March 23rd, 2021

Scott Marshall, CTO

Jasper

345 Park Ave, New York, NY, 10154, United States

Dear Mr. Marshall,

Due to the ongoing pandemic, many companies have transitioned to a fully remote work model, where employees are expected to work from home for the time being. This remote model has been in place for many since the beginning of the COVID-19 pandemic and continues to stay throughout the pandemic. However, with the pandemic coming to an end, many companies are debating whether to go back into the office, transition to a hybrid model or stay fully remote.

Many employees around the world have supported a continuous fully remote model. I believe it is important for us to do economic and scientific research on this model and to see if our company would benefit from this continued work model.

I have attached and submitted a detailed report outlining the full impact a remote work-model has on companies and its employees. This report is backed with scientific research that comes from my own primary data research as well as secondary research.

Best,

Ali Hasan

Software Engineer, Jasper

Analysis of Fully Remote Model of Employment Style

For
Scott Marshall
Jasper, Chief Technology Officer
Chicago, Illinois

By
Ali Hasan
Eng 301 99C – Technical Writing
Instructor: Dr. Erika Paterson
March 30th, 2022

Abstract

Since the emergence of the COVID-19 pandemic, the entire workforce has been forced to shift to a fully remote work model. This shift has impacted many individuals and companies' way of conducting work for the coming years. With the pandemic slowly becoming under control, companies are wanting to go back into the office. However, many employees are wanting to stay and continue working remotely.

The overall purpose of this paper is to further investigate whether a fully remote work model is feasible for both companies and employees. In this report, I am to further investigate the mental and physical, economic and environmental impact a remote work model has on employees and companies.

To investigate this, I conducted my own study where I surveyed 26 participants regarding their feelings towards hybrid, remote and in-person models. In this study, I was able to learn more about how individuals feel about certain work models, and how companies may be able to use these responses to justify their own work model once the pandemic is under control or once they wish to go back into the office.

In conclusion, after conducting and reviewing the primary and secondary research I collected, I believe it is the decision of the company to decide whether a remote model is feasible for their employees and itself. I recommend a hybrid model, where both the employees and the company are both happy, however, this model may have drawbacks as I further elaborate in the paper.

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Introduction

For the past decade, many employees have become accustomed to going into the office daily. Companies have expected their employees to commute to work, come into the office, and spend time attending meetings and doing work with others at the office. However, with the recent spike of COVID-19 and the pandemic, many companies have been forced to break the tradition of going into the office and transition to a fully remote work model. Tools such as Zoom were introduced and became popular due to the ease of collaboration and convenience without having to leave home. Moreover, individuals were able to save and spend more time with their family due to not having to commute. Since the start of the pandemic, many individuals have had the luxury of being able to work from home while reaping the benefits it presents. However, there are some opinions around working remotely that believe that it does more harm than good. In other words, with family and other things around in a remote environment, it is easy for individuals to become confused with the boundaries of work and home. In a sense, many believe it may harm their performance due to distractions such as family and other things.

The purpose of this report is to determine whether a fully remote work model is feasible and the best solution mentally, physically, environmentally, and economically for companies and employees in near future to implement permanently. Before the surge of the COVID-19 pandemic, fully remote work was not considered to be a norm for many companies. In fact, one study showed that before the COVID-19 pandemic, at most 5% of the workforce worked remotely from home for more than three days per week. (Yang 2021). By April 2020, as many as 37% of the workforce was working remotely from home full-time. (Yang 2021). With the recent

spike of remote work, it is important to further analyze not only the impact remote work has on individuals, but to look more specifically on how remote work impacts the mental, physical and economics of an individual and company, and how it can impact the environment. Using my primary data and secondary research from academic journals and studies, I aim to uncover whether a fully remote work model is the best solution for both employees and the entire company at Jasper, and for other companies around the world who may be considering a fully remote work model.

<div align="center">**Data Section**</div>

Personal Health Analysis

<u>The Mental and Physical Impact</u>

A recent study done by Tokyo University aimed to further research the effects of remote work and the implications it may have on employees and companies. In this study, a total of 3,213 workers who had not done remote work prior to 2019 were surveyed about their job stress conditions and overall sleep practices in the span of 2019 to 2020. These workers' responses were analyzed with several variables, including but not limited to age, gender, overtime social support and job stress. The results of the study determined that remote work was associated with a decrease of psychological and physical stress responses. (Shimura, 2021). Moreover, the results of the study also demonstrated that the effects of remote work can be associated with a negative impact on employees' work productivity.

In terms of one specific demographic, one study done by FlexJobs.com wanted to learn more about the experiences parents went through with remote work. Through this study, they

were able to survey 1,100 parents with children under the age of 18 and who live at home. According to the study, the researchers found that 40% of parents were "unable to unplug after work or worked too much", and another 36% found dealing with non-work distractions. This goes to show that even though remote work can be viewed to be flexible, the boundaries of work and home become blurred and can have a negative impact on an individual's overall wellbeing.

In another study done by the University of Southern California, they aimed to further explore and understand the social, physical, and behavioral impact on the wellbeing of office workstation users during COVID-19. In this study, they surveyed 988 individuals to further understand what factors were impacted through COVID-19. The results of this study demonstrated and found that these workers reported a decline in overall physical and mental health status. In addition, these workers were found to have an increased number of new physical and mental health issues.

The Environmental Impact

Intuitively, working remotely from home or a remote location seems better for the environment. In fact, a study done by Spain's Institue de Ciencia i Tecnologia Ambientals suggests this is true and looks deeper into this opinion. In this study, they aimed to further investigate whether working remotely has a positive impact on the amount of air pollution in cities. Researchers found that working from home four days a week would reduce the amount of nitrogen dioxide by 10%. (Badia, 2021) With nitrogen dioxide being the main pollutant created by traffic emissions, working remotely instead of traveling can have a positive impact on the environment.

However, even though there are many studies that show that working remotely has a positive impact on the environment, it can still have a negative impact. Another study done by the International Energy Agency found similar to the positive impact, that by working remotely, personal emissions can be cut down by up to 80%. Even though some may have their personal emissions cut by 80% by staying at home, a significant amount of energy was consumed at home. Things such as having the heater run, or the air conditioner, found on average that home electricity consumption rose to 20% on weekdays. (International Energy Agency, 2020). This goes to show that even though working remotely can cut personal emissions on the road by a certain percentage, working remotely at home and using electricity can still have a negative impact in a way.

In a different light, another study done by the University of College Dublin, studied the effects of energy consumption if the Irish population were to work fully remote full time. The results found that if 5% of the Irish population worked remotely full time, the final energy consumption would fall by 0.14%. (Fu, 2021). Even though Ireland is a much smaller country than Canada, this still demonstrates that working remotely from home can still have a valuable energy saving impact on the environment.

To conclude, even though a fully remote model has its pros and cons, others believe businesses wanting to create a hybrid model could create a "worst-case scenario". A report written by the Carbon Trust and Vodafone Institute for Society and Communications stated that "this split could result in consuming more energy and emitting more emissions as both homes

and offices are fully operating to enable teleworkers and office workers to do their jobs" (Carbon Trust and Vodafone Institute for Society and Communications, 2020).

Economic Analysis

The Economic Impact

A study done by Stanford Professor, Nicholas Bloom, investigated more into the current state of work from home and how it has impacted employees and companies on a more personal level. Bloom found that the overall impact of WFH was "striking" and that the company the research was done on improved total firm productivity by between 20-30% and saved about $2,000 a year per employee by WFH (Bloom, 2021).

Moreover, the same study investigated how working remotely can positively or negatively impact an employee's long-term career by having less on-the-job training and time spent in the office. To investigate this topic, promotional data was conducted and collected on 249 employees. Results showed that the total impact of working remotely had a "negative but only weakly significant impact on promotions" (Bloom, 2021). The report stated that employees that worked remotely from home were "out of sight, out of mind" (Bloom, 2021). In other words, the report stated that supervisors did not notice their performance as much and were less likely to promote them". It is important to note that working from home has shown in research that working remotely from home can impact an individual's future career progression and promotional status.

Survey Results

<u>Introduction</u>

To further analyze the remote work model, and other work models such as in person and hybrid, a set number of individuals were asked to participate in a study regarding their current work model, and their experiences with present and future work models.

<u>Method of Research</u>

Twenty-six individuals from the city of Vancouver responded to a short survey designed to analyze individuals' feelings regarding in-person, remote and hybrid work models. An analysis of answers was performed to determine the feasibility of implementing different work models, especially to gauge a potential hybrid or remote work model

<u>Results</u>

For my primary data research, 26 individuals from the City of Vancouver were surveyed. These individuals came from a wide range of backgrounds, job titles, genders, and more. The following observations were made from the 26 surveys given:

82% of individuals had some sort of experience working remotely from home, rather that was working remotely in a school or work-related setting.

Figure 1: "My experience working remotely so far has been"

Of those 82% individuals that answered that they had experience working remotely from home, all 75% of individuals answered "yes" to wanting to work permanently from home.

Participants were also asked the question regarding "what they missed the most about the office", given options listed above. Looking at the demographic bar graph, 50% of individuals said they miss "nothing at all", while the other 25% said "socializing with coworkers" and the remaining 25% said "free assistance and mentorship."
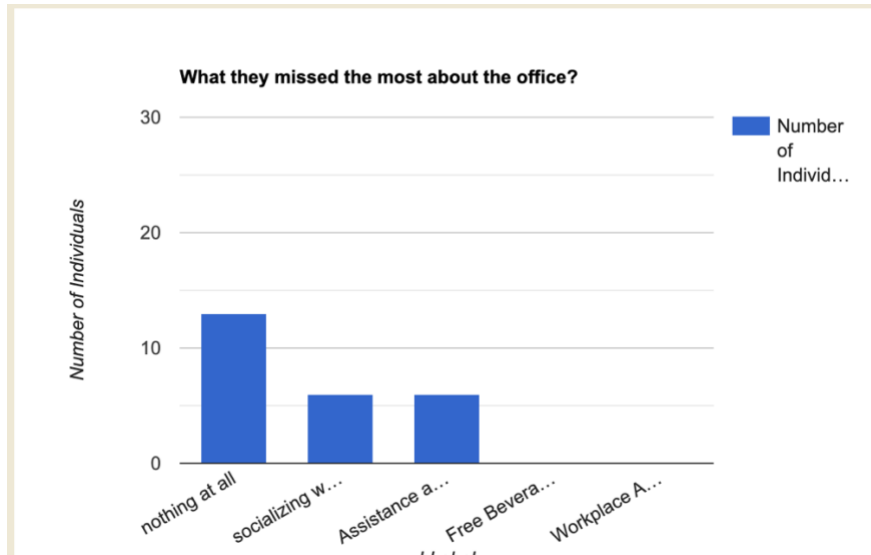
Figure 2: "What they missed about the office"

When participants were asked to select which of the options they preferred of a hybrid model, most participants (78%) selected "freedom from supervision" and "financial gain/savings."

When asked the question regarding if a hybrid model is "the perfect balance", "useless" or "not the best, but better than (what they were) currently doing", almost all participants selected it as the perfect balance.

Participants were asked to rank the following models in order of preference: hybrid, remote, and fully in-person. 60% of participants ranked hybrid as their first choice, 30% of participants ranked remote as their first choice and 10% of participants ranked fully in-person as their first choice. All participants who had remote as their first option, ranked hybrid as their second option and all participants who ranked hybrid as their first option, had remote as their second option.

The survey ended with asking participants what option of the following selected options listed above, best correlates with their view on working remotely. 55% of participants selected "I can spend more time with loved ones", 35% of participants selected they would prefer a "hybrid style" and 15% of participants selected they "do not like to have work and home in the same environment".

Analysis of Findings

Based on the primary survey results generated, many individuals would prefer some sort of remote work incorporated into their everyday lives. This may be due to a variety of reasons, but participants who stated that they would prefer a hybrid model selected they would prefer one because of the "financial gain/savings" and "freedom from supervision". By working remotely, individuals can save money for other things rather than spending it on commuting to the office, etc. Moreover, with individuals being given the flexibility to work at home, most individuals are given more freedom since they do not have supervision while working. Reasons for this may be due to feeling increased stress, pressure, or the ability to perform while being closely watched. Over half of individuals in the study believed working remotely gives them more time to spend "with loved ones".

Moreover, participants in the survey held a strong majority towards hybrid work and did not oppose it. With most participants selecting that a hybrid work model was the "perfect

balance", it demonstrates to companies and potential employers that a hybrid model for the future might be the best option to satisfy both the companies need of an in-person model, and a desired remote model by current employees.

<u>Limitations</u>

As for the limitations of the primary research and research conducted, one clear limitation is the demographics of the participants that participated in the study. While analyzing this study, it should be considered that most of these participants were my friends who are students or on a co-op work term. This can be seen as strictly focusing on one demographic, as these participants have different ideologies than other age or demographic groups in the area. It is also important to note that most of these participants started school or work in the pandemic world, and some might just have pure experience in remote settings, and none in in-person settings. Another limitation in the study can be the size of the participants that participated in the study. With data only collected from 25 participants, a sample size of this small can introduce a higher variability and can lead to bias. With a much larger sample size in the future, it can eliminate the possibilities of bias and lower variability.

<u>Conclusion</u>

<u>Summary and Interpretation of Findings</u>

Working remotely has been seen to make both a positive and negative impact on companies and employees. Even though this type of work model may provide more flexibility and freedom to the employee, it has been shown through studies that this type of work model can impact an individual's physical, mental, and economic status. On the other hand, researchers have found that it has a negative impact on employees' work productivity and overall well-being.

Moreover, working remotely has shown to have a positive and negative impact on the environment. As stated in the report previously, working remotely for a couple of days a week can reduce nitrogen dioxide by 10% and can lower carbon emissions given during traffic. Moreover, remote work can also cut personal emissions by up to 80%. However, electricity can rise while remote, causing us to use more power and have a negative resulting impact on the environment.

Companies interested in shifting to this work model should consider: (1) the impact it may have on employees, and (2) the impact it may have on the company (3) the impact it may have on the environment. Each of these three reasons have benefits and drawbacks, based on studies discussed previously in the report.

Recommendations

Based on the surveys conducted and the findings in the secondary research, it is recommended that when COVID-19 is more under control:

1. Companies introduce a hybrid model, where employees can go into the office and be remote for the other days. By introducing a remote model, employees can reap the benefits presented in the studies above, while also going into the office where they can have more guidance and potential career advancement.

2. Companies introduce more activities and change the work culture currently in office. Survey results showed that half of participants do not miss anything about the office, but 25% do miss socializing with coworkers. By potentially introducing more activities and

making the office more of an open space, it may change employees' opinions in regard to going into the office.

3. Companies should allow more freedom from supervision at the office, giving more time to employees to work independently and potentially incentivize employees to come into the office. Survey results proved that 78% of participants enjoyed remote work because they had freedom from supervision and had more financial savings/gain. By providing them incentives such as bonuses for coming in, or providing them a safe space to work independently, it may positively change employees' opinions about coming into the office.

<u>Appendix</u>

<u>Questions from survey:</u>

- My experience working remotely so far has been:

    - I have no experience working remotely

    - In a work environment

    - In a school environment

- I would prefer to work from home permanently

    - Yes

    - No

    - Not sure

- The things I miss about the office are:

    - Workplace Amenities

    - Socializing with coworkers

    - Assistance and Mentorship

    - Free Beverages/Snacks

    - Nothing at all

- Please select all that apply. I would prefer a hybrid model of work because:

    - Financial gain/savings

    - A lively, mentoring culture

    - Clear management direction

    - Freedom from supervision

    - I do not prefer a hybrid model

- I believe a hybrid model of work is:

- The perfect balance

- Useless

- Not the best, but better than what I'm currently doing

- Rank(1-3, 1 being the best and 3 being the worst) the following working styles from best to worst: Remote, hybrid, in-person/office

- My view on remote working correlates best with:

    - I can spend more time with my loved ones

    - I'm fine with whatever working environment

    - I don't like to have work and home in one environment

    - I would prefer a hybrid style

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