

The gendered impact of school closures and working from home on economic research

23 January 2026

This paper examines how school and workplace closures affected the research productivity of female and male economists. Prior evidence shows that both planned and unplanned school closures reduce mothers' labour supply substantially more than fathers', consistent with an uneven distribution of care-giving responsibilities. We combine a global dataset of more than 700,000 working papers listed on IDEAS/RePEc with country- and day-specific information on school holidays, COVID-19-related school closures, and workplace activity. We document a large and statistically significant decline in publications by female economists in 2020, concentrated in places and periods with reduced workplace activity. Beyond pandemic-specific disruptions, we also find recurrent declines in the female authorship share during and immediately after regular school holidays, producing sizeable seasonal declines in women's publications between December and January and from June through August.

Planned and unplanned school closures, arising, for example, from holidays [Price and Wasserman, 2023] or teacher strikes [Jaume and Willén, 2021], have been shown to worsen mothers' labour market outcomes far more than fathers', likely due to persistent gender differences in care-giving duties [Heckman, 1974; Gelbach, 2002; Nollenberger and Rodríguez-Planas, 2015]. In academic settings, several studies further document that the sudden school closures associated with COVID-19 reduced women's research output, at least in the initial phase of the pandemic [Amano-Patiño et al., 2020; Squazzoni et al., 2021; Deryugina et al., 2021; Ucar et al., 2022; Peetz et al., 2023; Li et al., 2025]. The broader evidence, however, is mixed and varies by context, discipline, and time horizon. For instance, ? report little evidence of systematic gender differences in publication outcomes across most fields.

An additional channel is the increase in working from home during the pandemic. Women report a stronger preference for working from home in general, even when this is not fully reflected in realised hours worked [Barrero et al., 2023; Buckman et al., 2025], with potentially important cultural heterogeneity [Jalota and Ho, 2024]. However, evidence on whether working from home differentially affects productivity and job satisfaction, distinct from labour force participation, is mixed, in part because care-giving responsibilities are unequally shared [Stefanova et al.,

2023]. Consistent with this interpretation, Feng and Savani [2020] find that women reported lower satisfaction with working from home than men during COVID-19, and Goldin [2022] emphasises that “women during the pandemic [...] were stressed because they were in the labor force, not because they left.”

In our study, we construct yearly and monthly measures of research output from more than 700,000 unique IDEAS/RePEc working papers authored by approximately 45,000 individuals. For each paper, we algorithmically assign a binary gender to at least one author by matching first names to Census-based name–gender records. For a subset of roughly 500,000 papers, IDEAS/RePEc reports the month of first publication, which allows us to analyse within-year dynamics in output

As ? argue, working papers and preprints capture research productivity more directly than journal publications, because they are less affected by heterogeneous and often substantial lags between submission and publication. In our context, focusing on working papers also mitigates concerns that gender differences in editorial and refereeing processes could confound publication-based measures of productivity.

To measure school and workplace disruptions, we merge these publication data with daily country-specific UNESCO information on school closures due to holidays and COVID-19, and with Google Mobility indicators of workplace activity for 2020–2022.

Using the combined dataset, we first show that women published substantially fewer working papers where and when schools were closed due to COVID-19 and workplace activity declined. These factors account for a large share of the observed gender gap in research productivity in 2020.

Second, independently of pandemic-era closures, we document significant seasonality in the gender composition of working-paper output: women’s share of working papers is significantly lower during and immediately after regular school holidays. These recurrent patterns produce pronounced declines from December to January and from June through July and August, indicating that planned school closures are associated with systematic within-year fluctuations in women’s research output.

References

- Amano-Patiño, N., Faraglia, E., Giannitsarou, C., and Hasna, Z. (2020). Who is doing new research in the time of covid-19? not the female economists. *Publishing and measuring success in economics*, 13:137–142.
- Barrero, J. M., Bloom, N., and Davis, S. J. (2023). The evolution of work from home. *Journal of Economic Perspectives*, 37(4):23–50.
- Buckman, S. R., Barrero, J. M., Bloom, N., and Davis, S. J. (2025). Measuring work from home. Working Paper 33508, National Bureau of Economic Research.
- Deryugina, T., Shurchkov, O., and Stearns, J. (2021). Covid-19 disruptions disproportionately affect female academics. *AEA Papers and Proceedings*, 111:164–68.
- Feng, Z. and Savani, K. (2020). Covid-19 created a gender gap in perceived work productivity and job satisfaction: implications for dual-career parents working from home. *Gender in Management: An International Journal*, 35(7/8):719–736.
- Gelbach, J. B. (2002). Public schooling for young children and maternal labor supply. *American Economic Review*, 92(1):307–322.
- Goldin, C. (2022). Understanding the economic impact of covid-19 on women. *Brookings Papers on Economic Activity*, 2022(1):65–139.
- Heckman, J. J. (1974). Effects of child-care programs on women’s work effort. *Journal of Political Economy*, 82(2, Part 2):S136–S163.
- Jalota, S. and Ho, L. (2024). What works for her? how work-from-home jobs affect female labor force participation in urban india. *How Work-from-Home Jobs Affect Female Labor Force Participation in Urban India (January 4, 2024)*.
- Jaume, D. and Willén, A. (2021). The effect of teacher strikes on parents. *Journal of Development Economics*, 152:102679.
- Li, T., Yang, X., and Cai, J. (2025). A systematic literature review on the impact of the covid-19 pandemic on faculty members’ research performance. *Humanities and Social Sciences Communications*, 12(1):1–12.

- Nollenberger, N. and Rodríguez-Planas, N. (2015). Full-time universal childcare in a context of low maternal employment: Quasi-experimental evidence from Spain. *Labour Economics*, 36:124–136.
- Peetz, D., Preston, A., Walsworth, S., and Weststar, J. (2023). Covid-19 and the gender gap in research productivity: understanding the effect of having primary responsibility for the care of children. *Studies in Higher Education*, 48(9):1428–1439.
- Price, B. M. and Wasserman, M. (2023). The summer drop in female employment. NBER Working Papers 31566, National Bureau of Economic Research, Inc.
- Squazzoni, F., Bravo, G., Grimaldo, F., García-Costa, D., Farjam, M., and Mehmani, B. (2021). Gender gap in journal submissions and peer review during the first wave of the covid-19 pandemic. a study on 2329 Elsevier journals. *PLOS ONE*, 16(10):1–17.
- Stefanova, V., Farrell, L., and Latu, I. (2023). Gender and the pandemic: Associations between caregiving, working from home, personal and career outcomes for women and men. *Current Psychology*, 42(20):17395–17411.
- Ucar, I., Torre, M., and Elías, A. (2022). Mind the gender gap: Covid-19 lockdown effects on gender differences in preprint submissions. *PLOS ONE*, 17(3):1–13.