SKILL-BIASED TECHNICAL CHANGE AND FERTILITY IN GERMANY

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BACKGROUND

Skill-biased technical change (Autor et al., 2006) has been transforming the labor markets since the 1980s, inducing increasing demand for cognitive skills and decreasing demand for low-skilled workers who perform routine/manual tasks. Thus, it has created opportunities for one group of workers and worsened the LM situation of the second group. At the same time, having a stable job is an important precondition to childbearing (e.g. Alderotti et al., 2021).

Objective. Provide evidence how the rising demand for cognitive skills influences entry to parenthood in Germany.

DATA & METHODS

Analytical Sample. GSOEP (1984-2018), single/coupled women and their male partners. 18.100 women, 100.272 person-years and 2.934 first births. We start observing women at 20 years old and stop once they have entered parenthood, reached 44 or dropped out of the panel.

Task Measures Source. BiBB Qualifications and Career Survey conducted every 6-7 years since 1979 (last wave 2018). We utilize the task-based framework proposed by Autor et al. (2003) and focus on nonroutine cognitive tasks (2 categories: analytic and interactive).

Task Measures Calculation. We use the measure developed for the BiBB data in Spitz-Öner (2006), which ranges from 0 to 100 and quantifies the degree to which an individual's work is intensive in analytic or interactive skills. E.g. if a worker performs 4 tasks classified as "analytic" out of 5 considered analytic task items, her analytic task measure is (4/5)*100=80. We average over individuals in order to obtain a measure at an occupation level (*Fig. 1*), which can then be merged with the complete SOEP data by occupational codes (*Fig. 2*).

Modelling. First birth risk is modelled with complementary log-log with two-way SE clustering (by woman's id & occupation) and bootstrapped CIs.
Controls include baseline (age), period, woman's residence (Western vs. Eastern Germany), woman's number of siblings, and woman's education.

Fig. 1

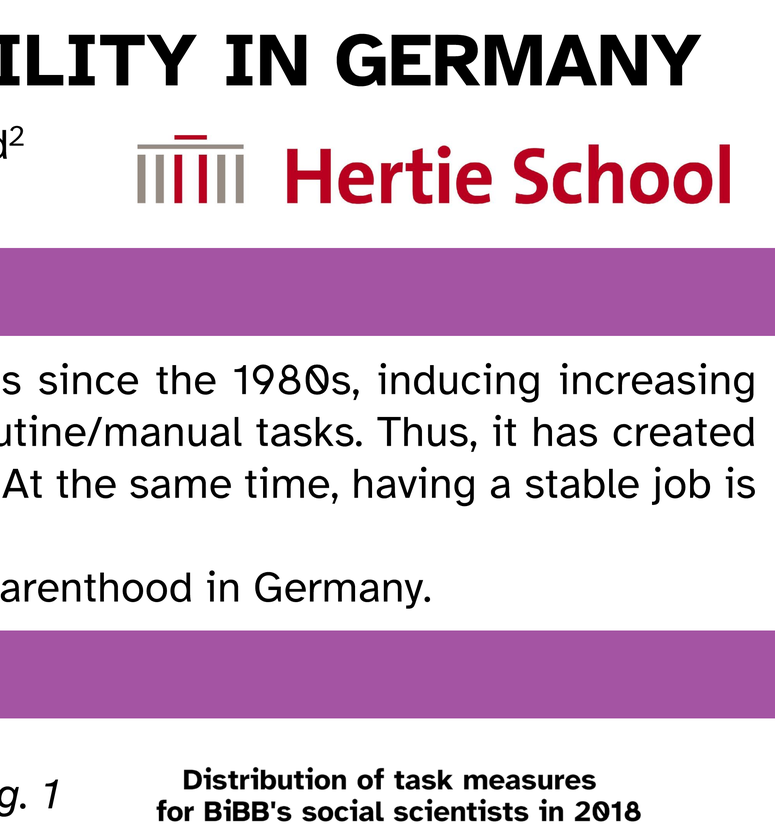
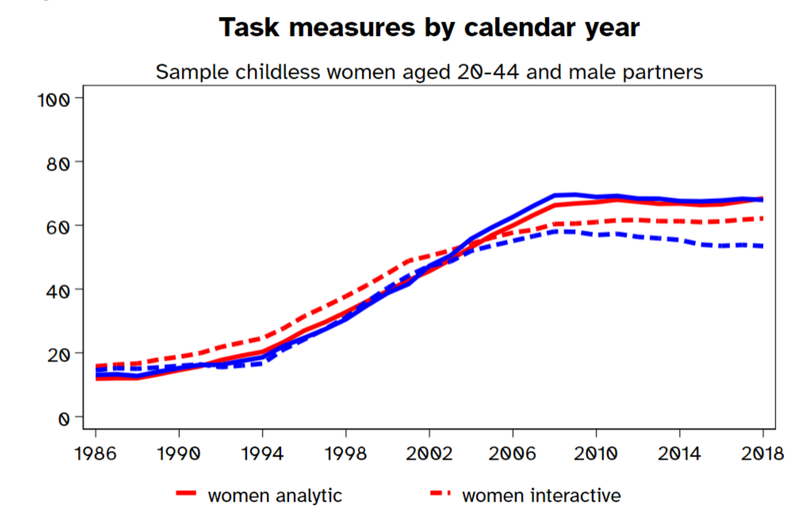


Fig. 2



RESULTS

Odds Ratios, low task measure <0,33) is the reference level (line in 1)

Fig. 3

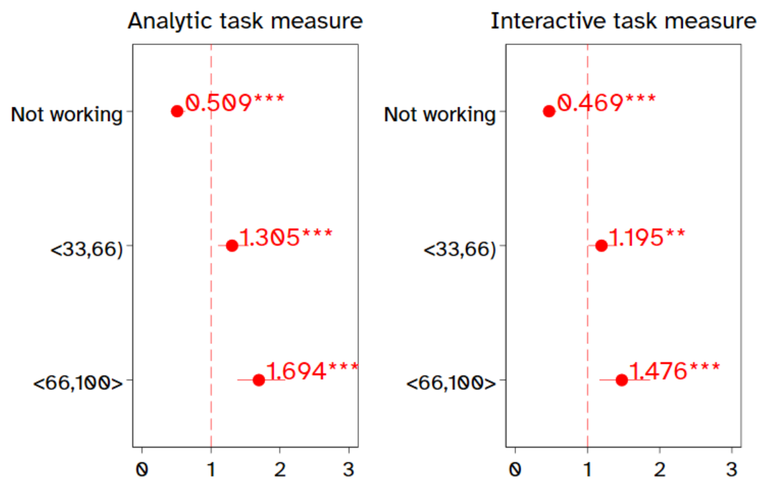


Fig. 4

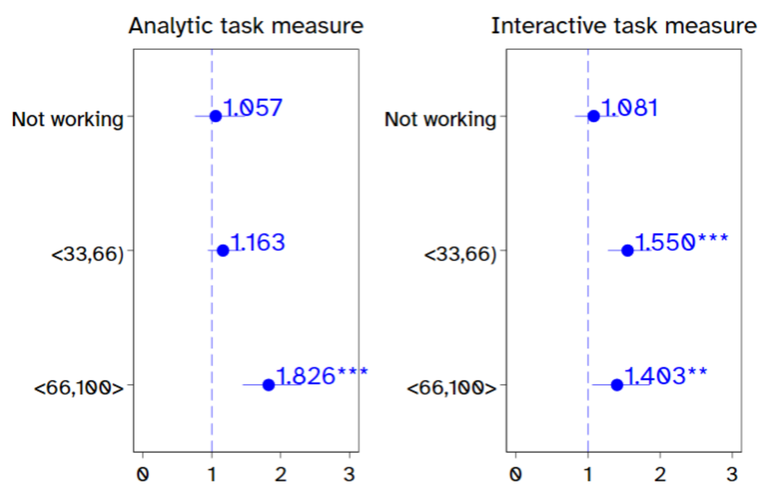


Fig. 8

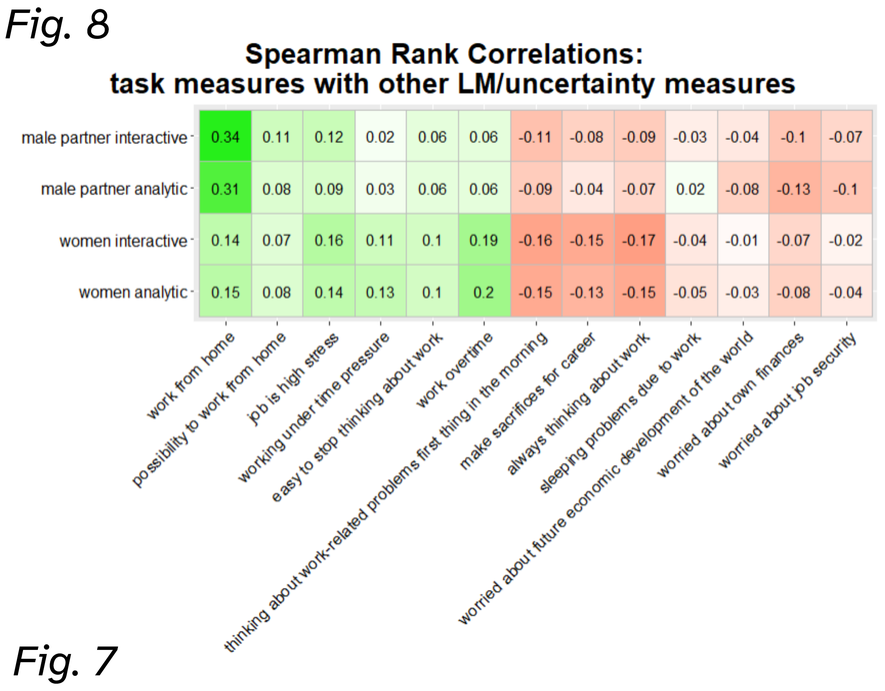


Fig. 5

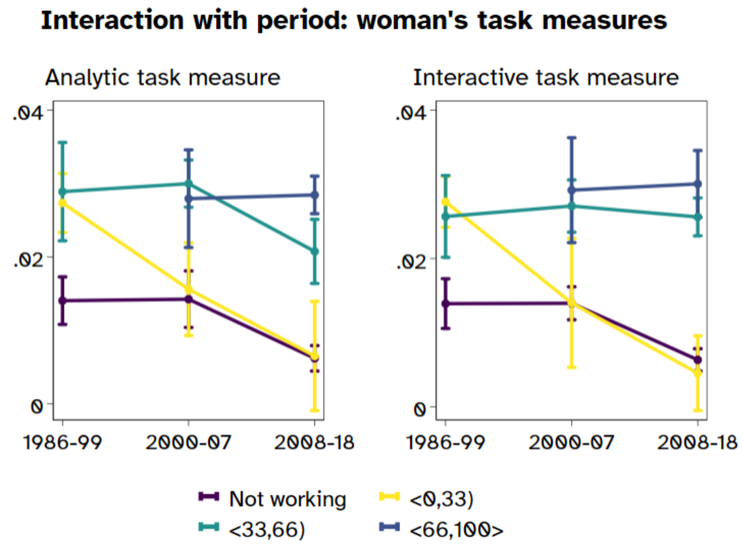


Fig. 6

Average Predicted Probabilities

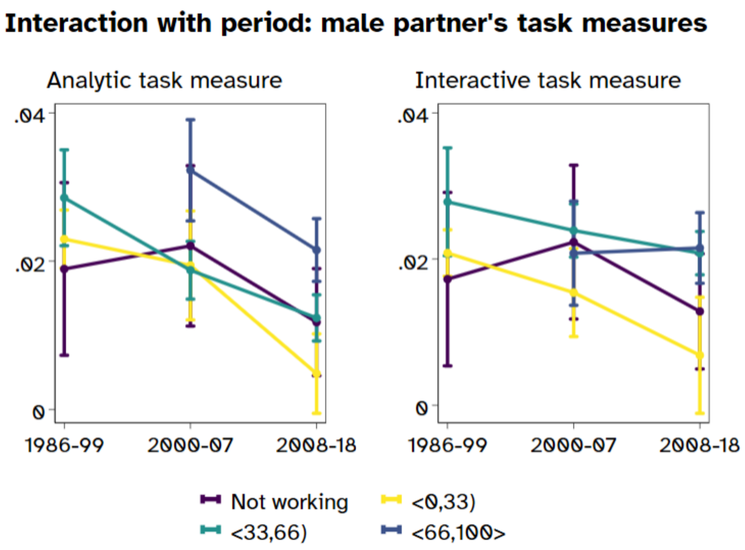
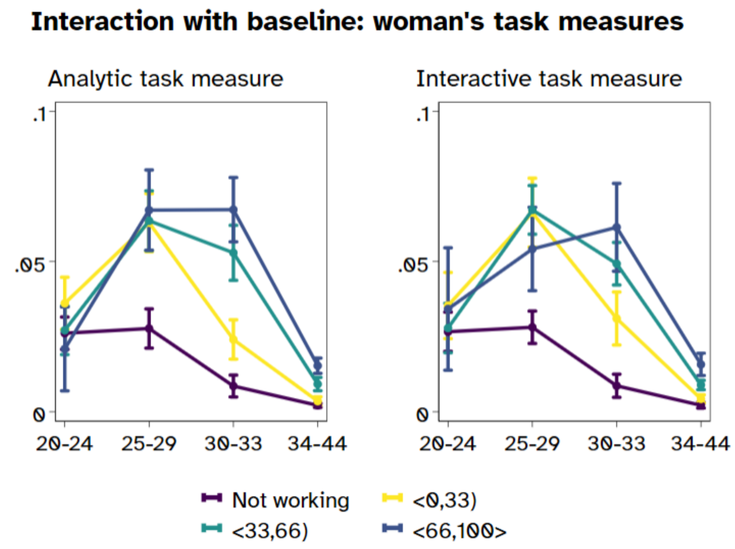


Fig. 7



FINDINGS

1. Skill-biased technical change affects entry to parenthood through both partners' LM situation in DE (*Fig. 3 & 4*).
2. First birth risk has been declining for all workers, except for woman with high cognitive measures. (*Fig. 5 & 6*).
3. Women with high analytic/interactive task measures postpone parenthood until their early 30 (*Fig. 7*).

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