Research Proposal:
Labor Market Effects of Paid Maternity Leave

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1 Project Proposal

Recently, Sweden's substantial portion of paid maternity leave earmarked for men spurred a discussion among Danish politicians and media whether the Danish system should be changed to be more similar to that of Sweden. While the debate is political in nature, it most surely lacked good empirical evidence on the effect of paid maternity leave on labor market behavior.[1] Particularly little is known about how to optimally construct paid maternity leave schemes. We want to contribute to this understanding in a Danish context using methods that expand the current international research frontier by asking:

How does paid maternity leave affect labor market participation of men and women?

Policy Relevance. We want to simulate and evaluate labor market behavior from hypothetical policy scenarios changing the Danish paid maternity leave. A particularly interesting policy question here could be what the labor market effects of changing the number of months of paid maternity leave are. In turn, we can investigate the optimality of the current Danish system. We will also investigate hypothetical policies

[1] Nielsen, Simonsen and Verner (2004) analyze how the paid maternity leave contributes to the gender wage gap in Denmark. Kleven, Landais and Søgaard (2015) show that the arrival of a child leads to a long-run penalty for women of around 21 percent and the share of gender inequality that can be explained by children has increased from 30% in 1980 to 80% in 2011. This development takes place at the same time when the maternity leave scheme has been extended from 14 weeks to 52 weeks. Studies from Sweden and Norway have analysed the effects of parental leave on fathers' earnings and find ambigious effects (see Rege and Solli 2013 and Ekberg, Eriksson and Friebel 2013).

such as the earmarked maternity leave for men in the public sector introduced in 2008 (the so-called 6-6-6 maternity model).

These types of questions have only recently received international attention presumably because the female labor market participation is much lower (yet increasing) in e.g. the U.K. and the U.S. Byker (2016) uses reforms in the U.S. states California and New Jersey in a difference-in-difference approach to estimate the effects of paid leave on female labor force attachment. Unlike our approach, her results have only limited external validity and it is particularly questionable if the results translate into a Danish context with a very generous paid maternity leave and high degree of female labor market participation.

Method and Contribution. We set up a novel life cycle model where consumption/saving, labor supply and fertility are endogenously determined. We embed the realistic fertility process from Ejrnæs and Jørgensen (2016) in which households experience a declining biological fecundity and can have both intended and unintended children in a realistic labor supply model, as the one in Blundell, Dias, Meghir and Shaw (forthcoming). A similar approach is implemented in Adda, Dustmann and Stevens (forthcoming). While these studies only model female labor supply, we model both household members labor supply in order to study how paid maternity leave affects labor supply behavior of the family.

We intend to estimate the model using the Danish register data using a method of simulated moments. The life cycle model of optimal consumption/saving, fertility and labor supply will successively be numerically solved using state-of-the art numerical tools developed in Druedahl and Jørgensen (2016) for a given guess of preference parameters. The parameters matching the Danish register data "best" will be the resulting estimates. Particularly, we imagine matching the average age profile of wealth, childbirths, earnings, and labor supply. Because the Danish registers lack precision in the number of hours worked, we will use information on part versus full time employment together with maternity leave take-up around childbirth. Besides the novel modeling framework, we intent to use some of the many changes in the Danish paid maternity leave policies since 1980, affecting differently private and public employees, to identify parameters of the model and validate the resulting theoretical economic behavior. This is an interesting use of policy changes in "structural econometrics" that, to the best of our knowledge, has not been fully explored yet.

2 Time Frame and Expected Outcome

The current project is to be initiated during fall 2016 and spring 2017. In particular, we envision hiring a research assistant in 2016 who can then start constructing the estimation data from the relevant registers. After initial data investigations, we would setup, solve and estimate our novel consumption/saving, fertility and labor supply model during 2017. In fall 2017 or spring 2018, we expect to submit the paper to an

economic journal.

Because relatively little research has been done and the growing literature on this topic has been very well published (top 5), and our empirical framework will advance the research frontier, we believe that there is a realistic probability of publication in a top 5 general interest economic journal or at least in a top field journal.

3 Budget

Table 1 reports the budget. We apply for 200 hours of research assistance and eIndkomstRegistret. The former will facilitate data construction, initial investigations and crucial data analysis to determine the most parsimonious, yet rich enough, dynamic economic model, we can formulate to investigate labor market effects of paid maternity leave. The latter will facilitate an analysis of the labor market behavior just around childbirths.

We also apply for two months of salary for Mette Ejrnæs (Professor, University of Copenhagen) to work intensively on the current project. Finally, we include travel expenses in total of 70,000. These funds should cover one or two conference participation (EALE or SOLE are examples of good outlets for this project). Because Thomas H. Jørgensen will be taking up a postdoc position at University College London (UCL) in 2016 and 2017, we ask for money for him to travel to Copenhagen several times during the project period. Finally, the project would also benefit greatly from the visit of the remaining authors (Mette and Jeppe) at UCL where many of the leading researchers in the related fields are located.[2] These travels are all included in the travel budget.

Table 1: Budget, in Danish Kroner.

	Cost
Research assistance (200 hours in 2016 and 2017)	31,976
Travel expenses	70,000
Salary, Mette Ejrnæs (2 months a 68,260 in 2017)	136,520
Data: eIndkomst	5,000
Sub-total	243,496
Overhead 20%	48,699
Total	292,195

References

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[2]For example, Richard Blundell, Christian Dustmann, and Monica Costa-Dias (IFS).

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