



WORK FROM HOME & PRODUCTIVITY:
Evidence from Personnel & Analytics
Data on IT Professionals



In 2020, billions of workers around the world abruptly switched to working from home. Now, employers around the world are all asking the same question: **How well is working from home working?**

OVERVIEW

A new working paper, **Work from Home & Productivity: Evidence from Personnel & Analytics Data on IT Professionals**, published by Becker Friedman Institute for Economics at the University of Chicago, explores the effect of working from home on productivity. The report is based on data gathered from over 10,000 skilled professionals at one of the Top 5 Global IT Services companies outside the U.S.—with data from before and after the work-from-home (WFH) transition that occurred as a result of COVID-19. The purpose of the study was to determine the effect of working from home on input, output and productivity, and to explore which factors drive productivity when employees work from home.

The study found that total work hours increased by roughly 30%, including an 18% rise in working after normal business hours. Average output did not significantly change. Therefore, productivity fell by about 20%. Variables analyzed included gender, employee experience and tenure, and the presence of children at home.

METHOD OF DATA GATHERING AND ANALYSIS

To understand work patterns and behavior, researchers studied 17 months of data from Sapience Analytics’ legacy solution, a data collection tool that delivers workforce analytics. With Sapience, data accuracy is guaranteed, because information is collected automatically, instead of being reported manually. Sapience measures hours worked in a sophisticated way, identifies the software tools employees use, and presents the hours during which employees are engaged in work. To measure output, managers set goals and tracked completion over time. The key outcome measure was Productivity, output divided by hours worked. In contrast to productivity studies based on surveys, which may be subjective, this analysis is based on objective analytics and monitoring data.

FINDINGS	DETAIL
Working from home (“WFH”) led to an increase in working hours.	Employees worked about 1.6 more hours per day after WFH, increasing total hours by roughly 30%.
Employees continued to meet all goals.	WFH had no significant effect on output. Workload was unchanged, and all assigned tasks were completed.
WFH led to a decrease in productivity.	Because employees worked more hours to achieve the same goals, productivity declined by -0.3 output percentage points per hour worked. Overall, productivity fell by about 20%.
The presence of school-aged children at home is correlated with increased working hours.	Employees with children worked almost 20 minutes more per day during WFH, compared to those without children. Those without children still worked 1.4 hours more per day.
Having children at home did not impact output—but it did lower productivity.	Employees with children continued to achieve all goals. However, their increase in working hours led to a 60% larger productivity drop, compared to employees without children at home.
Female employees were more adversely affected by WFH than males.	Female employees without children increased working time by about 0.2 hours more per day than male employees without children. While male employees without children worked fewer hours, they increased their output by about 0.9 percentage points more during WFH, compared to their female counterparts.
Study authors concluded that gender differences were unrelated to childcare.	Female employees with children did not significantly increase working hours during WFH compared to female employees without children, nor did their output or productivity significantly differ. When children were at home, male employees increased work time more than female employees.
Experienced employees worked more hours.	Experienced employees worked roughly a quarter hour more per day compared to less experienced employees. This may be due to increased management responsibilities.
Tenured employees accomplished more.	Output during WFH is roughly 0.5 percentage points greater per hour for employees with longer tenure at the company. This gain may be due to familiarity with company procedures, or more fully developed networks and working relationships with colleagues.

3 FACTORS THAT LED TO LOWER PRODUCTIVITY DURING WFH

1) Increase in Working Hours

Employees worked 2.7 hours more per week during WFH, out of which 1.8 were spent working outside regular office hours. However, this did not lead to an increase in output. As a result, productivity fell.

2) More Time in Meetings, Calls, or Answering E-mails

Employees spent 1.4 fewer hours working in a focused or uninterrupted manner during WFH, compared to working from an office. Meetings, phone calls and e-mails increased, making focused work difficult.

3) Less Time Networking and Meeting 1:1 with Manager

Over a 28-day period, employees interacted with about 7.62 fewer people internally, and about .53 fewer people outside the company. One-on-one meetings with managers decreased by .089.

KEY FACTORS DRIVING PRODUCTIVITY

1) Focus Hours

A one-percentage-point increase in focus hours was associated with a 0.072-percentage-point increase in productivity. Focus hours were harder to come by during WFH, which reduced productivity.

2) Networking and Mentorship

During work from home, networking and mentoring decreased, which negatively impacted productivity.

CONCLUSION

While productivity fell under WFH, this did not result in a decline in average output, because total time worked compensated for it. Since the employees who participated in this study were salaried, the increase in working hours did not have a negative financial impact on the employer. However, previous studies have shown evidence of the adverse effect of long work hours on employee well-being, mental and physical health. Reduced opportunities for coaching and mentorship during WFH could also slow employee development. Study authors conclude that, if continued, WFH could contribute to a loss of social capital, including connections, innovation, working relationships, and “unplanned interactions” that could lead to new opportunities.

Since the research site involved occupations and an industry that was predicted to have the highest likelihood of success with WFH, its findings suggest that these predictions may have been optimistic. This may be due to the fact professionals engage in many tasks that require collaboration, communication, and innovation, which are more difficult to achieve with virtual, scheduled interactions. It would be of great interest to replicate the study for other firms, occupations and industries, and uncover patterns for relative success or failure of WFH in various settings.

Positive effects of WFH noted in the study are the elimination of commuting, which could lead to more leisure time, and improved flexibility in working hours. In addition, it is noteworthy that employees continued to meet their goals despite a severe shock to the work environment and were able to quickly adapt. While the overall results of WFH appeared to be negative, study authors suggest this does not rule out “targeted WFH.” For example, employees whose roles allow for effective WFH might benefit from a flexible schedule, alternating between days in the office and days spent at home. Due to the benefits and popularity of WFH, it is likely to continue—so it’s important that companies understand how it impacts their workforce and productivity.

NEXT STEPS

- **Read the Full Report**

[Click here.](#)

- **Use Workplace Analytics to Assess Your WFH Results**

Curious how well working from home is working for your company? Understanding begins with data. Businesses around the world are leveraging workforce analytics solutions like those used in this study to gain insights into work patterns, employee behavior, and productivity. Sapience Analytics' new cloud-based platform, Sapience Vue, pulls data from existing systems to provide your company with information on application utilization, URLs visited, and more. This information can help leaders structure workloads, plan for projects, guide decision-making and improve work-life balance in a WFH or WFO environment.

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