

The Lessons Learned from Telework and Pandemic Countermeasures:

The Impact and Challenges of COVID-19 in Japan and the Country's post-COVID Prospects

Toshihiro Okubo

Professor, Faculty of Economics, Keio University /
Senior Adjunct Fellow, NIRA

Atsushi Inoue

Research Coordinator & Research Fellow, NIRA

Kozue Sekijima

Research Coordinator & Research Fellow, NIRA

Since COVID-19 first emerged in the public consciousness in early 2020, the scope and pace of digitalization has rapidly expanded around the world. The key to Japan's economic future lies in whether or not the country can ride this wave of digitalization to a new era of prosperity. However, the expansion of digitalization, and in particular, telework, also brings about new challenges in the realm of international economy, bringing a new dimension to globalization that will further expose white collar workers to the ravages of international competition.

Recognizing both the critical nature of meeting this moment for Japan, as well as the difficulties it will entail, the Nippon Institute for Research Advancement (NIRA) and Keio University's Toshihiro Okubo, after having analyzed the trends across six rounds of the "Questionnaire Surveys on the Effects of the Spread of COVID-19 on Telework-based Work Styles, Lifestyle, and Awareness on Telework", and now present the results for this paper. Our research has shown that to succeed in increasing productivity via telework it is insufficient to simply provide an online environment that connects workers and the workplace. Employers must craft clear criteria for evaluating employee performance, ensure that there exists a clear division of labor and responsibilities, and assist employees in securing a remote work environment in which they can be productive. Furthermore, even after controlling for occupation and the specific responsibilities and duties of a given job, large divides remain in telework opportunities between regions and companies of differing sizes. Equalizing the situation so that the benefits of telework can be distributed more widely will require a combination of the following: improving the ICT competency of workers, accelerating the digitalization of regional areas and corporate structures, and the reworking the employment system to better suite telework.

Telework as a Pandemic Countermeasure:

An analysis of the relationship between the use of telework, and the flow of people in the Greater Tokyo Metropolitan Area shows that the First Declaration of a State of Emergency was followed by a large decrease in the number of people staying in the Tokyo city center during the daytime on weekdays, with a consequent increase in the number of people staying in other areas of Tokyo. In other words, the use of telework alleviated, to some extent, the flow of people in business areas that are normally crowded with commuters. Although more research should be conducted to clarify this relationship, telework will undoubtedly continue to be one of the most effective public health measures available to fight the spread of COVID-19.

Japan Must Reform the Way It Works to Unlock the Increased Productivity Telework Enables:

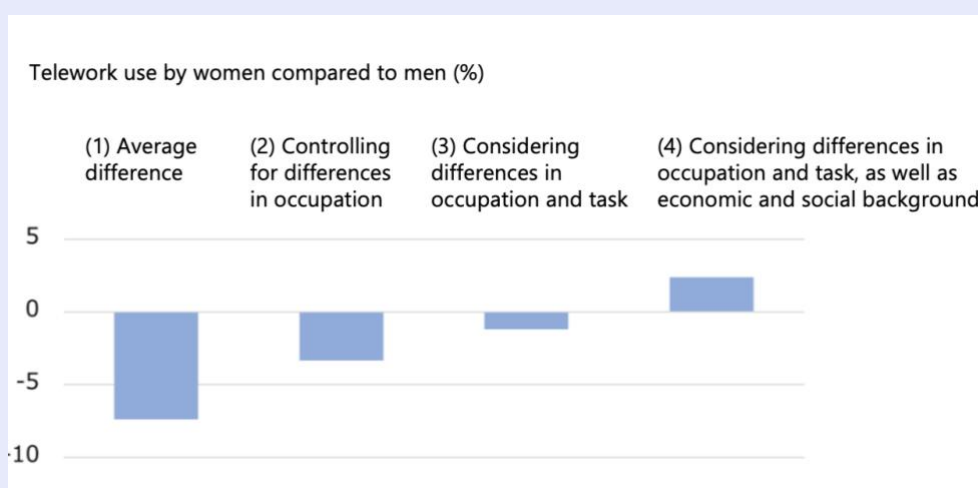
Research into the impact of telework on productivity in Japan during the pandemic has shown that there have been many cases of decreased work efficiency. An analysis of the pluses and minuses of telework as indicated by the data collected for this report shows that decreases in productivity typically stem from inefficiencies that arise in the chain of command due to the lack of physical proximity as well as difficulties experienced by employees in accessing the work environment remotely. In cases where telework increased worker productivity, it was tied to the crafting of clear criteria for evaluating employee performance, the establishment of a clear division of labor and responsibilities and the availability of quiet environment in which the employee could focus on work. Taking the above examples into account, it is clear that it is not reasonable to expect productivity to improve simply by setting up a remote office via ICT. Fully capturing the benefits of telework will require institutions to retool their existing jobs and work styles, while ensuring that employees have access to appropriate workspaces.

ICT Skill Improvement and Digital Environment Development Necessary to Equalize Telework Opportunities:

Amidst the backdrop of the pandemic, large differences in the use of telework by industry, income, place of work and other factors have emerged, raising urgent questions about telework's impact on equality of opportunity. A pertinent example can be seen by looking exclusively at gender, which reveals that the telework rate of women is significantly lower than that of men. However, this is in part a reflection of the fact that

in many industries, the jobs and tasks that men and women perform at work differ significantly; by controlling for factors other than gender, the rate at which women telework increases significantly. This suggests that telework is an important tool for women's labor participation. Also, at the time of the First Declaration of a State of Emergency, non-regular workers were less likely to use telework than regular workers, but later, as of September 2021, there was no longer a significant difference between the two groups. On the other hand, even after controlling for occupation, job duties and responsibilities, and the position's inherent compatibility with telework, significant observable differences in the telework rate persist between individuals of differing ICT skill levels, companies of differing sizes, and metropolitan and rural areas. This strongly suggests that improving equality of opportunity in telework will require increasing workers ICT competency, accelerating the digitalization both corporate structures and more rural areas, and the reworking the employment system to better suite telework.

Figure: Difference in Telework Use by Gender



Five Challenges for the Japanese Economy in the era of Telework:

In order to make effective use of telework, the government must address the issues facing the Japanese economy. The first order of business is to improve the digital skillset of individuals, who collectively, make up the work force. The goal should ideally be for digital skills to be accumulated at the individual level, not the corporate or organizational level. Through support for individuals, the government should aim to raise ICT literacy level of society as a whole. The second major issue to be addressed should be that of retraining and labor adjustment. In order to keep pace with the rapid advancement of

science and technology, it is necessary to provide adequate incentives to encourage the retraining and reskilling of the labor force as necessary. The third issue is the improvement of the employment environment. It is necessary to create a flexible employment environment that enables the integration of workers, both Japanese and non-Japanese, within and outside Japan, into the workforce in the appropriate capacity, either in person or remotely. Fourth, infrastructure must be developed to connect workplaces and residences, and cities and rural areas. It is important to promote digital infrastructure throughout Japan to alleviate the concentration of people in Tokyo and to promote the development of other regions. The government must work to prevent the emergence of digital disparities that would impoverish rural areas and trap people in the low-income bracket. Fifth and finally, Japan's capacity for advanced research should be enhanced to further promote the advancement of digital technology. In the coming years, it will be increasingly necessary to conduct research that transcends the boundaries of industry, government, or academia. Interestingly, Mr. Wakabayashi noted that the Danish and Australian state governments felt very "human," despite the fact that the digital transformation implies a focus on technology. He believes that the core of a successful digital transformation is in changing bureaucratic systems into more flexible and humanized systems, a suggestion that warrants greater attention.

NIRA Project Staff:

Volume Author & Editor: Toshihiro Okubo
Professor, Faculty of Economics, Keio University / Senior Adjunct Fellow, NIRA

Volume Author (1): Atsushi Inoue
Research Coordinator & Research Fellow, NIRA

Volume Author (2): Kozue Sekijima
Research Coordinator & Research Fellow, NIRA

Technical Advisor & Reviewer: Kiwamu Kato
Senior Architect for Future Corporation / Senior Adjunct Fellow, NIRA

Moderator: Toshihiro Okubo
Professor, Faculty of Economics, Keio University / Senior Adjunct Fellow, NIRA

Copy Editor: Sosuke Suzuki
Research Coordinator & Research Fellow, NIRA

Research Support: Kohei Ando
Graduate Student, Graduate School of Economics, Keio University (as of publication)

Project Support & Assistance:

Daisuke Aihara
Executive Vice President, Toray Carbon Magic Co., Ltd.

Mitsuko Zama
Department Head, Japan Institute for Women's Empowerment & Diversity Management,
Business Promotion Department

Kazuo Tamiya
Exclusive Director, Japan Telework Association

Megumi Tsukamoto
Representative Executive Officer at a major multinational manufacturing firm with prior
experience working in the IT industry