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Centre for Economic Analysis
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We use a discrete choice labour supply model (van Soest, 1995; Blundell et al., 2000) to estimate labour supply implications of a large scale reform of financial support for families with children in Poland, the so-called Family 500+ programme. The reform introduced universal regular payments of 500 PLN per month for each second and subsequent child in the family aged 0-17, supplemented with means-tested 500 PLN per month for the first child in low income households. As such, the programme significantly changed the balance of financial incentives to work among parents. We estimate that it will reduce labour supply among families with children by about 240,000 individuals, principally mothers in families with one or two children. The estimates suggest that labour supply effects will be felt most strongly in small towns and villages and will contribute substantially to the reduction of the proportion of couples in which both partners are working.

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*Michał Myck is director at Centre for Economic Analysis, CenEA; Address: ul. Królowej Korony Polskiej 25, 70-486 Szczecin, Poland; e-mail: mmyck@cenea.org.pl. The paper builds on earlier work on development of labour supply modelling financed through the Polish National Science Centre (NCN) grant number [6752/B/H03/2011/40]. Estimates presented in the analysis have been conducted under a project financed by the National Bank of Poland (contract number NBP-IE-INZ-MO-1140-0057-2016). Data used for the analysis have been provided by the Polish Central Statistical Office (GUS) who bear no responsibility for the results of the analysis. I am grateful for comments and suggestions to participants of the NBP internal seminar. The paper uses CenEA's microsimulation model SIMPL which has been developed in a number of collaborative projects since 2005 and has been recently maintained by Michal Kudera and Mateusz Najsztub whose support is greatly appreciated. Technical parts of the paper draw on unpublished work in Myck (2014). Official disclaimer: *"Simulations of the effect of the Family 500+ reform on labour supply in Poland in a static labour supply model accounting for heterogeneity of the household structure have been commissioned by the National Bank of Poland. The analysis does not reflect the position of the National Bank of Poland. The National Bank of Poland bears no responsibility for the content of research output containing the numerical results of these simulations."*

1 Introduction

Implementation of the Family 500+ Programme by the Polish government of the Law and Justice Party (Prawo i Sprawiedliwość, PiS) in April 2016 represents an unprecedented shift of financial resources towards families with children. The new policy increases the total value of financial support for families with kids by about 140% at the cost of between 23-25bn PLN per year (i.e. 1.5% of the GDP). While the policy will undoubtedly improve the material situation of almost two thirds (2,7mln) of Polish families with children and will have a major influence on the level of child poverty and income inequality (Goraus and Inchauste, 2016), its indirect implications, and in particular the effect of the policy on labour market activity among parents, have so far been left largely unexamined. This paper addresses the issue by employing an established approach to modelling labour supply decisions in the form of a discrete choice labour supply model along the lines of van Soest (1995) and Blundel et al. (2000).[1] We draw on the model presented in Myck (2014) and applied recently in Kurowska et al. (2016), extend its scope and simulate the response to the Family 500+ reform using data from the Polish Household Budget Surveys (PHBS) from 2011, 2012 and 2013. The estimated labour supply effects suggest that, *ceteris paribus*, the policy will limit labour supply by about 240 thousand individuals, mostly women. The response will concentrate predominantly among parents with less than higher education, those with one or two children and among families living in small towns and villages.

While the approach we take to model the implications of the policy simplifies a number of aspects of labour market optimisation, such as long term labour market planning and saving decisions, the discrete choice method used in the paper has proved to be a popular and reliable way to shed light on the consequences of tax and benefit policy for employment decisions, and the results of a priori simulations have largely been confirmed in reduced form ex-post evaluations (e.g. Eissa and Liebman, 1996; Frencesconi and van der Klaaw, 2007; Francesconi et al., 2009). The effects of the policy estimated in this paper suggest a relatively large change in employment among parents. These, apart from the immediate implications in terms of employment patterns and family incomes, may have long term consequences at the individual level for

[1] For other examples of applications of discrete choice labour supply models see: Aaberge et al. 1995, Duncan and Giles 1996, Bargain and Orsini 2006, Brewer et al. 2006, Haan and Myck 2007, Haan and Wrohlich 2011 or Bargain et al. 2014.

specific individuals and families. They will also translate into broader macroeconomic implications both in the short and in the long term.

The rest of the paper is structured as follows. We begin with a brief outline of the details of the Family 500+ reform in Section 2. In Section 3 we briefly describe the data used for the analysis and the sampling approach. This is followed by the description of the labour supply models we estimate and the estimated labour supply elasticities (Section 4). Results of the simulations of the Family 500+ programme are presented in Section 5 which is followed by conclusions.

2 The Family 500+ reform

The Family 500+ reform was a key element of the electoral campaign of the Law and Justice party in the 2015 parliamentary elections, which the party won with an absolute majority of seats in both chambers of the Polish parliament. The policy was implemented after a brief period of consultations and became effective as of April 2016. Few minor changes were made during the legislative process to the original policy announcements from the electoral campaign, the most important of which was that the 500+ payments were excluded from means-testing for other social support, such as Family Benefits or Social Assistance. In its final form the new policy consists of the following key elements:

- each family with two or more children in the age group 0-17 is eligible to $(n-1)$ universal payments of 500 PLN per month, where n is the total number of children in the 0-17 age group in the family;
- low income families, with net income up to 800 PLN per person per month (or up to 1200 PLN if there is a disabled child in the family) are additionally eligible to 500 PLN per month for the first (oldest) child in the family in the 0-17 age group;
- income considered for eligibility to payments for the first child is the average monthly post-tax per capita family income from the most recent income tax calculation, with special rules defining eligibility of farmer families.

As a consequence of the implemented policy the payments were expected to reach 2,7mln Polish families at the total annual cost of between 23-25bln PLN, i.e. 1.5%

of the GDP.[2] The reform significantly increased income levels of recipient families, although the means-testing condition for the oldest child in the family has resulted in a substantial discontinuity in the family budget constraints at the eligibility threshold. These can be seen in the examples of budget constraints drafted for families with one and three children shown in Figure 1. In the first case the benefits are completely withdrawn at the level of gross monthly family income of about 3,100 PLN, while in the latter they are reduced from 1500 PLN to 1000 PLN when gross monthly family income reaches about 5,100 PLN per month.

The unprecedented generosity of the new family support programme in combination with means-testing of benefits for oldest children imply a very substantial change in the balance of financial incentives to work. While the design of the policy is such that marginal tax rates on labour income remain unaffected (with the exception of the eligibility threshold), the income effects of the policy could be substantial with potentially strong negative implications for labour market activity. These implications are examined in detail below using a formal discrete choice labour supply model.

3 Data used for estimation and sample specification

We estimate a number of models on data from the annual Polish Household Budget Survey (PHBS) for years 2011, 2012 and 2013. Since the model that underlies the estimation relies on the assumption of a free choice of the optimal labour market state we limit the samples to families with at least one individual who is defined as "labour supply flexible" which in our case assumes fulfilling the following criteria:

- men aged 18-59, women aged 18-54;
- not self-employed or student;
- not receiving disability or retirement pensions.

Additionally we differentiate two sample selection strategies conditional on the assumed nature of unemployment. In Sample 1 we assume that all declared unemployment is voluntary (i.e. a decision of the unemployed individuals) while in Sample 2

[2]For details see Myck et al. 2015 and 2016.

the assumption is that unemployment - as declared in the survey - is involuntary. In the latter case the individuals are considered as not labour supply flexible. For each of the samples we divide the data from every year into three sub-samples: couples with two labour supply flexible partners, couples with one labour supply flexible partner and singles. In every sample we include families with and without children. As we describe in Section 4 the modelling approach requires us to compute disposable incomes in alternative labour market scenarios and this is conducted using CenEA's tax and benefit microsimulation model SIMPL.

The implications of the sample selection criteria for Samples 1 and 2 in each of the estimation years and for each of the sub-samples are given in Table 1. In the case of couples with one labour supply flexible person and in the case of singles, as we estimate models separately for men and women we show the samples separately. Since the only information concerning the intensity of work in the PHBS is whether individuals work full time or part time, we base the model on three labour supply scenarios: not employed, part time employed and full time employed. In the case of couples with both labour supply flexible partners this implies nine labour supply combinations - three for each of the partners. Given a high proportion of so-called complex households in Poland (see Haan and Myck, 2012), i.e. households made of more than one nuclear family, the modelling approach here focuses on the responsiveness of the main family in the household and treats the behaviour of household members from other families as exogenous.

4 Labour supply estimation

We follow van Soest (1995) and Blundell et al. (2000) to estimate static discrete choice models for Samples 1 and 2, and in each case the estimates are conducted on data from 2011, 2012 and 2013 to examine stability of estimated labour supply elasticities and reform simulations with respect to different baseline data and tax-benefit systems. In each case (data year/sample combination) we estimate the models for three subsamples: Model A - for couples (married and cohabiting) with both partners who are labour supply flexible, Model B - for couples (married and cohabiting) with only one partner who is labour supply flexible, and Model C - for singles. In each of the three cases we assume a slightly different specification of the estimated utility

function. In Model A the deterministic part of the utility function is represented by the following expression:

$$U_{ij}(c_{ij}, w_{ij}^m, w_{ij}^f) = \beta_1 c_{ij} + \beta_2 (c_{ij})^2 + \beta_{3mi} w_{ij}^m + \beta_{3fi} w_{ij}^f + \beta_{4m} pt_{ij}^m + \beta_{4f} pt_{ij}^f +$$

$$+\gamma_{1f} c_{ij} w_{ij}^f + \gamma_{1m} c_{ij} w_{ij}^m + \gamma_{2f} c_{ij} pt_{ij}^f + \gamma_{2m} c_{ij} pt_{ij}^m + \gamma_{3mf} w_{ij}^m w_{ij}^f, \quad (1)$$

where c_{ij} is consumption of household i in labour market scenario j, equivalent in this static context to disposable income in scenario j, w_{ij}^m and w_{ij}^f are dummy variables for work status - either full or part time - of the man and woman respectively, while pt_{ij}^m and pt_{ij}^f are dummy variables for part time work.

The utility functions assumed for Models B and C are more straightforward as in these cases we model a decision of only one person, either the only partner in a couple who is labour supply flexible (Model B) or the single adult (Model C). For Model B estimations, for the case where the woman is the labour supply flexible person in the couple, the deterministic part of the utility function is:

$$U_{ij}(c_{ij}, \overline{Y_i^m}, w_{ij}^f) = \beta_1 c_{ij} + \beta_2 (c_{ij})^2 + \beta_{3fi} w_{ij}^f + \beta_{4f} pt_{ij}^f +$$

$$+\gamma_{1f} c_{ij} w_{ij}^f + \gamma_{2f} c_{ij} pt_{ij}^f \quad (2)$$

with $\overline{Y_i^m}$ representing the income of the man in the couple which is fixed across the j labour market states of the woman. Finally the utility function in Model C, i.e. in the estimation for single people, for an individual i is:

$$U_{ij}(c_{ij}, w_{ij}) = \beta_1 c_{ij} + \beta_2 (c_{ij})^2 + \beta_{3i} w_{ij} + \beta_4 pt_{ij} +$$

$$+\gamma_1 c_{ij} w_{ij} + \gamma_2 c_{ij} pt_{ij}. \quad (3)$$

To estimate each of the models we assume that the stochastic form of the utility function has i.i.d. error terms which are distributed with extreme-value type-I distribution (EV-I):

$$V_{ij} = U_{ij} + \varepsilon_{ij}. \quad (4)$$

This allows us to represent the conditional probability of choice j by household i as:

$$P_{ij} = \frac{exp(U_{ij})}{\sum_{k=1}^{J} exp(U_{ik})}. \quad (5)$$

The parameters of the utility function can then be estimated using the conditional logit model.

In the estimated specifications parameters β_1 and β_3 are allowed to vary with characteristics (taste shifters) and the model is estimated without accounting for unobserved heterogeneity, i.e. using the simple conditional logit approach[3]

The model is closed by a budget constraint equation. Disposable incomes for each of the labour market scenarios which are assumed to be equivalent in the static model to the value of consumption, are functions of wages (ω_i), work status (w_{ij}), household characteristics (X_i), out of work incomes (y_i) and the tax and benefit function (ϕ). In Model A the budget constraint function takes the following form:

$$c_{ij} = \phi[\omega_i^m, \omega_i^f, w_{ij}^m, w_{ij}^f, X_i, y_i] \tag{6}$$

while in Model B, in respect to the situation represented by the utility function in equation 2, the budget constraint is:

$$c_{ij} = \phi[\omega_i^f, w_{ij}^f, \overline{Y_i^m}, X_i, y_i] \tag{7}$$

and for singles it is represented by the following expression:

$$c_{ij} = \phi[\omega_i, w_{ij}, X_i, y_i]. \tag{8}$$

Since we estimate Models B and C separately for men and women in total thirty models are estimated in the paper: five specifications for each sample-year (i.e. for couples with both flexible partners, two for couples with one flexible partner (for men and women), and two for singles (for men and women), each set of these estimated for three years and two sample selection approaches (Sample 1 and 2). Given the high number of estimation results below we only discuss the resulting elasticities and reform simulations.

4.1 Estimating labour supply elasticities

Following Myck (2014) we compute labour supply elasticities with respect to net contributions to family incomes (net earnings elasticities). This means that elasticities are calculated with respect to small changes in net income which makes them more comparable across time given the possible changes in the tax and benefit function. As

[3]As Haan, 2006, points out there is little difference between simulated predictions on the basis of models with and without accounting for unobserved heterogeneity when estimates are based on cross sectional data; this finding has been confirmed on Polish data in Myck, 2014.

in Myck (2014) we derive net income elasticities by simulating labour supply changes to increases in disposable income c_{ij} resulting from a 1% change in the post-tax employment income contribution of each person (in cases of two flexible couples also for both partners). For example in Model A the change in disposable income resulting from a 1% change in the female employment net earnings contribution is equal to:

$$\Delta c_{ij} = 0.01 * \{\psi[\omega_i^f = \widehat{\omega_i^f}, Z_{ij}] - \{\psi[\omega_i^f = 0, Z_{ij}]\}, \tag{9}$$

where ω_i^f is the measure of female wage assumed to take the value of an expected wage ($\hat{\omega_i^f}$) to compute the total disposable income of the family if the woman is working or zero if not. In this case the function ψ is the tax part of the tax and benefit function ϕ from equation 6. The difference in disposable incomes under these alternative wage assumptions, assuming other factors (Z_{ij}) which include gross earnings of the man are unchanged, is the employment contribution of the woman to the post tax income in scenario j. In a similar way we compute the contribution of the man, while the joint contribution of both partners to calculate total net income elasticities takes the following form:

$$\Delta c_{ij} = 0.01 * \{\psi[\omega_i^f = \widehat{\omega_i^f}, \omega_i^m = \widehat{\omega_i^m}, Z_{ij}^*] - \psi[\omega_i^f = 0, \omega_i^m = 0, Z_{ij}^*]\}, \tag{10}$$

with ω_i^m standing for the expected male gross wage and Z_{ij}^* representing the unchanged other factors in scenario j excluding both male and female wages. In a corresponding fashion elasticities are computed for Models B and C, although in these cases we do not need to estimate cross elasticities, i.e. reactions of one partner to the change in the net contribution of the other.

The estimated labour supply elasticities for all of the estimation years and subsamples are presented in Figure 2 for Model A, and in Figure 3 for Models B and C, in each case distinguishing between the sample selection criteria - i.e. given separately for Sample 1 and Sample 2. with respect to the elasticity estimates, two results are particularly interesting. First of all we find relatively high levels of labour supply elasticities among women in couples, ranging between 0.6-0.9 depending on the year and sub-sample. While high, this range of elasticities is consistent with findings for female labour supply elasticities found for other countries, such as Ireland or France (Callan et al. 2009; Bargain and Orsini 2006). Secondly, we find substantial differences in the estimates of elasticities for men between Samples 1 and 2. For example,

the elasticity for single men in 2012 in Sample 1 is around 0.7, while in Sample 2 around 0.1. Total elasticities for men in couples with both flexible partners are also significantly different. For example in 2013 we find the total elasticity to be equal to 0.3 in Sample 1 and it is nearly ten times lower in Sample 2. Such differences are to be expected given the differential approach to sample selection in Samples 1 and 2 based on different treatment of the unemployed. If unemployment is assumed to be a result of individual optimisation, and is thus a choice as in Sample 1, then a much larger proportion of individuals (especially among men) are treated as deciding to stay out of the labour market, which given their characteristics then leads to higher elasticity estimates. In our analysis we will conduct the simulations using both Samples, but given the elasticity values for men in Sample 1, which are very high in comparison to values in most labour supply studies, it is probably advisable to treat results of Sample 1 with caution, and give more credence to simulations based on Sample 2.

5 Results - simulating the Family 500+ reform

The simulated labour supply effects of the Family 500+ programme use the estimated parameters of the models discussed in Section 4 and compare the expected numbers of employed individuals under the baseline tax and benefit scenario and the reformed scenario in each of the years for which the models are estimated. The simulations are done for both men and women in each of the analysed samples and the data is weighted using adjusted population weights as discussed in Myck and Najsztub (2015). Overall results of the simulations are presented in Figure 4 while a more detailed breakdown by family characteristics for results in Model A is shown in Figure 5. For the simulation based on 2013 data we give a more detailed breakdown of the estimated labour supply changes in Tables 2 and 3.

As shown in Figure 4 the simulated effects on different years of data are broadly consistent, but - as we could expect from the differences in elasticity estimates presented above - there are noticeable differences in simulated response between results based on Samples 1 and 2. This is especially the case for the results in Model A, where the simulated response among men is substantially higher in Sample 1 specifications compared to Sample 2 estimates. At the same time simulations for women are slightly less pronounced in Sample 1, which is related to the greater response flexibility of male

partners. The differences between Samples 1 and 2 are not as visible in the case of Models B and C, which is largely due to the fact that number of families with children where the man is the modelled individual is small (this is especially the case for singles).

Focusing on the most recent year of data, 2013, we can see that the overall simulated labour supply effect is very similar for the two sampling approaches and is in the range of 240 thousand individuals. Under the specifications in Sample 2, which is our preferred approach given the estimated values of elasticities, the number of women who are simulated as resigning from employment is about 230,000 while the effect among men is very small - less than 7,000. Reduction of employment among lone parents is about 25,000 and among parents living in couples is about 210,000. A detailed breakdown of the response by characteristics of parents (Table 3) suggests that the most significant effect would come from women with one or two children (respectively 43.8% and 45.5%) and among families with parents without higher education (84.7%).[4] The negative labour supply consequences are focused in villages (46.4% of women) and in towns below 100,000 individuals (45.7% of women).

6 Conclusions

The recently implemented reform of support for families with children, the Family 500+ programme, has more than doubled the total value of financial assistance to families in Poland. As of April 2016 the families receive universal support of 500 PLN for each second and subsequent child in the age group between 0-17 years old. On top of this, low income families receive support for their first (oldest) child in this age group of the equivalent amount. The reform has had a substantial effect on the material situation of about 2,7 million families with children (about 63% of families with children in the relevant age group) and is expected to have a major effect on the level of child poverty (see e.g. Goraus and Inchauste, 2016). Such significant changes in the level of material conditions among families with children are also likely to have positive long-run consequences on child outcomes (e.g. Carneiro et al., 2015). At the

[4]Note that among families with children aged 0-17, about 10% have three kids or more. This means that while in absolute numbers the employment effect among these families - of about 25,000 women - is smaller compared to those with one or two children, it is roughly proportional to the overall family structure.

same time the policy has substantially changed the structure of financial incentives to work for parents given both the generous level of universal assistance and the withdrawal of the means-tested component for the first child.

In this paper we presented the first set of estimates of the potential influence of the programme on labour market decisions of parents based on a discrete choice labour supply model. The results suggest a significant degree of withdrawal from employment - in the range of 235,000 individuals - following the introduction of the reform. The simulations suggest that the employment effects would be concentrated among women (230,000), in families with one or two children and among those living in small towns and villages. We estimate that about 25,000 lone parents would decide to leave work following the introduction of the policy.

It is important to note that the estimated effects are equilibrium results and we are unlikely to observe these changes immediately after the introduction of the policy. We should also bear in mind that the simulations assume that other factors which determine employment decisions, such as gross wages or taxes, remain constant. Improving conditions on the labor market and the resulting increases in wages, additionally fuelled by significant growth of the minimum wage, may limit the negative effects of the new benefits. Similarly, reductions in the level of taxation - in particular on low incomes - would also reduce the final employment response among parents.

However, generosity of the Family 500+ benefits and the design of its means-tested component are bound to have a significant effect on labour market decisions among parents. These decisions, apart from reduced labour market activity at the time of benefit receipt, might have significant long term consequences in terms of likelihood of future employment and eventually also on the level of pension benefits. Labour market withdrawal among parents will also imply additional fiscal burden of the policy, as parents who drop out of the labor force stop paying taxes and contributions. Additionally, a higher number of families may as a result become eligible to means-tested benefits, namely the 500+ payments for the first child and even to low income support through Family Benefits.

The new policy has significantly improved material conditions of a large proportion of Polish families with children, and represents an unprecedented shift of public resources towards this group of the population. While doubts about availability of re-

sources to sustain the policy still remain, the government is convinced that the Family 500+ programme will continue to operate in the years to come. Given the initial signals from the labour market after April 2016, and the results presented in this paper, it seems, however, that the benefits may lead to increasing dependence of families on social transfers. A much more careful design of financial support for families would be necessary if the government wanted to combine the policy of improving material conditions of families with children through transfers with increases in their financial independence and long term wellbeing through greater labour market involvement of parents. There is growing evidence that to secure the most important government goal behind the new measure - namely increases in the fertility rate - higher employment needs to go hand in hand with adequate financial assistance. It seems therefore that a more complex policy mix will be necessary to provide for stable growth of Polish fertility statistics. This should involve a comprehensive approach to the redesign of existing elements of financial support for families with children and include appropriate focus on employment incentives and key labour market constraints faced by parents.

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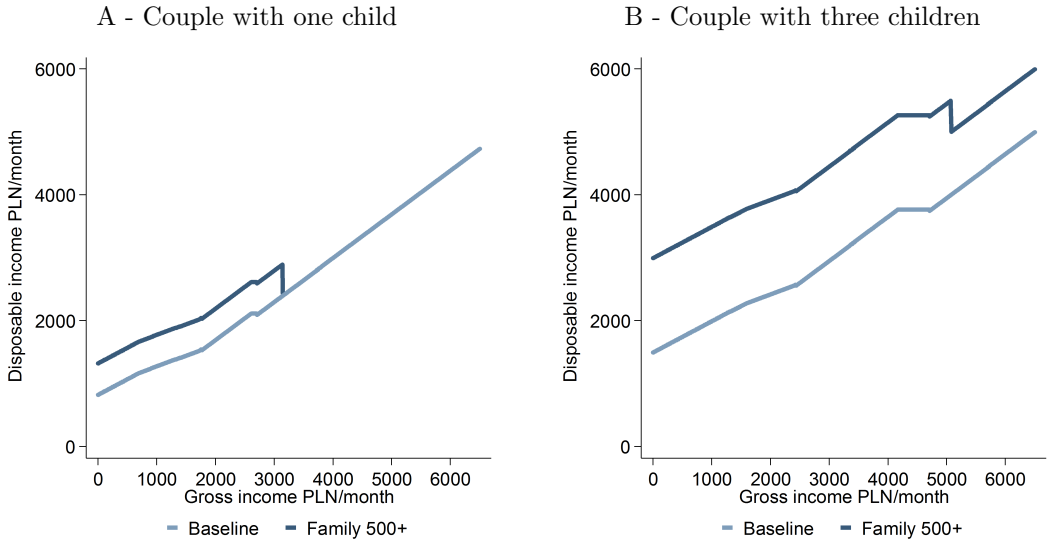
Figure 1: Family budget constraints: before and after the introduction of the Family 500+ programme



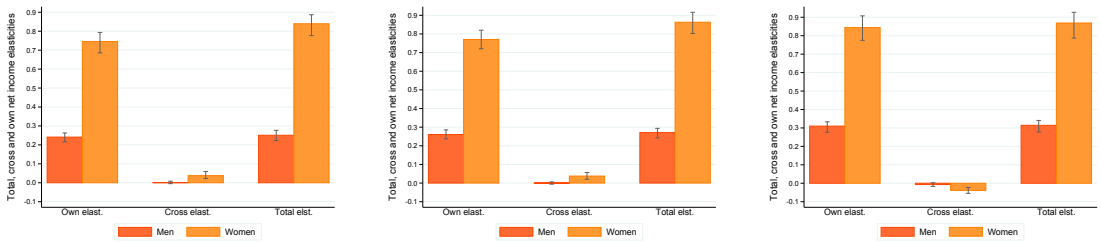
Source: SIMPL microsimulation model.

Notes: Budget constraints drawn for the first earner in the family assuming the January 2016 system as baseline.

Figure 2: Labour supply elasticities - couples with both partners flexible (Model A)

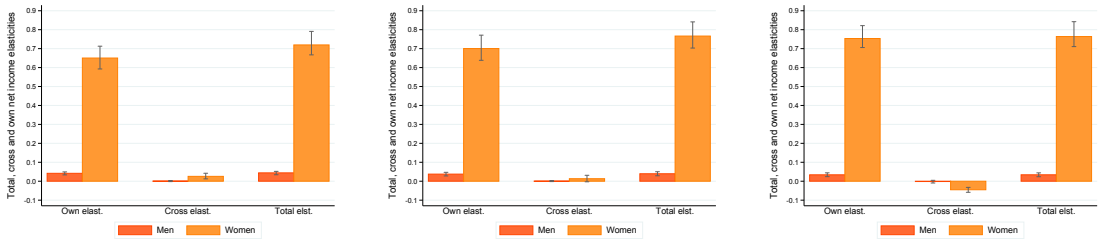
Sample 1

a - 2011 b - 2012 c - 2013



Sample 2

d - 2011 e - 2012 f - 2013



Notes: Net income elasticities calculated with reference to income changes as in equations 9 and 10. Confidence intervals computed using the parametric bootstrap method.

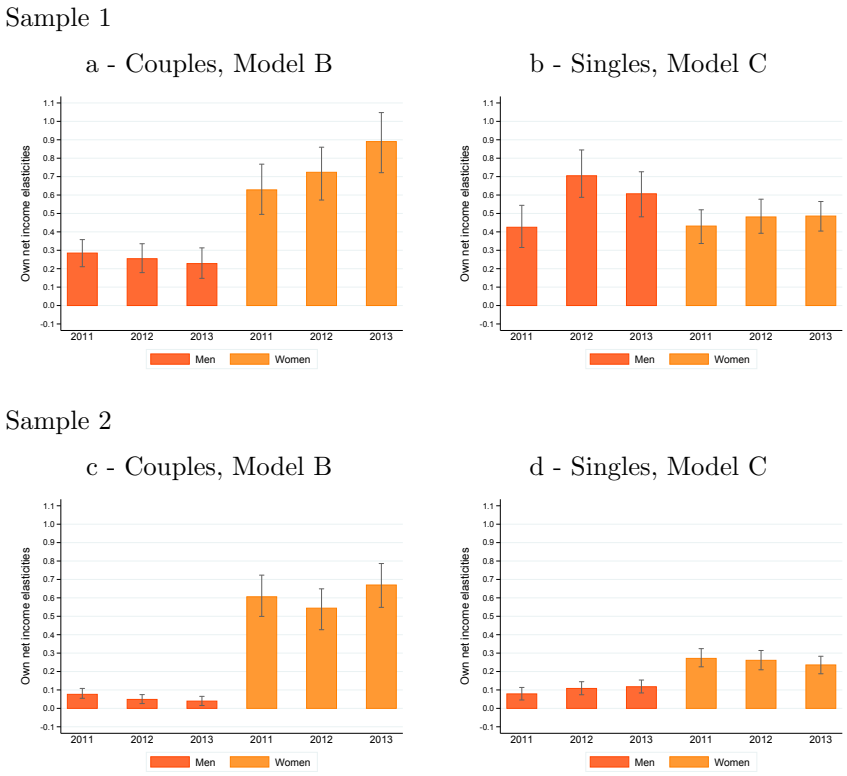
Table 1: Estimation sample sizes

	Two-flex couples	One-flex couples		Singles	
		Men	Women	Men	Women
Sample 1:					
2011	12,405	2,393	3,405	3,010	3,468
2012	12,159	2,235	3,314	3,083	3,508
2013	12,021	2,227	3,119	3,127	3,467
Sample 2:					
2011	10,992	2,965	3,780	2,465	3,140
2012	10,598	2,897	3,668	2,455	3,154
2013	10,324	2,873	3,572	2,509	3,083

Source: Based on PBS data 2011-2013.

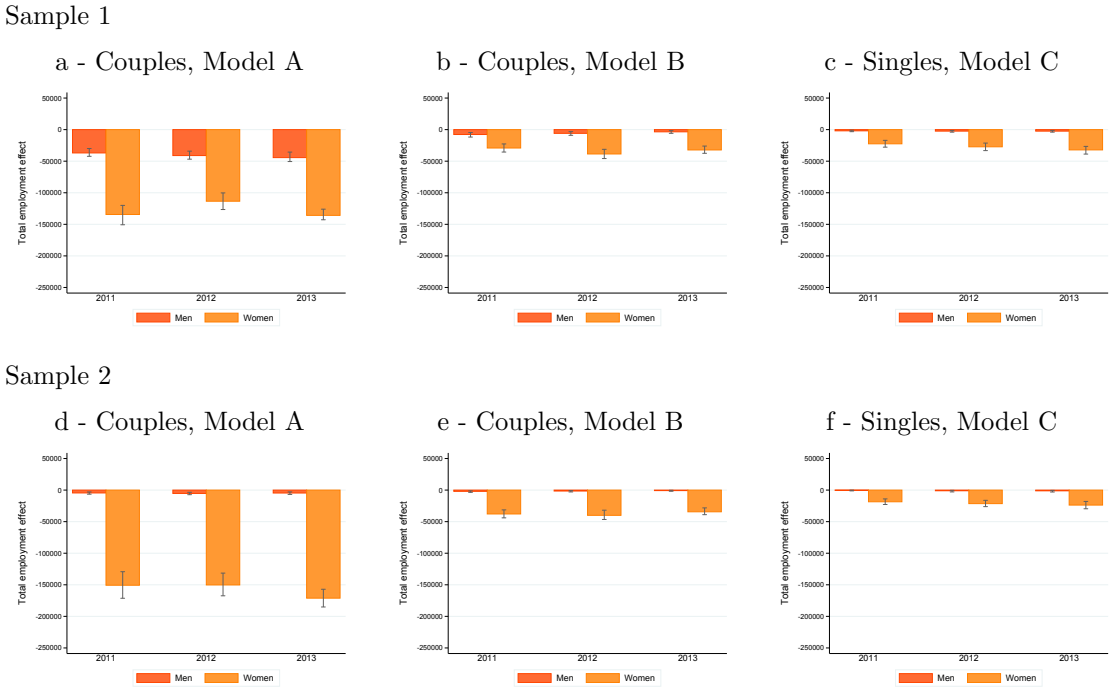
Notes: "Two-flex couples" - couples with both flexible partners, "One-flex couples" - couples with a single flexible partner.

Figure 3: Labour supply elasticities - couples with one flexible partner (Model B) and singles (Model C)



Notes: Net income elasticities calculated with reference to income changes as in equations 9 and 10. Confidence intervals computed using the parametric bootstrap method.

Figure 4: Family 500+ reform: estimates of labour supply response



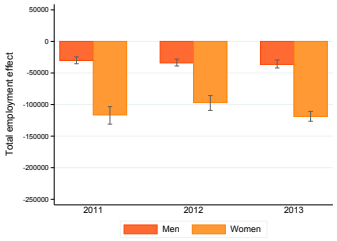
Notes: Reform effects calculated with reference to income changes between baseline and reformed systems. Confidence intervals computed using the parametric bootstrap method.

Figure 5: Labour supply response to Family 500+ by parental characteristics (Model A)

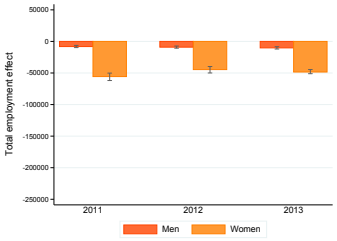
Sample 1

a - Couples with one child

b - Parents without higher education

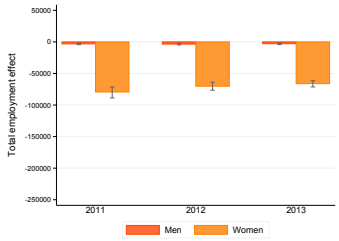


c - Father aged below 35

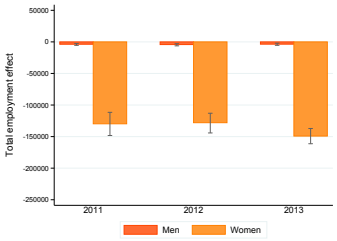


Sample 2

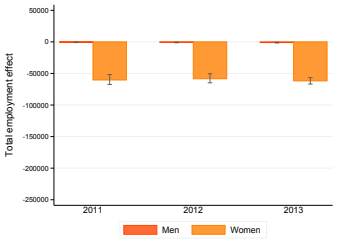
d - Couples with one child



e - Parents without higher education



f - Father aged below 35



Notes: Reform effects calculated with reference to income changes between baseline and reformed systems. Confidence intervals computed using the parametric bootstrap method.

Table 2: Family 500+ reform: labour supply response

	Couples, both flexible (Model A)	Couples, one flexible (Model B)	Singles (Model C)	Total
Sample 1				
Men	-44,300	-3,500	-2,400	-50,200
Women	-135,800	-32,200	-32,100	-200,100
Total	-180,100	-35,700	-34,500	-250,300
Sample 2				
Men	-4,700	-800	-1,200	-6,700
Women	-171,200	-34,400	-23,800	-229,400
Total	-175,900	-35,200	-25,000	-236,100

Source: Calculations using BBGD data 2013.

Notes: Figures rounded to the nearest 100.

Table 3: Family 500+ reform: labour supply response by family characteristics

By the number of children in the family:				
	One child	Two children	3+ children	Total
Men	68.7%	27.7%	3.6%	6,700
Women	43.8%	45.5%	10.7%	229,400
By higher education status of parents:				
	Either	Neither		
Men	18.1%	81.9%		6,700
Women	15.3%	84.7%		229,400
By age of the father:				
	Aged below 35	Aged between 35-47	Aged 48+	
Men	26.4%	45.0%	28.6%	6,700
Women	38.2%	50.2%	11.6%	229,400
By town size:				
	Town above 100k	Town below 100k	Village	
Men	11.6%	49.2%	39.2%	6,700
Women	7.9%	45.7%	46.4%	229,400

Source: Calculations using BBGD 2013 data.

Notes: Absolute numbers rounded to the nearest 100.