

Chapter 1

Introduction

1.1 Motivation

Family policy has long been a neglected issue in Germany. In the past few years, however, it has attracted increasing public attention. In the scientific community, family policy and its potential effects on household behavior have been discussed for a long time, but it is a relatively new phenomenon that these issues are debated in a broader public. For example, although fertility rates have long been known to be declining, the issue has only recently become a focus of public discussion. In almost the same manner, negative work incentives for mothers created by the German tax-transfer system, along with limited availability of childcare, have long been common knowledge but have only recently become a topic of the public debate in the context of claims to improve work-life balance for German families. These discussions may have been to some extent motivated by findings of recent comparative studies revealing that in several areas Germany's family policy seems to be less successful than those of many other EU countries. This applies especially to indicators such as fertility, pupils' performance or child poverty rates on which Germany performs worse than countries such as France, Belgium, the Netherlands and the Scandinavian countries, despite of the relatively large amount of public expenditures spent

on family policy instruments.¹

The political discussion about how to reform Germany's family policy covers many issues, including parental leave benefit, family taxation and the provision of childcare. In the past few years, many reforms have already been undertaken, with the parental leave benefit as the most prominent example. The benefit was changed from a means-tested transfer to a benefit payment that is tied to pre-birth earnings of the stay-at-home parent. Moreover, several childcare reforms have been implemented that aim at improving accessibility of childcare for children under three years and lowering costs of childcare through subsidies or tax deductions.

The treatment of children within the income tax is also a topic that is frequently discussed. For many years, the system of "dual family support" (*Dualer Familienleistungsausgleich*) within income taxation, whereby the family receives either the child benefit or the tax allowance, depending which is higher, seemed to be accepted as an adequate solution of child support. Most recently, however, there have been discussions whether the German system of joint taxation of married couples with full income splitting (*Ehegattensplitting*) should be extended to include a child component, following the French example of a "family tax splitting".

Proponents of these different family policy reforms expect that they could contribute to improve the work-life balance for families with children and thereby increase Germany's low fertility rates. Moreover, it is argued that increased investment in early childhood education and childcare could improve child outcomes in the medium and in the long term as well as facilitate the integration of children from disadvantaged families. Last but not least, all reforms are also discussed with respect to their potential redistributive effects. Opponents of a family tax splitting, for example, object the degressive effects of these sorts of reforms.

It is thus of great interest to gain insight about the effects that these policies are expected to bring about. In particular, it is important to evaluate these policies

¹One example is the recent UNICEF report on a comparison of child well-being in OECD countries; see Bradshaw, Hoelscher, and Richardson (2006).

from an ex-ante perspective, in order to be able to compare fiscal costs and expected effects of different reform scenarios. In this dissertation, I develop a behavioral microsimulation model that can be used to analyze the effects of potential family policy reforms. The model can be applied to answer questions about fiscal costs, redistributive effects, labor supply effects, changes in the demand for out-of-home childcare and changes in the welfare of households resulting from different policies, which I show for the example of two childcare policy reforms and two reforms of family taxation.

1.2 Methodology

The behavioral microsimulation model of mothers' labor supply and childcare decisions consists of three parts. First, a representative data set is needed that includes key information on household characteristics, individual wages, other sources of income and working hours. For Germany, the German Socio-Economic Panel Study (SOEP) contains all this information. It is a representative sample of households living in Germany. For the analysis presented in the following chapters, I will draw on three waves of this panel study, 2001-2003. Information on childcare utilization is available in all waves. Additional information on childcare expenses is available in the 2002 wave of the SOEP. Moreover, regional data such as the availability of childcare slots on the county level can be matched to individual SOEP data.

The second part of a microsimulation model consists of a detailed tax-benefit model that can be used to calculate net household incomes for every single household under different working hours states based on information of gross income and household characteristics. For this study, the tax-benefit model STSM is extended to include childcare costs within the households' budget constraint. Since there is a considerable shortage of formal childcare in Germany, in particular for children under three years, childcare costs cannot be merely modeled as average parents'

fees to center-based childcare. In fact, access restrictions to formal childcare have to be explicitly taken into account. Thus, I suggest a measure of “expected costs of childcare”. They consist of a weighted average of the costs to formal childcare, which are low due to subsidies, and the price for childcare on the private market, which comes at considerably higher cost. The calculation of the weights is based on a partial observability model of the demand and supply of childcare, which can be used to predict the individual probability to be rationed with respect to formal childcare for every child in the sample. Moreover, including this suggested measure of childcare costs in the budget constraint of households has the advantage that both dimensions of childcare - its costs and its accessibility - can be analyzed with respect to effects on mothers’ labor supply behavior.

Based on the information about disposable income at different working states, the behavioral model of the joint decision of mothers’ labor supply and childcare decision is estimated in a third step. In the discrete choice setting used for estimation, it is assumed that every mother chooses among a discrete bundle of working and childcare hours categories. The model used for the estimation is a conditional logit model controlling for unobserved heterogeneity. The parameters of the utility function can be used to derive labor supply elasticities with respect to wages and childcare costs. Moreover, elasticities of the demand for childcare can be computed. The model can furthermore be used to analyze the effects of different reform scenarios on the income distribution and on potential changes of households’ welfare.

The thesis presents also an application of the behavioral microsimulation model. Four different policy reforms are simulated. These include two childcare policy reforms, one aiming at an increase in subsidized childcare and one cutting parents’ fees to existing childcare slots. Apart from these, two tax reforms are simulated. The first tax reform consists of substituting the German child tax allowance with the French version of a “family tax splitting”, while the second tax reform simulates the shift from the current system of joint taxation towards purely individual taxation.

The latter simulation is not only interesting from a policy perspective but can also contribute empirical findings on the allocative efficiency of joint versus individual taxation that is debated in the optimal tax literature.

1.3 Contribution and Main Findings

The contribution of this dissertation to the literature is threefold. First, it extends previous studies on structural models of mothers' labor supply behavior by the inclusion of childcare costs for the case of Germany. As I show in this dissertation, there is a considerable excess demand for subsidized childcare, in particular for children under three years and for afternoon care of children in primary school age. Thus, an adequate measure of childcare costs has to take these access restrictions to childcare into account.

Second, the behavioral model extends the estimation of mothers' labor supply decisions to a joint estimation of labor supply and the demand for childcare. This extension is necessary in order to derive labor supply elasticities with respect to costs of childcare. Moreover, for a comprehensive welfare analysis of childcare policy reforms it is essential to include domestic and non-domestic childcare explicitly in the utility function.

Third, the model can be applied to evaluate different family policy reforms or reform proposals. The dissertation thus contributes empirical findings for the ongoing political debate on how to reform Germany's family policy. Among the many reforms that are currently discussed, four alternative policy scenarios in the field of childcare and family taxation are evaluated. The choice of these reforms is motivated by the ongoing discussion. For example, the first of the two childcare policy reforms that are simulated consist of an increase in the availability of center-based childcare for children under three years who have working mothers. This reform comes close to one that has been implemented in 2005. The second childcare policy

reform is currently debated in many German Federal States and focusses on the free provision of center-based childcare for children between three years and school age.

Simulation results show that these reforms would lead to an increase in mothers' labor supply by 1.4 and 0.8 percentage points, respectively. The magnitude of the effects depends on whether the subsidies are conditioned on the mothers' working status, and on the age of the children. One main finding is that increasing availability of childcare slots (reform 1) leads to a higher increase in mothers' labor supply than cutting parents' fees to childcare slots for children aged three to six years (reform 2). Furthermore, it can be shown that under the first childcare policy reform, low-income households benefit more than higher-income households, whereas the opposite is true for the latter reform. However, a comparison of welfare effects of these two reforms - measured by compensating variation - reveals that the second reform leads - on average - to higher increases in household welfare. This is due to the fact that in this case, subsidies are not conditioned on the mother's working decision and are thus less distortionary than under reform 1. Moreover, the estimated parameters of the mothers' utility function reveal that non-parental childcare increases utility of mothers whose youngest child is above three years in 50 percent of all cases, while this is only true for 1 percent of the mothers whose youngest child is below this age. Thus, unless the society sets a high value on low-income families with working mothers, the second childcare reform seems to be more favorable from an efficiency perspective.

The family tax splitting reform that is simulated here is similar to the French "Quotient Familial". Under this tax system, parents are allowed to split income not only among each other but also with their children, which leads to considerable tax reliefs, depending on the amount of the splitting factors per child and whether the maximum tax relief for every child is limited (such as in France) or not. As is shown in this study, introducing a family tax splitting according to the French example would hardly change the tax liability, at least of married couples with less

than three children, and thus has very little effect on the income distribution and work incentives. The main reason for this is that under this income tax regime, the principle of joint taxation that leads to high marginal tax rates for secondary earners, is retained unchanged. The results therefore suggest that a family tax splitting such as practiced in France is very similar to the existing German system. Single parents and non married cohabiting couples with children would benefit from this reform, but only to a small extent. Thus, potential policy goals of targeting more resources towards families with three or more children as well as towards children of non-married parents could be achieved by simply changing the parameters of the existing family policy instruments such as the income tax splitting, the child tax allowance or the single parent's tax allowance.

The German system of joint taxation of married couples with income splitting has been criticized for different reasons. From a social policy perspective, it has been argued that it favors married couples instead of households with children. In addition, it implies negative work incentives for secondary earners. Many European countries such as the UK, Italy, Austria and the Scandinavian countries have moved to individual tax systems already many years ago. As the simulation results show, a shift from joint to individual taxation would lead to large effects in labor supply and utilization of childcare. Moreover, income tax revenues and social security contributions would increase and could be redistributed, for example by increasing the child benefit. Such a reform would enhance mother's employment, lead to a redistribution of income from high-income to low-income families, as well as from families with less to families with more children. The analysis of welfare changes shows that such a reform would result in high increases in households' welfare, even for the group of married couples.

