Maternal Health, Well-Being, and Employment: A Longitudinal Comparison of Partnered and Single Mothers in Germany

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Abstract

Challenges with balancing the different roles of motherhood and employment are assumed to affect maternal distress which further might cause health problems. For single mothers, time allocation in general and combining family and employment in particular is more challenging, because single mothers cannot rely on intra-household division of labor. In this paper, we investigate differences between partnered mothers' and single mothers' well-being and health associated with employment. Using longitudinal information from the German Socio-Economic Panel (1984-2016), we apply panel regression techniques that address the potential endogeneity of maternal employment, as well as the dynamic nature of the relationship between maternal employment, well-being and health. The results show that single mothers benefit more than partnered mothers from employment. Considering that single mothers have a poorer health than partnered mothers, the beneficial effect of employment on single mothers' well-being and health is of great importance for health researchers and policy makers.

Introduction

Labor force participation of women has been increasing continuously in many industrialized countries in the past decades. This trend went along with changing gender relations and family organization (World Bank 2019), as well as new challenges, in particular combining work and child rearing. Impeded compatibility of work and family life appears to be gender specific as mostly women compromise their professional careers and take over parenting when a child is born (Hein 2005). Challenges with balancing the different roles of motherhood and employment are assumed to affect maternal distress which further might cause poor health (Esping-Andersen and Billari 2015; Tiedje et al. 1990).

In the case of single mothers, time allocation in general and combining family and employment in particular is more challenging, because single mothers cannot rely on intra-household division of labor (Minnotte 2012). In a number of studies, it was shown that single motherhood is associated with health problems: Single mothers have higher prevalence of depressive symptoms (Cooper et al. 2008; Crosier et al. 2007; Lipman et al. 1997; Wang 2004), psychological distress (Franz et al. 2003), anxiety disorders (Afifi et al. 2006), lower levels of well-being (Bull and Mittelmark 2009), as well as a higher risk of mortality compared to partnered mothers (Weitoft et al. 2002).

Findings of studies analyzing the association between employment and family status were less consistent. In a comparison of British and Finnish mothers, Lahelma et al. (2002) found that in Britain part-time working single mothers tend to have a better health than their full-time working counterparts, while their results suggest the reverse for Finnish single mothers. In line with these results, another study could show a particularly poor health for non-working women in Sweden and non-working and non-partnered mothers in Finland (Roos et al. 2005). Unlike studies showing a positive association of employment and single mothers' health, Cook and Noblet (2012) report a significantly lower job satisfaction and higher parental distress for single mothers involved in Australia's welfare-to-work program than the general Australian population. The authors indicate that job satisfaction is an important antecedent of a range of health variables and link low job satisfaction to poor health outcomes. Also, Struffolino et al. (2016) could not find a positive association of employment on Swiss single mothers' self-rated health. One reason for these varying findings might lie in different welfare regimes of the analyzed countries. Further, given that most of these studies relied on cross-sectional data, their results may be influenced by unobserved characteristics that affected both the employment status and the health and well-being of mothers.

In this paper, we investigate differences between partnered mothers' and single mothers' health and well-being associated with employment. Using longitudinal information from the German Socio-Economic Panel (SOEP), we apply empirical methods that address the potential endogeneity of maternal employment, as well as the dynamic nature of the relationship between maternal employment and well-being and health.

Germany is a particularly interesting country to study working mothers as the female labor force participation is low compared with other Western countries but continuously increasing (Kreyenfeld and Geisler 2006; Spiess and Wrohlich 2008). Further, Germany shows a higher prevalence of traditional gender role models in family organization referring to the classical male-breadwinner model, with a high percentage of women who do not work or only work part-time once they become mothers (Borck 2014; Maurer 2006). At the same time, single mothers in Germany work more often full-time than partnered mothers but also have a higher risk to rely on social benefits than their partnered counterparts (Hancioglu 2015; Lietzmann 2009). Remarkable differences in employment, well-being and health among mothers, but also changes over their life-courses makes it eminent to consider heterogeneity between and among partnered and single mothers and to provide a more complete picture about potential causal and selective processes.

Data

The SOEP

The database for the empirical analysis is the German Socio-Economic Panel (SOEP). The SOEP is a nationally representative longitudinal study of households including Germans living in West Germany and East Germany (former German Democratic Republic), foreigners, and recent immigrants to Germany (Wagner et al. 2007). The SOEP was initiated in West Germany in 1984. Since then, it has been conducted annually, and includes detailed social and economic information on all individuals aged 16 and older in the respondent households. The East German sample was added in 1990.

To identify mothers, we use the SOEP biobirth data, which combines prospective information on births with data from biographical interviews (Goebel 2015). Based on information about the household composition, we were able to distinguish between partnered mothers and single mothers. We define partnered mothers as women who live with their underage child or children and their partner in a household, while single mothers live with their underage child or children in a household but without a partner. Our sample consists of two sets of episodes: partnered mother episodes and single mothers episodes. For instance, if a women is first observed as single in the data from 1991 to 1995, then as partnered without children in the years 1996 to 1998, and then partnered with children from 1999 to 2016, then only the panel waves in which this woman was partnered with children are used (waves 1999 to 2016). As additional requirements, we only use those episodes in which at least one change of the employment status is observed. Further, we use up to three observations before and three observations after the change. This effectively restricts our analysis to episodes with variance on the employment variable, and to the time immediately before and after a transition, focusing on the immediate effect of employment on the outcomes. Alternative samples – both defined wider and more narrowly – yield very similar results.

Key Measures

We have three key outcomes: a) the self-rated health, b) health satisfaction and c) subjective well-being of mothers. We use the self-rated health and the self-assessed level of health satisfaction as the main measures of health. The respondents were asked: a) “How would you evaluate your present health? Is it 1) very good, 2) good, 3) fair, 4) poor, or 5) bad? Self-rated health is an indicator that is commonly used as a proxy for assessing a respondent’s health status, and is considered to be a reliable measure of general health (Martikainen et al. 1999) and a good predictor of future morbidity and mortality (DeSalvo et al. 2006; Idler and Benyamini 1997). For b) health satisfaction, respondents were asked: “How satisfied are you at present with your health situation?” The answers were recorded on a scale of 0 (“very unsatisfied”) to 10 (“very satisfied”). Previous research has shown that health satisfaction is strongly associated with general health and physical health measures (Butterworth and Crosier 2004). We use both measures in order to assess the robustness of the health measure. For c) the subjective well-being respondents were asked to rate on the same scale as the health satisfaction variable: “How satisfied are you with your life, all things considered?” All three outcomes were measured annually from the beginning of the study in 1984 (health satisfaction and subjective well-being) resp. from 1992 onwards (self-rated health).

Exposure

The exposure is the employment status. Individuals are either employed or not employed. "Not employed" are individuals who are unemployed and looking for a job, or inactive individuals. Employed include individuals who are working full-time, part-time or who are in marginal employment, or in occupational training.

Other Variables

We control for a set of variables to capture life circumstances of mothers: Mother's age, age of the youngest child, net equivalent income, education (International Standard Classification of Education) being from East or West Germany, being a migrant, number of kids.

Empirical Approach

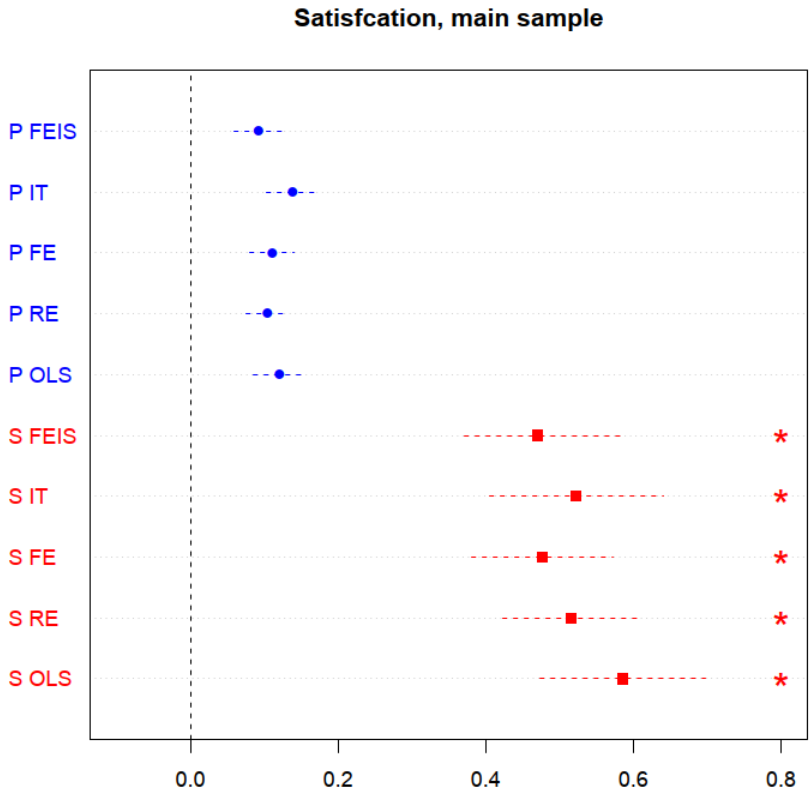
We use several panel regression approaches, which rely on different assumptions and roughly fall on a continuum from "strong underlying assumptions but low data demands" to "weak underlying assumptions but high data demands." The methods we use are pooled OLS, random effects, fixed effects, fixed effects regression with individual trends over time (Ludwig and Brüderl 2018) and fixed effects with treatment effect heterogeneity (Wooldridge 2010). Applying several different methods serves as a robustness check and avoids to rely on assumptions which are often hard to assess.

Pooled OLS is based on the rather strong assumption that there is no unobserved heterogeneity; but if this assumption is true it is the most statistically efficient method in the sense that it should yield comparatively small standard errors. Random effects (RE) regression and fixed effects (Kreyenfeld and Geisler) regression allow for time-constant unobserved heterogeneity, with RE relying on stronger assumptions than FE. Fixed effects with individual trends (IT) over time introduces the idea that individuals can be on different trajectories or trends – for one individual the outcome is improving over time, for another it is decreasing. This allows to account for selection into employment of individuals who are on a good health trajectory, and for selection out of employment for individuals who are on a bad trajectory. Finally, fixed effects with treatment effect heterogeneity (FEIS) allows for heterogeneous effects of employment on health and well-being – for some individuals employment might be good, while for others it might have a negative impact. To estimate the more complex methods requires more data, as FE, IT, and FEIS estimation essentially involves discarding some of the information contained in the data.

Results

Figures 1-3 show the effect of a change in employment on maternal well-being (Figure 1), health satisfaction (Figure 2) or self-rated health (Figure 3). All figures include the results of pooled OLS, random effects, fixed effects, fixed effects regression with individual trends over time and fixed effects with treatment effect heterogeneity estimated for partnered mothers (in blue) and single mothers (in red). Figure 1 demonstrates that a change in employment status has a positive effect on partnered mothers' (not significant) and single mothers' (highly significant) well-being. With only very small variation, this result is consistent for all applied panel regression techniques.

Figure 1: The effect of employment change on partnered mothers' (P, blue) and single mothers' (S, red) life satisfaction



Less consistent are the findings for health satisfaction (Figure 2). A change in employment status has no effect on partnered mothers' health satisfaction. The effect for single mothers' health satisfaction is positive but only significant for the OLS and RE estimations.

Figure 2: The effect of employment change on partnered mothers' (P, blue) and single mothers' (S, red) health satisfaction

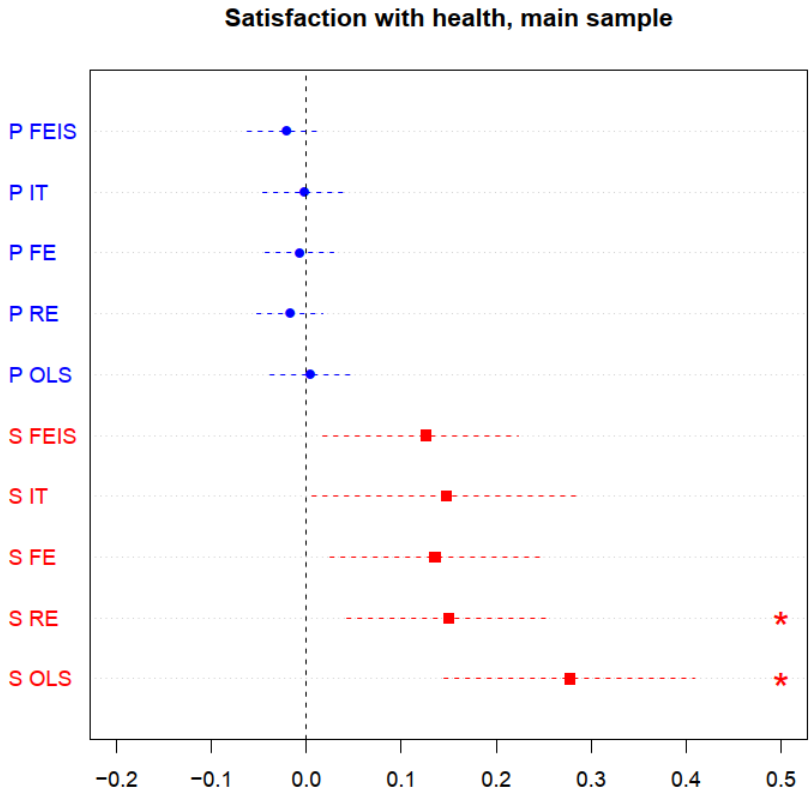
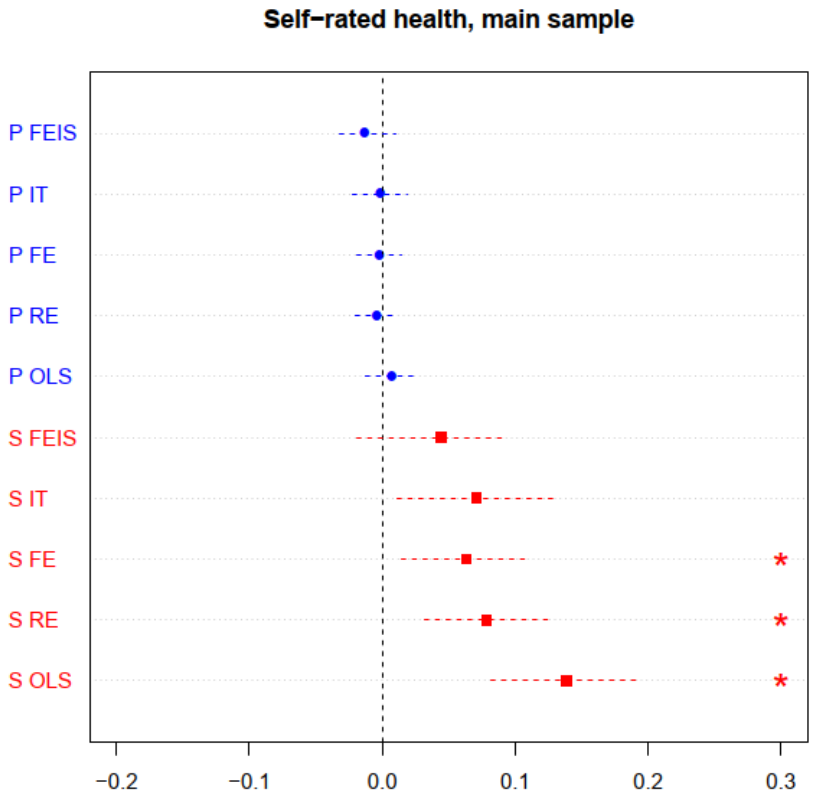


Figure 3 shows the same pattern already described for health satisfaction (Figure 2) also for self-rated health. While there is no effect on partnered mothers' self-rated health, a change in employment status affects single mothers' health positively (significant for OLS, RE and FE estimations).

Figure 3: The effect of employment change on partnered mothers' (P, blue) and single mothers' (S, red) self-rated health



Discussion

In this article, we investigate the relationship between well-being, health and employment of mothers in Germany. Unlike previous studies, our paper considers endogeneity of maternal employment, well-being and health. Our results indicate that single mothers benefit more than partnered mothers from a change in employment status irrespective of the examined outcome and the applied panel regression technique. Our models show a positive effect of employment on well-being for both, partnered and single mothers. Findings for health satisfaction and self-rated health demonstrate that a change in employment status affects single mothers' health positively, while there is no effect on partnered

mothers' health. Considering that also German single mothers have a poorer health than partnered mothers (Kühn 2018), the observed consistent pattern of a beneficial effect of employment on single mothers' well-being and health is of great importance for health researchers and policy makers.

Further models with different observation windows serve as robustness checks (results available). Besides the pre- and post-term effects, they also capture the long-term effects of employment on maternal health and well-being. This aspect is crucial because health measures may not show an immediate change but changes in health could emerge with a time lag. Additional estimations will be provided by the time of the European Population Conference with more details about the employment conditions including job characteristics such over-time, the distance to work place, job satisfaction, or the degree of autonomous work.

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