

Discrimination in hiring based on potential and realised fertility: A field experiment

Sascha O. Becker, Ana Fernandes, Doris Weichselbaumer

The arrival of a child affects women and men differently in terms of labour market outcomes, but it is difficult to separate out the causal impact of discrimination from other factors. This column uses empirical evidence from Germany, Switzerland, and Austria to show that women are most affected in part-time job applications if they signal a 'risk' of having young children soon.

Men and women still have very different labour market outcomes – in terms of wages, earnings, participation rates, as well as in other dimensions. While the gender wage gap has decreased over time (see Blau and Khan 2017), significant gender disparities remain.

The empirical evidence on this topic points to the birth of children as one defining moment after which labour market asymmetries emerge in particular. Kleven et al. (forthcoming) is one compelling example of this prolific literature. They use an event-study methodology to compute 'child penalties' – i.e. losses in earnings (or in other labour market outcomes) that men and women experience after their first child is born, controlling for life-cycle and calendar time. These losses are substantial and persist over time, with women experiencing a long-term decline of roughly 20% across all outcomes after the birth of their first child, while men remain virtually unaffected. In related work, Kleven et al. (2019) examine child penalties in different countries. They find particularly negative effects of children on earnings in the German-speaking countries examined. Specifically, the child penalties in Germany and Austria amount to long-term earnings losses of 61% and 51%, respectively, compared with 31% and 44% for the US and UK. In Sweden and Denmark, the corresponding losses total 27% and 21%.

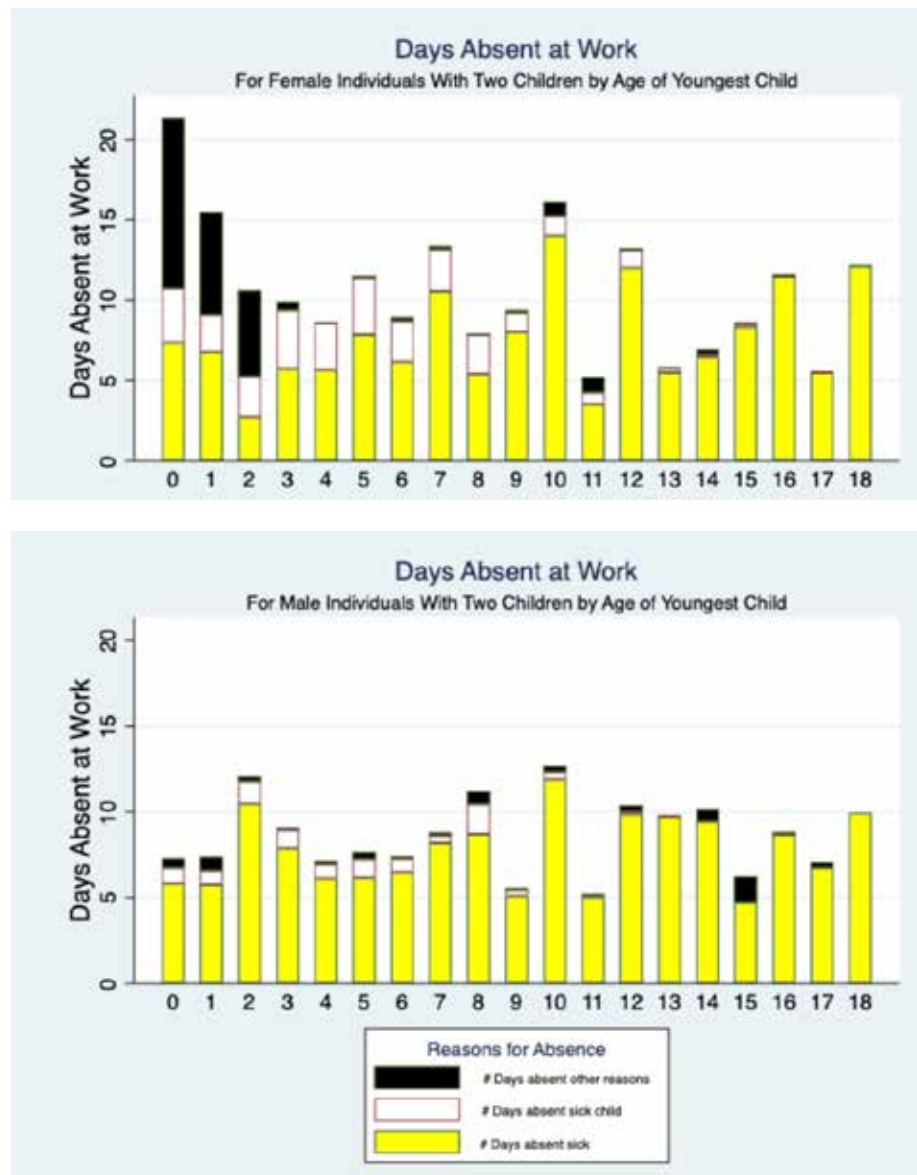
Sometimes such differences in earnings paths are interpreted as reflecting discrimination. Of course, depending on the data and empirical strategy used, identification problems when interpreting findings on child penalties may occur. Already the early human capital literature (especially the work of Mincer 1962 and Mincer and Polachek 1974) emphasised that choices concerning childcare, labour supply, occupation, and human capital investments of (future) mothers could generate identical data patterns to those described above. As a result, numerous endogeneity issues (e.g. concerning effort at work, selection into work) may confound evidence arising from non-experimental data, making the identification of discrimination in wage setting difficult.

Experimental methods allow for full randomisation of, for example, sex and family status. As a result, they are seen as a great improvement in the identification and measurement of discriminatory effects originating on the demand side of the labour market, to which the methodology also imputes a causal interpretation (see Guryan and Charles 2013 for a discussion). In particular, correspondence tests, in which the employment chances of individuals are tested by sending firms applications that are identical in qualification but differ with respect to the demographic characteristics of the applicant, have become increasingly popular (see recent surveys by Bertrand and Duflo 2017, Neumark 2018, Baert 2018 and Rich 2014). In Becker et al. (forthcoming), we conduct a correspondence test

that allows for full randomisation of motherhood status, and thereby enables us to clearly identify the occurrence of discrimination in hiring. Our study took place in the German-speaking countries (Switzerland, Germany, and Austria) as it is typical of applications there to provide extensive information on a candidate, not only concerning qualifications but also personal characteristics (Weichselbaumer, forthcoming).

Maternity, and the possibility of maternity, may disadvantage women in the labour market on two fronts. During their fertile age, employers may perceive women to be at ‘risk’ of pregnancy. And when children are already present, employers may be concerned that, due to conventional gender norms, women are more likely to be in charge of childcare than men. This may lead to more frequent absences – for example, when children are sick. Figure 1 reports on “days absent at work” using the German Socio-Economic Panel for both males and females with two children. It shows that the number of child-related absences is higher for mothers than fathers, and is particularly high when children are young. The age of children will therefore be our experimental indicator for mothers’ childcare chores/absences at work.

Figure 1. Days absent at work for women (top) and men (bottom) with two children



Social norms regarding labour force participation of mothers are relatively traditional in all the three countries examined. For example, data from the 2012 sample of the International Social Survey Program (ISSP) on Family and Changing Gender Roles show that, in German-speaking countries, respondents feel more strongly than in the EU15 as a whole that, for women, work and family are incompatible. Regarding the question of whether mothers should work when their youngest child is of school age, in Austria, 24.47% think women should work full-time in that case, in Germany 30.45% do as well, and, in Switzerland 11.47% agree. This compares with 47.05% for the EU15. These conservative gender norms are, in turn, reflected in the high rates of female part-time work (in 2015, according to Eurostat 2019, those were 46.6% for Germany, 60.6% for Switzerland, and 46.8% for Austria, whereas the EU-average is 31.1%), which is particularly prevalent for mothers with a partner. For example, in Switzerland, conditional on having a job, 58.6% of childless, partnered women (age 25–54) work full time. This fraction drops to 19.4% for mothers of similar demographics whose youngest child is 4-12 years old, with the remaining 80.6% working part-time (Swiss Federal Statistical Office). These numbers portray part-time as a form of labour market participation strongly associated with the presence of children.

As mentioned above, both potential and realised fertility may disadvantage women in hiring. In our study, we aimed to disentangle potential costs arising from maternity leave from absenteeism issues possibly associated with the presence of small children. We therefore indicated the probability of childbearing as well as childcare chores by varying information on marriage, presence and age of children when present, while holding applicant age (30 years) and past work experience constant. Further, it was clear that fertility-related costs ought to be inferred by comparing candidates at varying points of their fertility within a common gender.

The job candidates in our experiment were either single and childless, married and childless, married and parents of two young children (3 and 5 years old), or, finally, married and parents of two older children (aged 7 and 9). We conjecture that childless but married women may be less likely to receive a callback for a job interview than single women if employers consider them at particular risk of becoming pregnant. At the same time, mothers of two young children are more likely to suffer from child-related absences, for example due to child sickness, than mothers of two older children. Mothers of older children might therefore receive more callbacks than mothers of young children.

To test the reaction of employers to the demographics, we sent out nearly 9,000 job applications to open vacancies of secretarial and accounting jobs in Germany, Switzerland, and Austria. We simultaneously considered both full-time and part-time jobs, for which we hypothesise the following. When applying to part-time jobs, individuals clearly indicate their desire to reconcile family duties with work. In contrast, applicants to full-time jobs signal that, independent of their family situation, they ‘must have’ childcare arrangements in place for otherwise they could not reconcile a full-time job with the logistics of picking up children from kindergarten or school. We thus expect part-time jobs to amplify any employer reaction to fertility related costs compared to companies advertising full-time positions.

The study finds that, for applicants to full-time jobs, fertility-related information does not result in different callback rates. Indeed, all our family types experience statistically indistinguishable callback rates. Apparently, employers rely on full-time applicants having their family-related issues dealt with. However, in line with the hypotheses above, we find stronger differences looking at applicants for part-time jobs, where there is substantial variation in callback rates. Married, but childless women applying to part-time jobs have the lowest callback rates (13%),

and women with older children the highest (27%). In between these two family types are the callback rates of single, childless candidates and those of mothers of two young children, which are not statistically different. The gap in callback rates between mothers of two old children and married but childless applicants is substantial given that the average callback rate for females for part-time jobs is 19% in our sample. We interpret these findings as the presence of substantial hiring discrimination based on realised and expected fertility for part-time jobs – a possibly surprising result, given that these jobs are typically meant to be particularly family-friendly.

A lot of progress has been made over the last decades to help equal treatment of women in the labour market. Labour laws in German-speaking countries have strict anti-discrimination regulations where differential treatment based on sex or (expected) motherhood is forbidden. However, our results for part-time jobs illustrate that employers are not fully immune to considering potential or realised motherhood in female applicants, for part-time jobs, even in female-friendly occupations.

References

Baert, S (2018), "Hiring discrimination: an overview of (almost) all correspondence experiments since 2005", in S M Gaddis (ed.), *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*, Springer International Publishing.

Becker, SO, AFernandes, and DWeichselbaumer (forthcoming), "Discrimination in hiring based on potential and realized fertility: Evidence from a large-scale field experiment", *Labour Economics*.

Bertrand, M, and E Duflo (2017), "Field experiments on discrimination", in A Banerjee, and E Duflo (eds.), *Handbook of Economic Field Experiments*, Elsevier, North Holland, pp 309–393.

Eurostat (2019, March 11), Teilzeitbeschäftigung als Prozentsatz der gesamten Beschäftigung, nach Geschlecht und Alter (%).

Guryan, J, and K K Charles (2013), "Taste-based or statistical discrimination: the economics of discrimination returns to its roots", *Economic Journal* 123 (572), F417–F432.

Kleven, H, C Landais, and J E Søgaaard (forthcoming), "Children and gender inequality: evidence from Denmark", *American Economic Journal: Applied Economics*.

Kleven, H, C Landais, J Posch, A Steinhauer, and J Zweimüller (2019a), "Child Penalties Across Countries: Evidence and Explanations", *AEA Papers and Proceedings* 109: 122-126.

Mincer, J (1962), *Labor force participation of married women: a study of labor supply*, Princeton University Press.

Mincer, J, and S Polachek (1974), "Family investments in human capital: earnings of women", *Journal of Political Economy*, 82 (2), S76–S108.

Neumark, D (2018), "Experimental research on labor market discrimination", *Journal of Economic Literature*, 56 (3), 799–866.

Rich, J (2014), "What Do Field Experiments of Discrimination in Markets Tell Us? A Meta-Analysis of Studies Conducted Since 2000", IZA Discussion Paper 8584.

Weichselbaumer, D (forthcoming), "Multiple discrimination against female immigrants wearing headscarves", *Industrial and Labor Relations Review*.

About CAGE

Established in January 2010, CAGE is a research centre in the Department of Economics at the University of Warwick. Funded by the Economic and Social Research Council (ESRC), CAGE is carrying out a five year programme of innovative research.

The Centre's research programme is focused on how countries succeed in achieving key economic objectives, such as improving living standards, raising productivity and maintaining international competitiveness, which are central to the economic well-being of their citizens.

CAGE's research analyses the reasons for economic outcomes both in developed economies such as the UK and emerging economies such as China and India. The Centre aims to develop a better understanding of how to promote institutions and policies that are conducive to successful economic performance and endeavours to draw lessons for policy-makers from economic history as well as the contemporary world.



This piece first appeared on Voxeu on 5 June 2019
www.voxeu.org/article/regional-transfers-europe-do-we-need-fewer-them-or-different-ones

VOX

Research-based policy analysis and commentary from leading economists

© 2019 The University of Warwick

Published by the Centre for Competitive Advantage in the Global Economy
Department of Economics, University of Warwick, Coventry CV4 7AL
www.warwick.ac.uk/cage

Artwork by Mustard, www.mustardhot.com