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Future Uncertainty and Fertility: Experimental Evidence from Germany and Italy

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The "uncertainty-fertility nexus" has attracted increasing academic interest. Most studies assume that couples would refrain from having children if they were faced with future employment uncertainties. In contrast to previous studies, we consider not only *employment uncertainties*, but also *old-age caregiving uncertainties*. Old-age caregiving uncertainties are defined as uncertainties regarding the responsibility of caring for parents. We use an experimental design to investigate whether uncertainties are perceived as a universal prerequisite for having children, or whether patterns vary by gender, social background, and country context. The data come from a factorial survey experiment conducted in 2022 in Italy and Germany among childless respondents aged 20-39 (n=2,438). The analysis shows that future *old-age caregiving uncertainties* are perceived as equally important as future *employment uncertainties* for having children. Although caregiving uncertainties is slightly more important in the Italian sample than in the German sample, the overall patterns are very similar across gender, social background, and the two countries.

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Introduction and Research Question

The "uncertainty-fertility nexus" has attracted increasing academic interest (Brauner-Otto et al. 2018; Vignoli et al. 2020; Lappegard, et al. 2022; Zimmerman et al. 2022). These studies assume that couples would refrain from having children if they were faced with uncertainty about future employment conditions. In contrast to previous studies, we consider not only future employment uncertainty, but also examine how future *caregiving uncertainties* are related to fertility. Caregiving uncertainties are defined here as uncertainties regarding caregiving responsibilities towards one's own parents. We use data from a factorial survey experiment conducted in Italy and Germany in 2022. Based on the experimental design we investigate whether both employment and caregiving uncertainties are perceived as barriers to fertility, and whether patterns vary by gender, social background, and country.

Context and Main Hypothesis

Both Italy and Germany have introduced important family policy reforms in recent years, but significant differences remain. In terms of family policy, Germany has significantly expanded public day care since 2005, introduced an earnings-related parental leave scheme in 2007 and a legal right to public day care in 2013. A major reform of child-related means-tested benefits ('Kindergrundsicherung') is due to come into force in 2024. Italy has also expanded public day care since 2007. In addition, the General Family Allowance (GFA), a means- and wealth-tested transfer for families with children under 18, was introduced in 2022 (Dalla Zuanna and Mc Donald 2023). In terms of old-age care, both countries have a long-term care (LTC) system (Pavolini 2016; Ranci and Arlotti 2019). Despite similarities in the reform trajectories, Italian family policies are still characterised by "austerity, stagnation and fragmentation" (Ranci and Sabatinelli 2014; Saraceno, 2015). Given the contextual differences, we expect that caregiving and employment uncertainty will be perceived as more important preconditions for having children in Italy than in Germany. We also expect the patterns to be more gendered in the Italian than in the German case.

Data and Method

The vignette experiment (see e.g., Auspurg & Hinz 2014) was conducted in 2022 in Italy and Germany among childless respondents aged 20-39. Respondents were presented with fictional scenarios depicting a co-residential couple (Lena & Tom) facing different types of future uncertainties (see *Figure 1*). The vignettes varied in terms of whether only Lena, only Tom, both, or neither was subject to future employment uncertainties. Further, the vignettes

contained different levels of Lena's caregiving responsibilities for her own mother. Thus, not only was future employment considered, but also the role of future caregiving uncertainty. Respondents were presented with the different scenarios and then asked to rate the likelihood of Lena and Tom having children in the next three years on a scale ranging from unlikely (0) to very likely (10). In total, 5 vignettes were presented to 2,021 respondents in Italy and to 417 in Germany, resulting in a panel data of 10,105 observations for Italy and 2,085 for Germany. Our estimates of interest are the beta coefficients for "employment uncertainty" and "caregiving uncertainty" in reduced-form models. These are comparable to the Average Marginal Component Effect (AMCE), typically used in previous research using conjoint experiments. (Hainmueller et al. 2014, 2015; Basnak et al. 2022; Zhirkov 2022). All analyses were conducted separately by country. We also included interactions between by level of education and other socioeconomic measures. STATA software and the package "conjoint" were used to estimate the models (Frith 2021).

Figure 1: Vignettes

Tom and Lena have been living together for three years. They agreed to have children. Both are currently working full-time and seek to continue doing so in the future. Tom does not have any siblings and his parents live far away. Lena has an older sister and her mother lives close by. Her father had died a couple of years ago.

Dimension A: Future caregiving situation	**Dimension B:** Future employment situation
High: Her mother has developed a severe illness, which means that Lena will soon need to take care of her alone. **Mid:** Her mother has developed a severe illness, which means that Lena and her older sister will soon need to take care of her together. **Low:** Her mother has developed a severe illness, which means that she will soon move to a long-term care facility. **None:** Her mother is still very active and does not need any care.	**Both:** Tom and Lena are worried that they may lose their jobs. **Male:** Tom is worried that he may lose his job. **Female:** Lena is worried that she may lose her job. **None:** Tom and Lena are not worried that they may lose their jobs.

How likely is it that the couple will have children within the next three years?
0 [unlikeld]- 10 [likely)?

Preliminary Results & Conclusions

Uncertainty about the future employment of both partners is seen as a serious obstacle for family formation in both Italy and Germany. We also find that future caregiving uncertainties are as important as future employment uncertainties. The combination of being subject to both forms of uncertainty is perceived as strong barriers for having children (*Figure 2*). The model results furthermore show that the effect size is similar for both Italy and Germany and is equally strong for male and female employment uncertainty (*Figure 3*). Further analyses (not shown) do not reveal any difference by socioeconomic status either.

Germany and Italy share a history of "lowest-low fertility". This study shows that not only male but also future female employment can be an obstacle to having children. Regardless of

population subgroup, stable female and male employment is seen as a prerequisite for having children. Similarly, the absence of future female care responsibilities has a positive effect, suggesting that the increasing care burden experienced by "sandwiched" cohorts discourages childbearing.

Figure 2: Average fertility intentions (0=unlikely; 10=very likely) by care and employment uncertainty

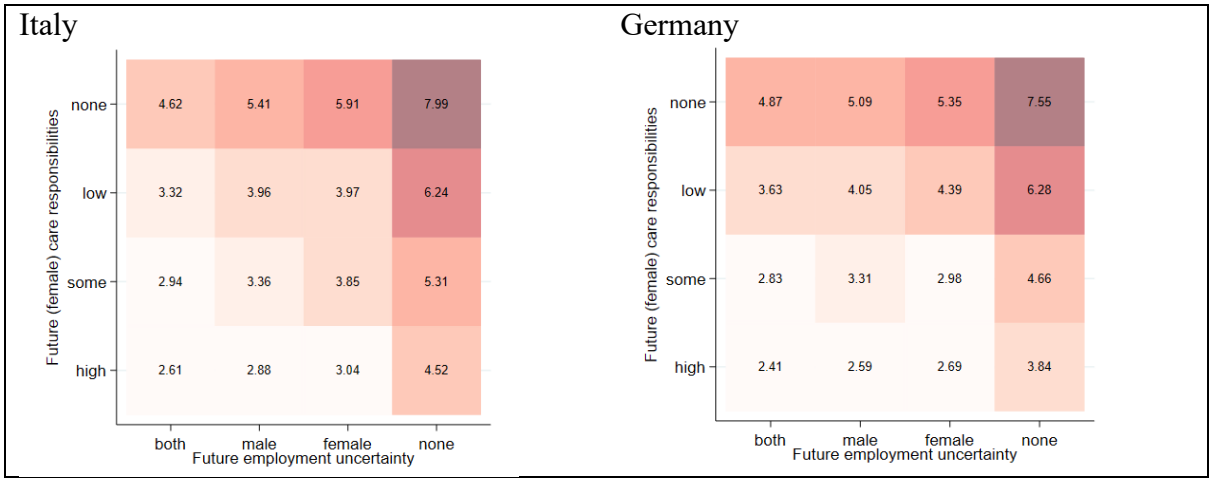
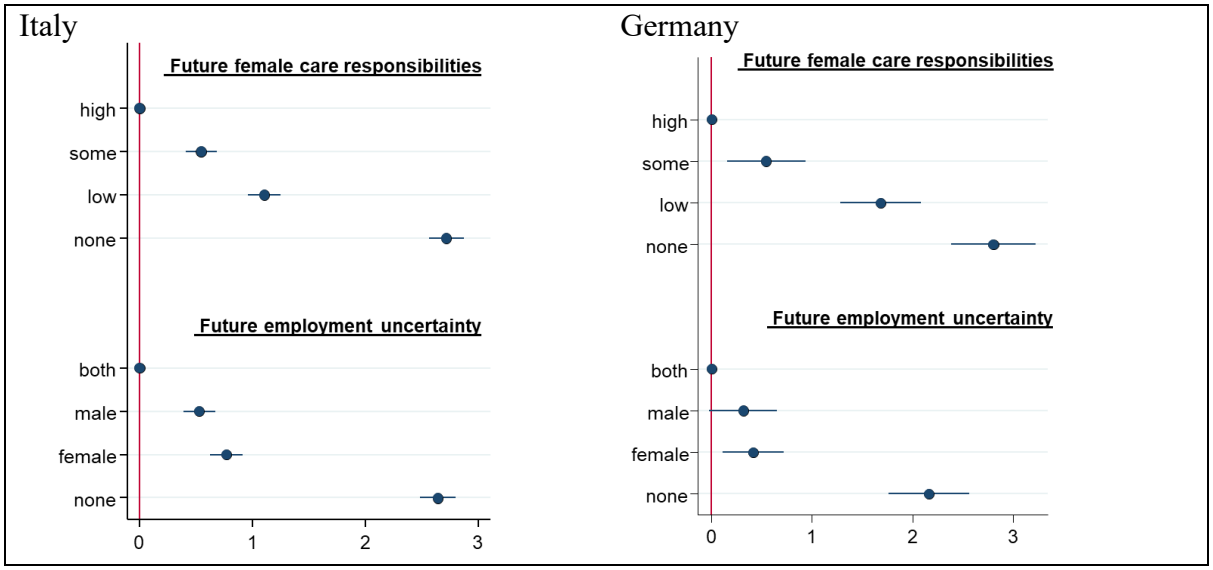


Figure 3: Effect of future caregiving and employment uncertainty on fertility. Dependent variable is likelihood to have a child (0=unlikely; 10=very likely)



Note: Coefficients are comparable to the Average Marginal Component Effects (AMCE)—the effect of a change in attribute relative to the base category on fertility. The full model controls for Lena's age and the respondents' age, gender, marital status. The command "conjoint" in Stata developed by Frith (2021) is used. Standard errors are clustered at the individual level

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