



Working From Home potential only half fulfilled in Germany. Is there a productivity paradox?

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We compare the current debate with the discussion about the introduction of the computer in the 1980s. Then as now, positive and negative effects on a macroeconomic level could almost cancel each other out at first. Accordingly, we anticipate that the question of productivity is only likely to be answered in some years' time.

Table: Many factors affect the productivity of WFH

For	Against
Employee	
<ul style="list-style-type: none"> • Flexible working in terms of time and place • Quality of working environment • No need to commute • Compatibility of family life and work commitments • Potential job vacancies available • Matching of employee and employer • Flexibility in terms of how different employees work 	<ul style="list-style-type: none"> • Demarcation of work and leisure time • Working rhythm suffers • More distractions • Coordination of communications • Technology still a barrier in some cases • Limited contact with colleagues • Poss. effect on chances of promotion • Hardly any "networking" in the company • Less informal contact • WFH fatigue after steep learning curve
Company	
<ul style="list-style-type: none"> • Reduction in office space • Digitalisation drive streamlines organisation • Less micromanagement, more focus on results • Productivity gains due to greater technical affinity • More suitable applicants • Improved matching of employee/employer • Global labour market can reduce costs 	<ul style="list-style-type: none"> • Less communication has negative effect in medium/long term • Management of communication-intensive activities/projects • System failure in event of power cut or IT crash • More difficult to comply with regulatory rules • Increased risk of disclosure/loss of confidential data • Non-intended creative processes made more difficult • Technology still a barrier in some cases • Reduced diversity due to self-selection
Society	
<ul style="list-style-type: none"> • Reduced CO₂ emissions due to less commuting • Reduced demand for housing in centres of metropolitan regions • Reduced pressure on infrastructure in urban areas • Strengthening of the outskirts of metropolitan regions levels up living conditions 	<ul style="list-style-type: none"> • CO₂ emissions caused by new construction • CO₂ emissions caused by converting offices to housing • Economies of scale benefit big companies • Global labour market threatens the welfare state • Financial stability: amortisation of loans for office buildings

Source: Deutsche Bank Research



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The world of work has seen a new consensus emerge in the wake of the COVID-19 pandemic. The future belongs to hybrid working models, as long as the requirements of the job permit. This is suggested by surveys conducted at management level as well as responses from employees. The new normal of the post-COVID-19 world could consist of an average two days working from home[1] and three days at the office.

Nevertheless, the use of WFH seems to remain below capacity. A study conducted by the ifo Institute concluded that in March 2021 only slightly more than half (31.7%) of the potential for WFH (56%)[2] in Germany was being used by employees who were able to work from home at least some of the time.[3] There are probably a large number of reasons why this was the case despite the COVID-19 pandemic and social distancing rules. Our table provides an overview, by no means exhaustive, of the numerous WFH-related factors and arguments affecting employees' private lives and work, companies and society as a whole.

The question of productivity is a factor that ought to significantly influence the structure and scope of WFH. Many questions still remain unanswered.[4] Given the wide range of perspectives on this subject, we expect that this will be the case for some time to come. By way of analogy, the famous quote by Nobel prize-winner Robert Solow about the increased use of computers in the 1980s, can be adapted to apply here: "You can see working from home everywhere but in the productivity statistics." Even though the massive increase in WFH during the COVID-19 pandemic is primarily to protect the health of employees, considerations on productivity will play an extremely important role in determining what happens afterwards. Just as the positive effects of the wide-scale introduction of computers only became evident after a substantial period of time, the extent of the overall effect on productivity of remote working may only become apparent at a later date.

There are four basic explanations for this paradox from the 1980s: first, measurement errors; second, computers caused an increase in complexity and progress was therefore more limited than generally assumed; third, positive effects only occurred after some delay – often decades later; and fourth, a discrepancy between the productivity of the individual and that of the overall economy.

Similar arguments may also explain the various observations and perceptions about working from home. For example, employees credit themselves with relatively high levels of productivity while working from home.[5],[6] Surveys of HR managers, however, produce a more mixed picture.[7] Employees may possibly overestimate their productivity because they increase their working hours by at least a proportion of the commuting time they save.[8]

Secondly, WFH could increase the complexity of business processes. There are many activities which lend themselves very well to WFH. However, creative tasks without fixed outcomes often require intensive communication in and across teams. Even smoothly functioning technology may place a strain on the participants' concentration when used intensively – especially when information is being exchanged among large groups. Even if the current results from the COVID-19 crisis are included, some surveys and statistics suggest that research and development in particular is less effective in the WFH scenario.[9],[10]



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Thirdly, there could be long-term effects that both reduce productivity and increase it. In the short term, existing teams now working increasingly from home might maintain their level of efficiency or even raise it. What is unclear, however, is how successful the integration of new members will be. Equally, it might prove challenging to build up informal knowledge and establish informal networks. It is possible that these barriers may be removed over time with growing experience and an increasingly tech-savvy workforce. But they could also be reinforced, with team structures becoming unclear and implicit understanding among colleagues suffering as a result.

Overall, we anticipate individual productivity to be lower on average in the long term among employees who work from home,[11],[12] especially if we include the increase in working hours in the calculation and therefore consider the work produced per unit of time rather than the work produced per se. Based on global company data on e-mail traffic and participation in meetings from at least three million employees during the various lockdown phases, DeFilippis et al come to the conclusion that the working day has been extended by an average of almost 50 minutes.[13] This differentiated view helps to explain, among other matters, the rise in productivity in the highly regarded study by Bloom et al on the introduction of WFH at a major Chinese travel agency.[14] And at the same time, overall commercial productivity could very well see an increase.[15] Company costs for office space should fall over time. Companies could also expand the use of WFH in order to expedite a far-reaching digitalisation process throughout the organisation. In this way, WFH would greatly reduce fixed costs in the long term. Barrero et al assume that in the US, the retention of WFH solutions after the COVID-19 pandemic would ultimately have an overall positive effect on productivity of 2.4%.[16]

Finally, both the digitalisation of companies and the global WFH boom will push open the door to the global labour market a little further. The number of well-qualified applicants with moderate salary demands could rise substantially and increase the productivity of companies. From a global perspective, many (but by no means all) employees could benefit from this. Politically imposed framework conditions motivated by social policy might have a huge bearing on the question of productivity.

There are, however, additional challenges in store for companies against the backdrop of the increasing skills shortage. Career-minded employees might see WFH as a barrier to progress. For family-oriented workers on the other hand, it could be an opportunity to combine personal and professional ambitions. There are, then, many individual answers to the question of productivity. Due to these many different elements and the high level of complexity involved in the issue, it might well take some years before a consensus on the question of productivity emerges. Until then, the adapted quotation from Robert Solow offers an apt description of the situation.

- 1.) As used here, the term 'working from home' (WFH) also includes remote working and teleworking.
- 2.) The German Employees' Health Insurance company DAK Gesundheit assumes a WFH potential of 45% of all employees and calculates a rate of uptake for February 2021 of 38%. The difference between this and the ifo Institute result can be attributed to differences in the method of calculation used.
- 3.) Alipour, Jean-Victor, Oliver Falck, Andreas Peichl, and Stefan Sauer (2021). Homeoffice-Potenzial weiterhin nicht ausgeschöpft.ifo Schnelldienst digital 6/2021.



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15.) The signs of individual and overall economic productivity would thus be the exact opposite of the introduction of the computer in the 1980s.
16.) Barrero, Jose Maria, Nicholas Bloom, and Steven Davis (2020). Why working from home will stick. University of Chicago, Becker Friedman Institute for Economics Working Paper No. 2020-174.

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