Smart PLS will be used to examine the research's data. Data will be analyzed in Smart PLS conducted in two phases. The primary phase involves evaluating the measurement model, or the outer model, while the subsequent stage involves calculating the structural model, or the inner model. The measurement evaluation (outer consists of four

main tests, namely, outer loading, composite reliability, convergent validity/average variance extracted (AVE), and discriminant validity. These four evaluations of the measurement model shall be discussed in the proceeding chapter.

4.1.8 Assessment of Structural Model

The next stage of data analysis in Smart PLS involves evaluating the structural model, which purposes to assess the relationships between independent, dependent and moderating variables (MVs). In this model, we will analyze the structural model that will be evaluated by using path coefficients (β), p-values and t-statistics derived from the Smart PLS bootstrapping technique.

CHAPTER 5: DATA ANALYSIS AND RESULT

5.1 Demographic Profile of Respondents

The individual profile of the respondents is examined as per their age, gender, job level and education. The final study involved 193 respondents of which 51.3% were female and 48.7% were male, as indicated below in the Table 3. A slight dissimilarity between the male and female population in the IT sector software house. The widely held of the respondents were within the age between 28 – 37 years (43.0%). We assess respondents with their educational level, master's degree (28.5%), bachelor's degree (30.6%) and undergraduate (40.9%). As we can see in Table 3. below, in terms of job level Jn. Web developer (28.5%), Sn. web developer (25.9%), team lead (17.1%), manager (20.7%), and director (7.8%) at software house.

Table: 3
Demographic profile of Respondents

Age	**Sample Amount**	**Percentage**
18-27	73	37.8
28-37	83	43.0
38-47	34	17.6
48 above	3	1.6
Total	193	100.0
Gender		
Male	94	48.7
Female	99	51.3
Total	193	100.0
Qualification		
Undergraduate	79	40.9
Bachelor	59	30.6
Masters	55	28.5
Total	193	100.0
Job Level		
Jn. Web Developer	55	28.5
Sn. Web Developer	50	25.9
Team Lead	33	17.1
Manager	40	20.7
Director	15	7.8
	193	100.0

5.2 Descriptive Statistics Analysis

Four assessments of the measurement (outer) model According to Hair et al in 2014 the measurement model evaluation encompasses four major tests. These assessments involve outer loadings, internal consistency estimate also known as composite reliability, AVA, and Fornell-Larcker criterion respectively. The next four assessments of the measurement model are described below. As cited by Urbah and Ahleman, 2010, Hair et al, 2014 and 2017, we get riders of 0. Battery Composite reliability has an acceptable level of above 70, while for Indicator

reliability the acceptable level is above 70 for the four hypothesised constructs of library services. 50 and above are acceptable for convergent validity Over 50 cent for convergent validity. Likewise, discriminant validity is determined by outer loadings whereby the items under a given variable should load highly on a given dimension and less on undesired dimension. Table 4 presents the consolidated results of the first 3 assessments of the measurement model of the study, which shows that the outer loadings, Cronbach's alpha and composite reliability are all above 0.6, whereas the estimate of Convergent validity, or AVE is over 0.5 and above. Also, as presented in Table 4, The items of variables loaded highly on intended construct and low on the unintended construct, thus supporting the discriminant validity of the measurement model. The result of the four factors of measurement model assessment is as follows: As revealed in Tables 4 and 5, the values of the measurement model conform to the standard thresholds, hence signifying the reliability and validity of the study's measurement model.

Table: 4
Outer loadings, composite reliability, and convergent validity of the measurement model

Constructs	Items	Outer loadings	Cronbach's Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	(AVE)
Job satisfaction	**JS1** **JS2**	**0.977** **0.96**	0.935	0.986	0.968	0.938
Productivity	**PR1** **PR2**	**0.947** **0.942**	0.878	0.879	0.943	0.891
Work–life balance	**WLB1** **WLB2**	**1** **1**	1	1	1	1
Workload	**WLK1**	**0.985**	0.968	0.968	0.984	0.969

Table: 5
Discriminant validity of the measurement model

	JS	PR	WLB	WLK
JS	0.006			
PR	0.055	0.117		
WLB	0.004	0.342	0.613	
WLK	0.038	0.143	1.039	0.27

5.3 Structural Model Analysis

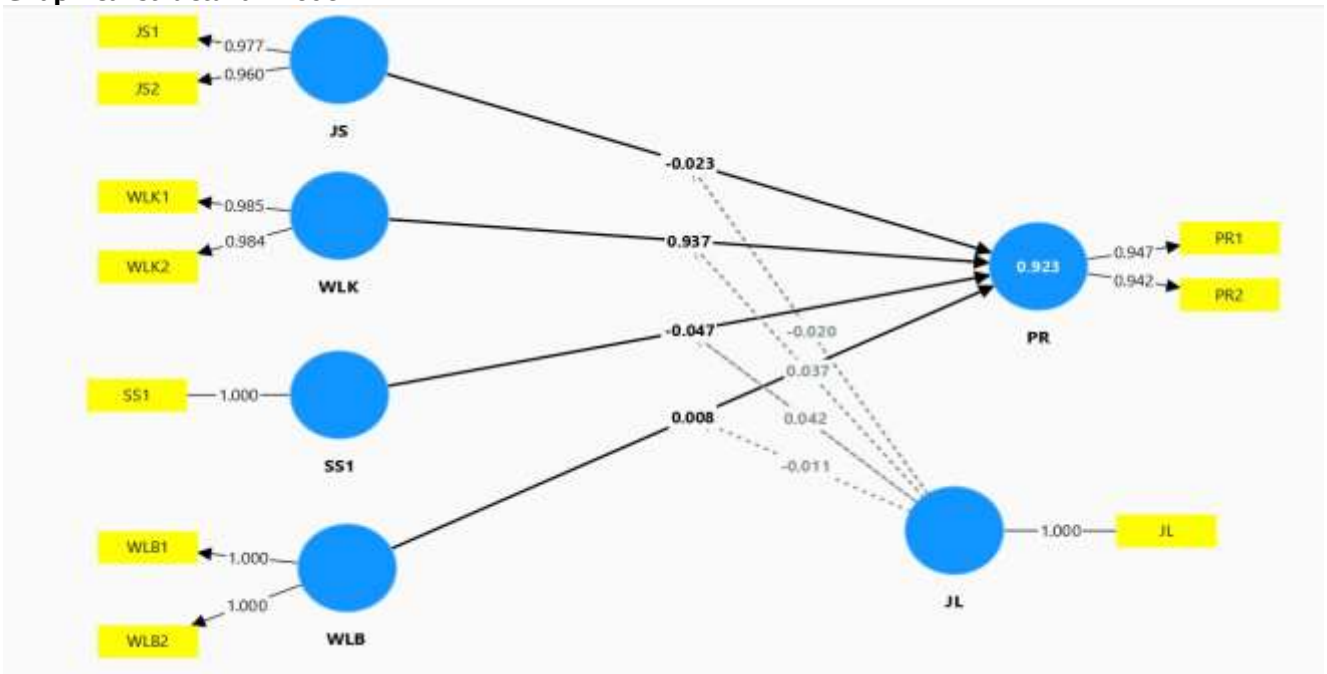
The following phase in data examination within Smart PLS involves assessing the framework to examine how the dependent, independent, and multilevel variables are interconnected. This framework is analyzed through the use of path coefficients (β), p-values and t-statistics obtained through the Smart PLS bootstrapping technique. These evaluations help determine the degree of association among various factors, allowing for the investigation of different research hypotheses (Hasan and Rifai, 2016). Cohen (1992) describes the estimation of path coefficient significance as 0.02 being weak, 0.15 being acceptable and 0.35 being strong. The acceptable values of p-values and t-statistics are 0.05 and 1.96, respectively, as recommended by Hasan and Rifai in 2016. Moderation (interaction effect). In the context of Hair et al.'s (2014) study, the moderator, also known as the MV, is identified as a third factor that influences the connection between two other factors. Within the framework of Smart PLS, the significance of a variable as a moderator is gauged by examining the magnitude of the interaction effect (Ramli and Latan, 2013). Chin et al (2003) and Ghozali and Latan (2015) have established that interaction effect

values of 0.02, 0.15, and 0.35 are deemed as weak, moderate, and strong, respectively. It's crucial to highlight that the inclusion of a moderator factor is essential in business study to explore the relationship among dependent and independent variables. Another strength of the study is the use of 'job level' as one of the MVs in order to examine in how way WKL, JS, WLB and SS influence the PR of employees at different hierarchical level in an organization. This study has four hypotheses of moderating relationships to reveal the extent of significance of JL as a moderator. The following Table 5 shows the structural model assessment to confirm all hypotheses of this study. These are four hypotheses pertaining to a direct relationship and three that pertain to an indirect relationship. The above analysis leads to the acceptance of four direct relationship hypotheses; this reveals that JL, WKL, WLB and SS have a positive influence on the level of employee PR during remote work. Three hypotheses were rejected that is JS, JL WLK create

Table: 6
Evaluation of the structural model of the study

Hypothesis	Path	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Remarks
1	**JL -> PR**	0.018	3.867	0.754	73.52	0.085	Accepted
2	**JS -> PR**	-0.023	-0.021	0.035	0.652	0.515	Rejected
3	**SS1 -> PR**	0.047	3.71	0.799	89.798	0.006	Accepted
4	**WLB -> PR**	0.008	3.73	0.969	65.83	0.007	Accepted
5	**WLK -> PR**	0.937	0.933	0.037	25.636	0	Accepted
6	**JL x WLB -> PR**	-0.011	-0.012	0.035	0.317	0.752	Rejected
7	**JL x WLK -> PR**	0.037	0.041	0.037	0.998	0.318	Rejected
8	**JL x JS -> PR**	-0.02	-0.02	0.026	0.747	0.455	Rejected

Figure 2
Graphical structural model



CHAPTER 6: DISCUSSION

The foremost hypothesis (H1) was used to measure the effect of JL on PR. The Smart PLS analysis displays a beta value of 0.754 and a p-value and t-statistic of 0.085 and 73.52, respectively. Each of the three values is important and fulfills the criteria for assessment established by Cohen in 1992, and Rifai and Hasan in 2016. Therefore, H1 is supported, consistent with Wu and Chen in 2020, and in line with allocation of time and social exchange theories. Likewise, the subsequent hypothesis (H2) was developed to check the relationship between PR and JS. This relationship has a β value of 0.035, a p-value of 0.515 and a t-statistic of 0.652, consistent with the not preceding assessment measures. H2 is not substantial, inline with prior research (Dubrin, 1991; Haloks and Bousinakis, 2010) and steady with EDT. The third hypothesis (H3) studied the relationship between PR and WLB. Outcomes illustrate that this relationship has a β value of 0.969, p-value of 0.007 and a t-statistic of 65.83. This theory is also supported and in line with the earlier research of Gainey and Feldman in 1997, Mahammad and Shareena in 2020 and Hasan et al in 2021. The conclusion also offers support for the SET. The latter hypothesis of direct relationship (H4) explored the effect of SS on employees PR. The study provided a beta value of 0.799, a p-value of 0.006 and a t-statistic of 89.798. Hence, H4 is noteworthy, similar to previously findings by Baruch-Feldman et al (2002) and Park et al (2004). This research is likewise in line with the SET, which forecasts that business companies can improve employee satisfaction and assurance by caring for them and providing them with livelihood for their family lives, which in turn increases their PR. After the evaluation of the direct associations, the moderation relationships come up for evaluation. As evident from tables, Smart PLS analysis reveals that all the four hypotheses of the moderating role are insignificant and possessed t-statistics less than 1.96 and p-values greater than 0.05. These results do not moderate the strength of the relationship between WKL, JS, WLB, SS, and 'employee PR' during remote working, according to the guiding principles of moderation suggested by Chin et al in 2003, and Latan and Ghozali in 2015.

CHAPTER 7: CONCLUSION AND RECOMMENDATION

The main objective of this research was to study the several dynamics that influence employees PR while working remotely at the IT sector software house in Pakistan. For this purpose, based on related philosophies and a comprehensive valuation of the literature, probable variables such as JL, SS, WLB and WKL were recognized and overall eight hypotheses were conveyed, four of which were straight relationships and four were unintended (moderating) relationships. The result of this study reveals a positive impact of WKL, JS, WLB and SS on employee PR. The study, nevertheless, illustrate that the JL does not perform a positive part among the independent variables (WLB, JS, WKL and SS) and the dependent variable (employees PR). The outcomes of this research offer numerous procedure effects for employers at IT sector in Pakistan. First off, companies ought to support their workers by providing tools that enhance their Job Satisfaction (JS), as an increase in JS benefits the Employee Performance (PR). Furthermore, flexible work timings should be offer to certify that employees have consumed time for both their professional and private lives, as WLB is absolutely connected with employee PR. Additionally, SS for employees is similarly critical since it contributes to the on the job PR of the workforces.

In conclusion, the research shows that when people work from home, they can handle more work-related knowledge and skills (WKLs), which boosts their performance rating (PR).

This study represents a pioneering effort in examining the impact of working from home at IT sector who are employed in Pakistan it revealed that a significant majority of IT employees experienced a boost in productivity while remote working. They efficiently utilized the time saved from commuting and met the heightened expectations of employer, remote working offers flexibility and utilizes technological advancements to enhance productivity. This indicates that companies should permit their staff to work remotely if their job doesn't require them to be in the workplace. Doing so can increase their PR since the time consumed traveling can be used for work-related activities.

The results suggest that certain aspects of the organization, such as granting independence and

empowerment to employees, fostering independence, and creating a helpful atmosphere, played a crucial role in maintaining employee productivity, Additionally, we discovered that prolonged remote work resulted in a feeling of exhaustion. To create positive environment businesses should think about implementing a mixed remote and in-office working approach to improve their employees' productivity and ensure a good fit between employees and their jobs, and creating favorable work conditions. These efforts will help boost job satisfaction and increase employees' commitment to the organization.

Limitations and Future Research

Inevitably, the existing study has some limits. For instance, the outcomes of this research cannot be generalized to another sector. It is important to note that the IT companies in Pakistan has one of the most progressive place of works. Therefore, telecommuting was simply adopting and implementing However, this does not apply to other industry that might not have such high-tech structures and even power and Internet links connectivity. Therefore, we recommend extending this research to other same industry to certify that the findings are comprehensive. In addition to that, opinions of the numerous industries would also be of attention as the apparent productivity may differ among businesses and that was not enclosed in this research.

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Appendix

Section I: Demographic Information

1. Gender
2. Age
3. Education Level
4. Job Level

Section II: Main Research Questionnaires

The Remote working increases the productivity of employee

I am satisfied with my remote job working schedule

I recommend my workplace to others as a good place to work remotely

I am happy with the amount of time I spend with my family

I am working longer hours to keep up with the Work load

The Work load increased during remote working

Overall, I am satisfied with my current remote work option.

Lack of face-to-face interaction with colleagues and managers is stressful in working environment

The Remote working affected the personal life

Overall, work environment supports a balance between work and personal life.

All items measured on a 5-point Likert scale