

How much do children really cost?

Maternity benefits and career opportunities of women in academia

By Vera E. Troeger

New research finds that the generosity of maternity pay can positively impact the career path of female academics and help close the gender pay gap.

// **M**AY" CHILDREN, HOLIDAY BABIES and post-tenure pregnancies: these are some of the labels attached to women's choices of having children in an academic environment. Academic women seem to share a common burden in scheduling their maternity plans: to survive in academia and advance through the faculty ranks, women tend either to give birth during vacation time or to postpone their motherhood status to the end of their probation period and the achievement of tenure. The end result is, generally, an under-representation

of women in higher academic positions (also known as the "leaking pipe problem"), lower salaries, lower research outcomes and promotion, lower fertility, and higher rates of family dissolution – while family and children seem to have either no impact or even a positive effect on the patterns of men's performance in the academic ranks. Thus, motherhood and professional achievements appear as conflicting goals even for women in academia, an environment that is usually praised for its flexibility in terms of working hours and thus family friendliness. ►

The UK Higher Education Statistics Agency (HESA) provides useful data underlining both the “leaking pipe” and gender pay gap in British academia.

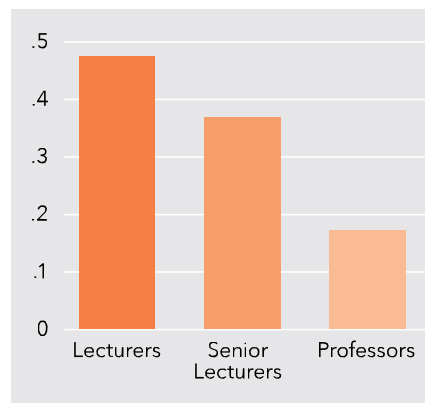
Across all academic disciplines, not even one in five professors is a woman and less than a third of academics in the highest salary bracket are female. Of course the argument that both promotion and salary should follow performance can and should be made. But even if we believe that these decisions are purely based on academic merits, we have to ask ourselves: Why is it that women in academia are notoriously underperforming? And what can and should be done about it?

The vast majority of studies on gender and academic achievements point to the lower mobility of women (mostly due to family responsibilities), child rearing burdens and women’s preferences for academic disciplines that have low publication records as possible explanations of gender differences in higher education systems. Other studies link the gender gap in academia to women’s ‘gender-related’ attitudes such as women’s propensity to choose teaching rather than research institutions.

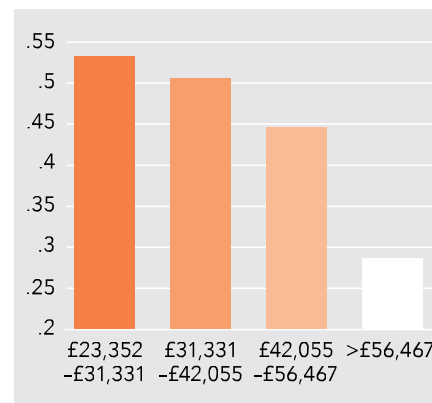
Previous research also argued that children and maternity breaks and the lack of family friendly policies negatively affect the career path of women in academia. Compared to their male colleagues, who are more likely to benefit from family formation and fatherhood, women pay a huge prize for having children in academia in the form of lower promotion rates, higher exit patterns and personal vicissitudes such as family dissolution and divorce. More generally, the probability of exit from academia is higher for women at the early stage of their career, which usually coincides with their fertility age, while the lack of family oriented policies disproportionately disadvantages women’s professional and personal conditions. Yet, to date, we do not know whether the status of

Figure 1: the “leaking pipe problem” and gender gap in pay at UK HIEs

The leaking pipe problem



The gender gap in pay



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female academics has improved over recent years, nor do we have updated information on maternity and parental provisions for faculty members in the UK system.

We seek to fill this gap by analysing higher education institutions in the UK and their provisions on a number of maternity leave arrangements. We examine the effect of such maternity provisions on career achievements of women, e.g. promotion to full professor, and salaries. We find that the generosity of maternity pay as well as the availability of child care positively affect career opportunities as well as income of female academics.

Most of the universities provide extra Occupational Maternity Pay (OMP) that tops up the SMP (Statutory Maternity Pay) in the first 39 weeks of maternity leave. The eligibility criterion to access the OMP usually depends on the length of service and both the payments and the eligibility criteria may vary among the institutions.

Arguably the best indicator for the generosity of maternity benefits

is the number of weeks full salary replacement is paid¹. We expect that if women can take more time out of work – without income cuts – they are advantaged in terms of adapting to their motherhood status without being pressured by income concerns or the need to multitask administration, teaching and research tasks. This increases the probability that women will return to their research position without having to take a career break and with possibly minor effects on research and publication activity.

Indeed, examining the generosity of maternity pay across 182 HEIs reveals a large variance which cannot only be explained by different financial constraints faced by the university². For example, the number of weeks for which full salary replacement is granted varies from 0 (e.g. Leeds Metropolitan University) to 26 weeks in HEIs such as Oxford, Manchester, Birkbeck College and the Royal College of Arts. Places as diverse as Warwick, Essex, Bristol, Exeter, Kent, Bath, Leeds, Birmingham

City, Bangor, Heriot-Watt, Strathclyde Universities or Goldsmith College only grant eight weeks of fully paid maternity leave, while HEIs such as Keele University, Heythrop College or Cambridge University pay mothers 18 weeks of full salary replacements.

The UK Higher education sector provides a useful start to empirically investigate the link between maternity provisions, productivity, and career paths. Firstly, unlike in other countries, such as Germany, Norway, Sweden or Denmark, maternity policies vary greatly across UK HEIs because the statutory regulations present a benchmark (minimum) standard of maternity benefits and universities usually top up these basic provisions to different degrees. Secondly, the university sector allows gathering very good data on hiring, promotion and career paths.

We collected data on parental leave regulations and childcare provisions for 182 institutions of which we could match 149 to data on composition of academic staff from the Higher Education Statistics Agency (HESA).

Universities with a very generous occupational maternity pay on average double the number of female professors compared to HEIs with minimal maternity benefits.

Whether more generous maternity provisions impact career paths of female academics seems to be an incredibly important question that has serious policy implications. We address the “leaking pipe” and gender gap in salary questions by analysing whether better maternity provisions affect the share of female full professors, and the share of women in the highest salary bracket.

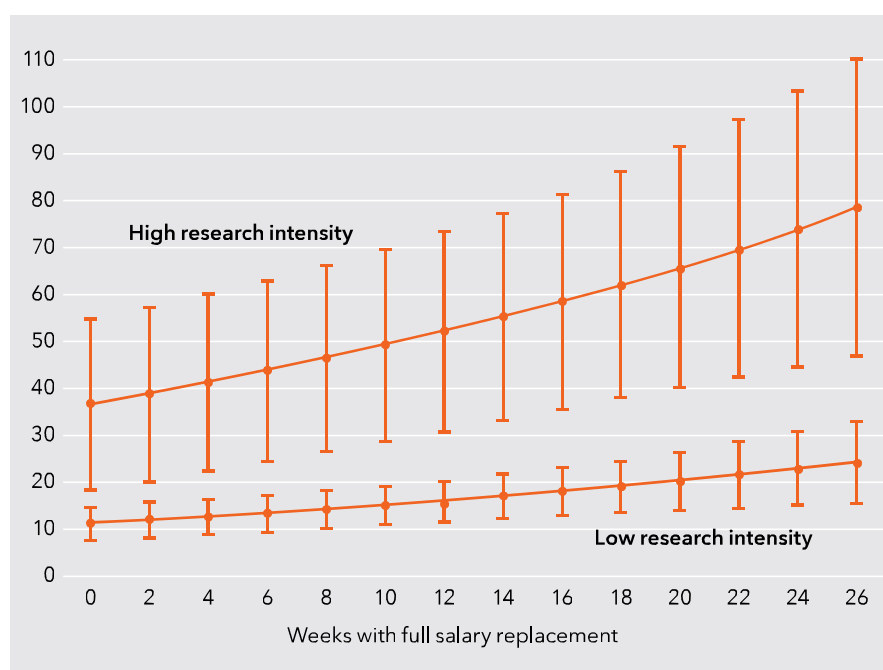
Strikingly we find an unambiguously strong relationship between the generosity of maternity pay and an increase in the share of female professors across all disciplines³. Universities with a very generous occupational maternity pay on average double the number of

female professors compared to HEIs with minimal maternity benefits. This effect, however, is much stronger for research intense institutions than for primarily teaching institutions as is shown in figure 2⁴.

In addition, in house childcare provision increases the share of female professors by up to a third. Our results suggest similar, albeit weaker patterns, for female salaries in academia: more generous maternity leave provisions lead to a higher share of female academics with an income in the highest salary bracket. We find no relationship between maternity/paternity leave provisions and career opportunities of male academics.

These aggregated results have to be taken with some caution and more work has to be done to identify the effects of maternity leave provisions at the individual level⁵. However, these findings point towards the possibility that the generosity of maternity pay can positively impact the career path of female academics and help close the salary gap. Of course generous maternity schemes impose a cost on universities’ budgetary allocation. However, if the academic community, and more broadly society, are interested in generating equal opportunities beyond just window dressing and keeping female human capital in the production process we have to ask ourselves how we can generate an environment that allows women to maintain productivity and keep up with their male colleagues despite child rearing and family responsibilities. ►

Figure 2: Generosity of maternity pay and career progression



Our research does not necessarily support the idea of infinitely generous and long maternity leaves, yet it is in line with previous results on the trade-off between length and generosity. Our findings suggest that a combination of limited but generous maternity benefits coupled with institutionally provided child care might help to deplete the leakage in the pipe.

We can possibly draw inferences from the UK higher education sector more broadly. Our research shows that more generous maternity pay

can help keep female talent in the labour market thereby increasing productivity. The UK suffers from a productivity gap compared with other highly developed economies and it ranks very unfavourably both in terms of generosity of statutory maternity pay and public spending on parental leave provisions compared to other EU and OECD countries. There seems to be room for improvement: more generous parental leave policies could help close the productivity gap and thus pay for themselves in the long run. ◀

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Footnotes

¹ We also analyse other generosity measures such as the number of weeks for which the OMP tops up the SMP and the so called full weeks equivalent which measures for how many weeks on average full salary replacement is paid.

² In a companion paper we explain this variance and find that larger, more research intense universities, with a (previous) larger share of female full professors and a low student-to-staff ratio implement more generous maternity packages.

³ When we break down the analysis across different disciplines we find stronger relationships between the generosity of maternity pay and career advancement for the natural and social sciences than for the humanities.

⁴ Research intense universities have a much stronger screening process at hiring stage and have therefore stronger incentives to keep highly productive female academics by providing more generous maternity pay.

⁵ We have collected individual data for 10,000 female academics in the UK on child rearing histories, individual career paths and productivity, the results show similar patterns.

The Author

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Publication Details

CAGE Working Paper forthcoming 'How much do children really cost? Maternity benefits and career opportunities of women in academia', Vera E. Troeger, Mariaelisa Epifanio