

# Research On Evolution of Corporate Office: Current Development Situation and Economic Transformation of Online Office Behind Epidemic Background

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**Keywords:** COVID-19, Teleworking, Economy, Remote work platforms, Human Resource Management.

**Abstract:** Under the circumstance of the rapid spread for COVID-19, telework became a necessary and efficient approach for both firms and employees. While COVID-19 does bring opportunities to the development of remote working platforms, there remain some challenges. This paper mainly discusses four factors that could significantly affect telecommuting and specific comparisons of Teams and Slack to evaluate why Teams surpass Slack. Through the preliminary study on this topic, subsequent researchers and corporation managers could acquire some adoptable information that might offer their management assistance under the background of COVID-19. In addition, the research is conducted to focus on investigating the information related to telework under COVID-19 constructed based on several completed actual statistical studies and outcomes. While comparing and evaluating its effectiveness, we also develop a general prediction of the future development trend of online working.

## 1. Introduction

### 1.1 Background

The COVID-19 outbreak has made working from home (WFH) the new way of working for billions of employees worldwide. Due to the pandemic, many employers had to suddenly switch to remote work for the first time without any preparation. A teleworking platform that can offer services like editing files with colleagues and participating in online meetings seems essential. According to this situation, the market of teleworking worldwide has increased significantly. The size of the telework market in China grows from 30 billion yuan in 2019 to nearly 450 billion yuan in 2021.

In America, the same situation also occurred when the epidemic's arrival opened up a brand-new channel for online offices. According to Statista (2021), there is a clear distinction between working online before and after the outbreak. Over time, participation in online work has increased with the introduction of advanced networking technology and the network-compatible degree of the occupation.

More and more companies have decided to go online to keep their production lines running and even ensure that their employees can earn a steady income during the pandemic. This situation is good for the nations since it increases the sense of economic security for people.

### 1.2 Related Research

As the outbreak of the Coronavirus epidemic, it is fundamentally changing people's work-life. Connley, Hess, and Liu claim 13 ways of how pandemics change people's life. Due to the shutdown of producing and servicing, most meetings inside the company will be replaced by email and instant messages, for example, which creates a more agile communication medium that meets the need of everybody. Companies will also provide home office stipends for the successful transition to online

workings and make it a standard perk. Under all kinds of situations, the multiple factors of post-epidemic background combining will also facilitate the automation process. This process will be quickly adopted by all companies that finally will lead to a popular trend of the digital industry during the economic downturns [1]. Likewise, the piece of research done by Soares, Bonnet, and Berg claims that as the epidemic diffuses, almost 1/6 percent of the world population will get involved with online working. Since based on studies, it is probably the only effective way to prevent the spread of disease and keep the production work as usual. Through extensive data analysis, in 2020, conveyed by experts in the journal, the higher the country's income, the higher the percentage that data presents workers carrying out their work from home. Again, it shows that work online at home has great potentials, which could guarantee the economic activity mechanism of the country [2]. Susan Lund's report also shows the influence of COVID -19. COVID-19 impacts the global labor market, mainly in eight countries that have 62% of global GDP. Then it describes several specific effects from COVID-19. It uses graphs and charts to show the research results, which is most jobs will be deeply influenced by COVID-19, and an online office could be a great solution [3].

Ma first discusses the benefits and drawbacks of telework during Covid-19. Then the following discover some factors related to telecommuting that influence communication for organizations regarding global pandemics from research. Additionally, the future tendencies of telecommuting in the world, methods of solving some problems, and limitations are discussed in the article. It comes out that the benefits of telework outweigh its drawbacks.[4]. Meanwhile, Faulds and Raju focus on the future tendency of telework. The work-from-home trend during the COVID-19 pandemic is stated. How this trend changing long-held attitudes among employers and employees is then discovered. Brian states the primary advantages and disadvantages for employers when employees work from home. In the cyber-age, what security issues related to working from home must firm be concerned about and how is artificial intelligence (AI) affecting this trend are then argued. Finally, suggestions of companies dealing with issues surrounding the work-from-home trend are offered [5]. Dave Cook also did research that shows a tendency for online office development. Due to the COVID-19 being widely spread and the difficulties in controlling, online work has become more and more popular in the USA and also globally wide. Charts and data were adopted in the article. The result is Online offices will be popular even COVID-19 is solved [6].

Workers are no doubt greatly affected by the Covid-19 and encounter different problems while working from home. Soares Bonnet and Berg claim that other occupations and people from various countries might encounter problems implementing online work. According to research, this is largely relating to the work type and whether workers, under this condition, are in the developed economic system. Despite this, networking infrastructure and internet access availability will become a significant discouragement. Therefore, ensuring that workers can work decently from home and balance their lives is one of the most important considerations for working online [7]. In the meanwhile, Galanti analyzed data collected through an online questionnaire completed by employees. The assumptions were tested using hierarchical linear regression. WFH during the pandemic. Employees' family-work conflict and social isolation were negatively related, while self-leadership and autonomy were positively associated with WFH productivity and WFH engagement. Family-work conflict and social isolation were negatively associated with WFH stress, not affected by autonomy and self-leadership. Individual- and work-related aspects both hinder and facilitate WFH during the COVID-19 outbreak [8]. Kim Parker also wrote the article that shows how serious COVID-19 will influence the worker, diverse kinds of charts were adopted, and the result is most people worry about if it is dangerous to work face-to-face [9].

As teleworking develop, many distance work companies sprung up. DingTalk is one of them.

Xiong uses questionnaire surveys and in-depth interviews to deal with the data and results obtained in a targeted manner and analyze SMEs' needs and the problems in the DingTalk platform. Individualized and optimized development of the platform seeks improvement countermeasures. It helps improve the work efficiency of SMEs and provides help for the transformation of enterprise management data. The personalized development and construction based on the DingTalk platform have far-reaching significance for improving corporate management ecology and the sustainable

development of DingTalk itself [10]. Apart from Ding Talk, Microsoft also works hard to adapt to the pandemic. Rita Zeidner describes how Microsoft built an online office structure under the background of COVID-19, which offers several examples of some of their employees.

Additionally, such a report adopts some charts that reflect the rate of using online offices.

Another method that they utilized is an interview, which contains ordinary staff and major leaders. The result shows a quick enough reaction is significant for effective working. Some suggestions were given based on all research [11].

### **1.3 Objective**

In this research, we propose investigating the relationship between the enterprise and Online-offing in the post-pandemic time. Online working is thriving because it guarantees workers' health and provides companies a great chance to operate normally, which helps them survive the economic downturn caused by the Covid-19. With the development of teleworks, most work can be done online through newly emerged applications such as Ding-Talk that assist people in creating symmetric communication and efficient work assignments. When people are stuck at home, teleworking plays a significant role in maintaining the national economy and stimulating employment.

## **2. PEST analysis of telework during COVID -19**

### **2.1 Political Factors**

Political factors mainly constitute external constraints upon a business, including its external activities that are usually outside the company's control. For pandemic times, typical political factors include laws and regulations for enterprises that may ban them from doing a specific type of business. One typical example is that government might implement radical supervision on the export and import routes regarding the demand for epidemic prevention and control. In addition to that, considering the global economic crisis that most industries face, governments have exercised some control over the business activities of many state-owned enterprises, especially in energy, rail transport, finance, and telecommunications. To prevent a systemic economic collapse and support recovery, governments are rolling out a series of measures to support the economy, including extensive tax breaks, wage subsidies, grants, and concessional loans. In addition, the emergence of online work in this environment, as a new industry supported by the government, provides opportunities for more initiatives to "self-recovery".

### **2.2 Economic Factors**

Online working is the easiest and best practice for companies with a complete management mechanism and communication process. First, it saves a lot of money on the rental of helper areas. For companies in the core area, grade A office rent expenses are often a big figure. Secondly, it significantly saves the time cost of commuting. Most business companies are located in the city center, and employees generally live in remote areas, with commuting times ranging from 1 to 3 hours at peak times. If this time can be used to work, it will cost the same price for the company, but get more human resources. In addition, for companies that have started working remotely, their workers will not be exposed to the risk of various infectious diseases, especially the Novel Coronavirus. Companies that work remotely will have more significant productivity advantages and better employee protection than other companies.

Working online is undoubtedly a massive shift for companies, but it is also a necessary shift for economies in the context of the pandemic. Based on statistics, this is also becoming the trend of change in most companies during the pandemic.

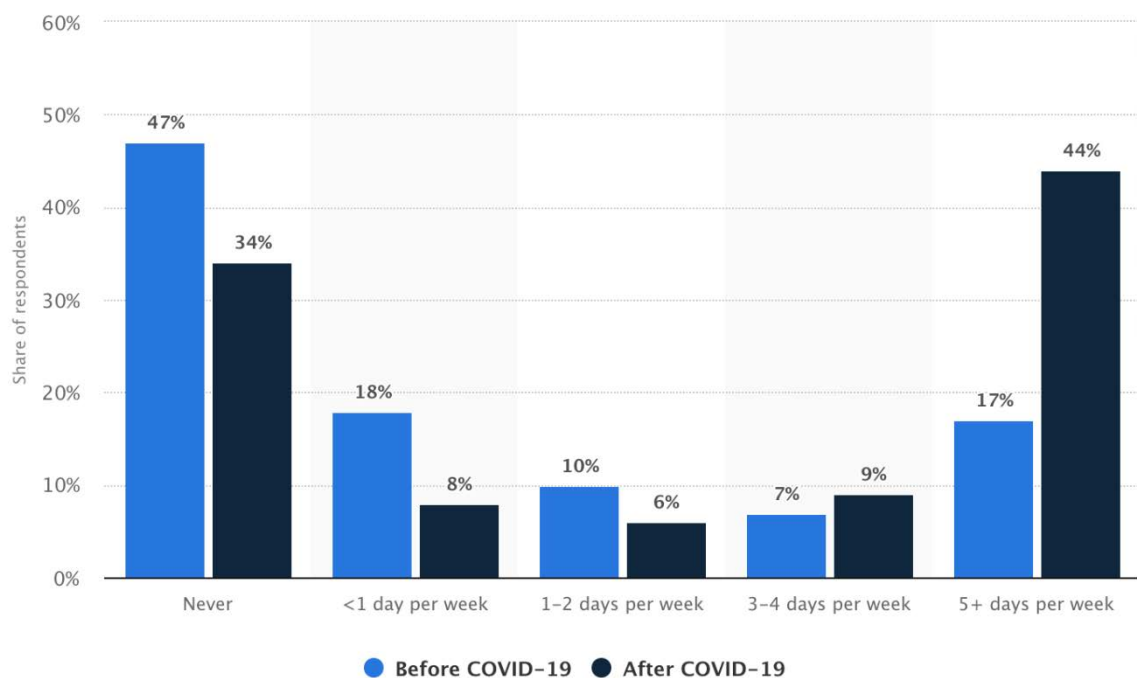


Figure 1. Software usage frequency

### 2.3 Social Factors

In 2020, there was a global outbreak that led to widespread shutdowns. In the face of this situation, most governments show a positive attitude and try to support critical industries through financial subsidies to tide them over. Gradually, we have come to realize that financial subsidies are not a very effective measure. This may achieve a short-term "recovery" goal for these enterprises, but operators still face a significant deficit risk in the long term. This method is also awful for the government, as the failure of key and large industries will lead to exponential growth in unemployment, lowering the country's GDP and leading it into a vicious cycle of economic downturn. Nevertheless, high-tech industries have a vital role to play in every sector.

### 2.4 Technology Factors

The development of the 5G network has given the online offices a sounder development path and provided a platform for all companies to cooperate. Unlike offline work, in the absence of face-to-face communication, it is easy to cause unclear work objectives and information asymmetry within the team. To make online offices work more smoothly, avoiding unnecessary conflicts and misunderstandings has become a topic that online technology must solve. Software engineering has incorporated many of the productivity tools of the past into its functions. For example, online clock-in, do-list, and log functions can enable team leaders to track their members' daily work better. At the same time, software that has matured in previous years to support multi-person online collaboration, online conferencing, and the like has also played an essential role during the pandemic.

## 3. Comparison of different Online office Platforms

During the Covid-19 period, different distance working platforms like DingTalk, Zoom sprung up due to the golden opportunities analyzed by PEST above. Nevertheless, as the market enlarges rapidly when more and more media access this area, some companies manage to flourish and dominate. At the same time, some even have difficulties in operating due to fierce market competition and problems analyzed above. So, what decides the development of teleworking platforms?

In 2021, Team's market share of distance work platforms reaches 14.5%, while Slack only has 3.6%, 10.9% lower than Teams. It is obvious that Slack is losing out to Teams in the battle of the market. What led to this situation when Slack started its business three years earlier than Teams? The following are some reasons.

### 3.1 Target customers

Since February 2014, Slack's daily users have increased to 2.3 million by March 2019. Microsoft Teams, however, surpassed Slack in users in just three years. We can see from chart one that Teams' daily active users reached 13 million in 2019. And the rate shows no sign of slowing down. In 2021, the number of Team daily active users has almost doubled 2020, increasing from 75 million to 145 million.

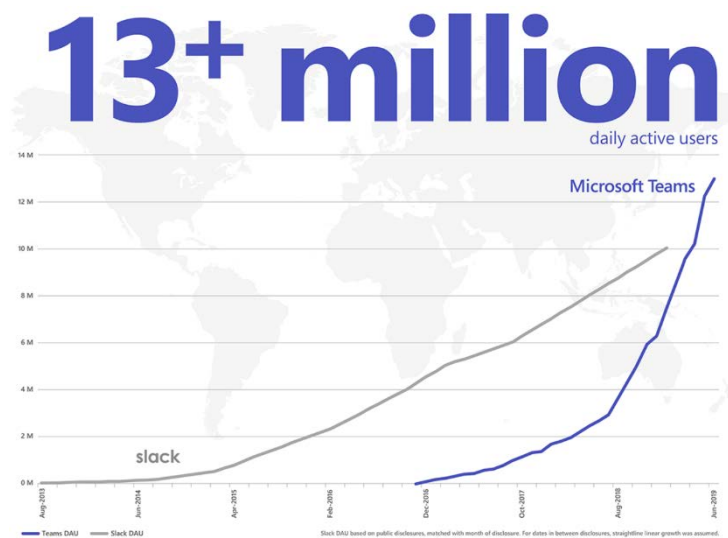


Figure 2. Daily active users of Teams and Slack

Teams and Slack have different target customers. As for the market of start-ups, developers, and young tech-proficient workers, Slack undoubtedly has an advantage over Teams. From chart three, we can know that Slack has a share of 60% in the market of technology penetration among founded start-ups, while Teams only has about 10%.

Nonetheless, Slacks' advantage in the star-up market fails to compete with Teams'. Teams focus on increasing many users from large organizations such as schools, government workers, and especially its large existing Office 365 customer base. That is to say, Team's plan is not only a stand-alone project. It is highly associated with Office 365—Microsoft's essential cloud-based Office solution. It could be viewed as an add-on with Office 365. For companies who have already paid for Office 365, it could be a great idea to use Team because the business and enterprise plans already have free access to using premium Teams without paying more, which is extremely attractive and economical. Peter Tsai, the senior technology analyst at Spiceworks, said in a statement accompanying the survey results that the sudden rise of Teams is likely to be triggered by the fact that Teams is available at no additional cost to Office 365 users." From chart 2, we can notice that in this aspect, Teams' share of the prominent organizations reached 65% at the end of 2019, while Slack only had 35%.

The different target customers and the Microsoft users base decide their number of active users. Although Slack still has strong competitiveness for start-ups, their number of active users fails to compete with Teams'. Facing target customers of large organizations and Office 365 users base, Teams successfully surpass Slack.

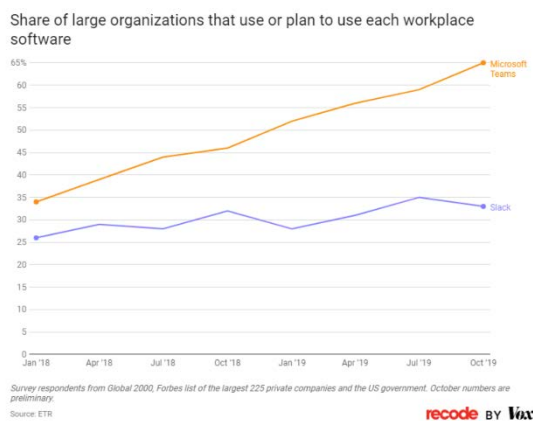


Figure 3. Share of large organizations that use or plan to use each workplace

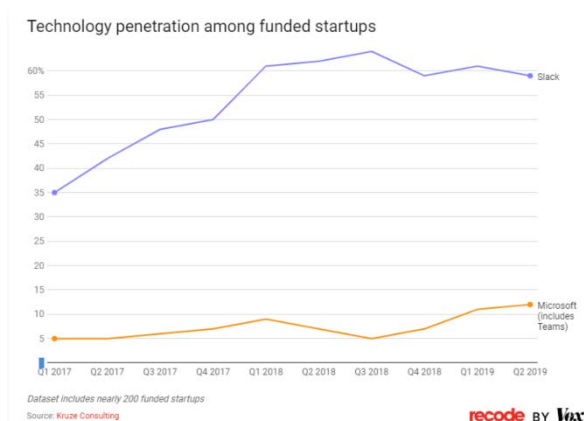


Figure 4. Technology penetration among funded startups

### 3.2 Products differentiation

Different products and services play a significant role in the competition of distance work platforms. As for medium and small enterprises, both Teams and Slack provide generous free plans, shown in table 1.

Table 1. Microsoft Teams and Slack Free

	Microsoft Teams	Slack
Max users	300 per org	Unlimited
File storage	2 GB/user and 10 GB of shared storage	5 GB total
Guest access	Yes	No
1:1 and group online audio and video calls	Yes	Yes
Channel meetings	Yes	No
Screen sharing	Yes	Yes
App integration	Unlimited	10
Chat messages	Unlimited	10K most recent messages
Two-factor authentication	No	Yes

As for large organizations, it is limited to free plans, so they usually choose to use a paid plan. Slack's basic plan is \$6.67 per user per month. With this plan, workers can avoid the limitations of searching for information, applications, integration, and video calls. Slack also offers a plus plan for \$12.50 per user per month, including advanced service, more security, and 20GB per user. Next, let's look at Team's paid plan. Team's Business Essentials plan is \$5.00 per user per month, cheaper than Slack's standard plan. And as described above, companies that have already paid for Office 365 have free access to Teams. As for companies that haven't paid for Teams because of its lower price compared with Slacks, which decides that Teams' products are undoubtedly more attractive to users.

### **3.3 Conclusion**

From the target customers and products analysis above, Teams perfectly uses a bundling strategy in commercial competition. Microsoft has a good reputation and has accumulated a large number of customer resources. Building an ecosystem of office software is what Microsoft has been attempting. As an essential step of the Microsoft ecosystem and an indispensable part of the Office365 suite, Teams successfully became the preferred work group compared with Slack even though Teams started three years later. Slack remains a good option for smaller organizations and start-ups, but it does not have a Microsoft-like ecosystem, which mainly decides its failure in the competition with Slack.

## **4. Problem and Solutions**

### **4.1 Defects of online working**

As the world is going through a pandemic, people have to adjust, especially companies and organizations. The new model of the working situation had been coming to the society: work from home, also people called it WFH. While this new culture came to terms with benefits and some problems.

#### **(1) Working Efficiency**

Since companies' internet is always the fastest or the best because no one would like to see any interruptions or delays by the slow speed of internet, however, home-based internet may be one of the reasons causing low working efficiency. The ill-internet speed makes people crazy when they are uploading or downloading documents or some large-scale stuff. Employees cannot concentrate while doing the things above, reported by 32% of employees that slow speed internet ruins their day. Sometimes even worse. The network problems could also lower the communication speed if employees adopted messages on online platforms. A discussion of resolutions to an emergency might be handled a few hours after it happened, which will lead to an unpredictable result. Additionally, incorrect selection of images, sending messages to the wrong group, and easier be affected by surrounding matter could all be barriers to comprehensive utilization of WFH.

#### **(2) Multi-people meeting barriers**

When we talked about work from home, there was one thing that we could not void was video conferencing platforms, such as ZOOM, Tencent online meetings, Classes, etc. We had to say that these sorts of software did solve most of our problems. At the same time, a new issue came out: ineffective communications. Some employees felt great when working at home, and with no distractions, some might feel difficult. Spending hours and hours communicating with team members can be challenging. Speaking through the internet would not be better than sitting together and discussing ideas. Lack of teamwork and communication would slow down the efficiency. Especially it happened in the multi-people meetings; poor communication hindered remote workforce.

#### **(3) Process evaluates work**

Some issues, such as software and hardware issues, became more difficult when you were not in the office; it took longer to solve instead of sitting in the same building. Furthermore, employees might not know well about others' work. Sometimes they didn't even know whom to ask for help, the work procedures became more complicated, and results might not be satisfactory. When the director assigned tasks for each department, and all of them needed to collaborate. At this time, the problem showed up: less communication and hard to monitor everyone's workload. Leaders will encounter the

problem related to supervision during a process evaluation work. How did employees accomplish the job? What difficulties did they meet before? And did they work on every single part as carefully as on the final result? All these kinds of questions will exist in the brain of managers.

#### (4) Decreasing Creativity

Innovation is the key point for a company being successful. On the other hand, brainstorming is always necessary and required. In a survey conducted by Boston Consulting Group and KRC Research, we can tell that 56% of executives considered their companies to be innovative with products and services. However, this number dropped down to 40% this year." A loss of a sense of purpose, which at work, is largely driven through strong and cohesive relationships and seeing how your tasks have an impact on others," reports Dr. Michael Parke, assistant professor at The Wharton School of University of the Pennsylvania and research collaborator." Both are more easily accomplished when people work co-located and are more challenging when working virtually."

Though there are still more challenges we will face, the company could figure out several new approaches to improve working efficiency.

### **4.2 Solution to teleworking flaws**

Remote working platforms are working hard to solve the problems described above. For instance, Teams' "Together Mode" helps increase workers' efficiency to a certain degree. Teams managed to add a set of new features that make online virtual interactions more natural on July 9, 2020. One of the major features is "Together Mode." It is designed to help remote workers reduce the psychological stress of long-term social isolation after working from home. After being forced to work from home for a relatively long time, many workers develop low working efficiency due to their mental pressure of lacking social contact with colleagues.

By "Together Mode", workers' faces are placed in a shared context like rows of seats in a university auditorium by using AI. It makes the meeting more interactive by letting participants pick up each other's' body language through the camera to see how others act clearly. This feature is better suited for meetings that require multiple speakers, such as brainstorming, round tables, etc. By seeing others' body language in a virtual meeting room, remote workers may feel less anxious and release some stress. In this way, workers will be able to improve their working productivity.

### **5. Conclusion**

This article first talks about the background and PEST analysis of telework during COVID-19. Then a comparison of Teams and Slack in different aspects is discussed. Finally, some problems of telework and solutions are stated. From the above work, conclusions are that during the COVID-19 period, telework platforms gain golden opportunities because of political, economic, social, and technological factors. A comparison of Teams and Slack indicates the importance of the user base in running a telecommuting company. Additionally, although the prosperity of telecommuting is optimistic, there remains a bunch of problems that are difficult to solve under the current circumstances.

As the world enters the post-pandemic era, people return to their everyday lives and gradually return to work. In this case, the massive demand for telecommuting decreases. Additionally, the future development of the whole remote working platforms market is unpredictable. Consequently, how should companies adapt to new situations and make working from home normality rather than a solution to COVID-19 a huge challenge. Only by solving this puzzle can platforms achieve sustainable development.

By analyzing the development of telework during the pandemic, this thesis hopes to provide some meaningful thoughts for remote working platforms.



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