Fiscal systems and female employment in Europe

Francesca Bettio and Alina Verashchagina

November 2009

EU Expert Group on Gender and Employment (EGGE)

The national experts and co-authors (* indicates non-EU countries)

Ingrid Mairhuber (Austria)
Danièle Meulders (Belgium)
Iskra Beleva (Bulgaria)
Chrystalla Ellina (Cyprus)
Alena Křížková (Czech Republic)
Ruth Emerek (Denmark)
Reelika Leetmaa and Marre Karu (Estonia)
Hanna Sutela (Finland)
Rachel Silvera (France)
Friederike Maier and Andrea-Hilla Carl (Germany)
Maria Karamessini (Greece)
Maria Frey (Hungary)
Lilja Mósesdóttir (Iceland*)
Ursula Barry (Ireland)
Francesca Bettio & Alina Verashchagina (Italy)
Ulrike Papouschek (Liechtenstein*)
Ruta Braziene (Lithuania)
Robert Plasman (Luxembourg)
Frances Camilleri-Cassar (Malta)
Anne Lise Ellingsæter (Norway*)
Ania Plomien (Poland)
Virgínia Ferreira (Portugal)
Elena Zamfir (Romania)
Magdalena Piscová and Miloslav Bahna (Slovakia)
Aleksandra Kanjuo Mrčela (Slovenia)
Elvira González Gago (Spain)
Anita Nyberg (Sweden)
Janneke Plantenga (The Netherlands)
Colette Fagan (United Kingdom)

This report was financed by and prepared for the use of the European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities. It does not necessarily reflect the opinion or position of the European Commission, Directorate-General for Employment, Social Affairs and Equal Opportunities. Neither the Commission nor any person acting on its behalf is responsible for the use that might be made of the information contained in this publication.

Table of contents

Country abbreviations

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HU	Hungary
IE	Ireland
IS	Iceland
IT	Italy
LI	Liechtenstein
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	The Netherlands
NO	Norway
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
SE	Sweden
UK	United Kingdom

List of Tables

Appendix of Tables

List of Figures

Appendix of Figures

Executive summary

Before the economic crisis set in, there was evidence of some convergence on the Lisbon target employment rate for women (Eurostat Statistics in Focus 99/2008). Nevertheless, serious disparities persist across European countries and regions, and the crisis is hampering progress. In the second quarter of 2009, just two years away from the final Lisbon deadline, 13 Member States fell short of the target. Some of the inter-country disparities in women's employment hide segments of informal labour; others mainly reflect structural, regional imbalances; yet others stem from inadequate incentives: work may not pay enough or only some types of work do so, e.g. part-time work or so-called mini jobs. Large and growing segments of female labour, such as lone mothers, continue to face high risks of 'in-work' poverty.

The tax and benefit system is an important policy tool for re-shaping incentives to work, addressing in-work poverty or ensuring adequate income protection. Taxation policy has traditionally addressed fairness and other issues of redistribution through progressivity and tax deductions. However joint taxation systems where taxes are assessed against the income of the couple rather than that of the individual may discourage the labour market participation of the female partner when the tax schedule is progressive. The 1984 study of the European Commission (EC 1985) was one of the first official documents to bring attention to this fact and it was instrumental in persuading several countries to switch to individual taxation.

The change brought by the transition to individual taxation, however, was often offset by an array of allowances and benefits which, in the attempt to favour income redistribution between households, ended up reintroducing biases in favour of the traditional division of labour. At the same time, success in encouraging several Member States to opt for individualization of the tax unit temporarily diverted attention from gender issues in taxation. In view of the need to address persistent labour market inequalities and the urgency to augment female employment these issues should be brought back to the fore in European taxation policy.

This report revisits the issue along different dimensions:

- It first looks at potential gender biases in fiscal rules and practices, understood as ways in which the design features of income taxation and benefit systems hinder the pursuit by

women and men of economic independence via participation in the labour market, or perpetuates inequalities of labour market outcomes between men and women.

- It investigates the actual impact of existing regulations on the incentives to enter work and on income protection outcomes for women. This is done by means of simulations and by focusing on specific target groups.
- It finally evaluates from a gender perspective recent tax reforms in Member States, as well as promising directions for future reforms.

Throughout the report, the analysis is carried out chiefly on the supply side, i.e. taxes and benefits accruing to the workers, not the employer. The demand side is part of the broader discussion but not of detailed analyses. This should in no way be taken to imply that addressing the supply side is more effective than engaging with the demand side.

Gender biases. Drawing from the existing literature and the evidence made available by the national experts, the first chapter of this report illustrates how current tax and benefit systems reflect policy decisions influenced over the years by prevailing ideologies which may have generated gender bias.

Explicit bias has generally been removed from current tax codes, but a few instances can still be found. Malta and Greece offer examples of traditional bias, e.g. when a Maltese married man with a dependent wife is entitled to a higher minimum pension compared to other beneficiaries. In Denmark and, until recently in Sweden, the payment of the child allowance to 'mothers' rather than 'parents' or 'the main carer' might be seen as an instance of 'reverse bias', although it simply responds to the need to ensure that the money is received by the actual carer.

Implicit gender bias - i.e. rules that, in practice, put women or men at a disadvantage - is much more widespread. The working taxonomy used in this report distinguishes among 'secondary earner bias', implying that the second income within a couple – usually that of the woman - faces higher rates; 'unpaid work bias', implying differential treatment between paid and unpaid work; 'bias in tax compliance', implying a differential risk for men and women of disappearing into the grey or black labour market in an attempt to evade taxes; and 'allocation bias', implying differential treatment between men and women as tax payers or recipients of benefits.

The secondary earner bias and the unpaid work bias carry the highest risks for the extent and the quality of women's integration into the labour market. The within-household gap in earnings is still wide, and a considerable proportion of women can still be classified as secondary earners,

although two-earner couple households are now a large majority within the European Union. On the one hand, more than two thirds of all households comprising couples with or without children currently rely on double earnings in the 26 countries included in the EU-SILC database. On the other hand, the share of couples where the female partner does not earn at all or earns significantly less (i.e. contributes less than 45% to the combined earnings) ranges between 53% in Slovenia and 81% in Austria. The (non-weighted) average for the 26 countries in the EU-SILC database is 69%.

The secondary earner bias is inherent in joint taxation systems, and the latter (generally the income splitting variety) are in place in several Member States. In France, Liechtenstein, Luxembourg and Portugal, couples are jointly assessed. Ireland and Germany operate joint taxation, respectively, with an option for individual taxation and the right to be individually taxed when this is more advantageous; conversely individual taxation is the default option in Spain and Poland, but the option of joint assessment is offered. Elements of jointness remain in some income tax codes for which the individual is the unit of taxation – the Belgian, Estonian, Greek, Icelandic and Norwegian codes – some of which are minor while others matter. The remaining countries enforce individual income taxation without exceptions.

Even where the tax code is individualized, the benefit system is often not so, or not entirely. As documented in the first chapter, the large majority of the countries with fully individualized taxation use family income to assess the amount of two or more benefits, especially social assistance and housing benefits, which are important benefits. While it is well understood that assessment against family income answers the need to channel benefits towards less affluent households, its gender implications are often discounted.

Main examples of unpaid work bias are the dependent spouse allowance and the tax treatment of childcare expenses. Only a minority of countries allow for significant deductions of out-of-pocket childcare expenses via tax credits or in other forms. Scandinavian countries ensure major deductions ‘at source’ by offering universal rights to child care with heavily subsidized fees.

The issue of tax compliance among women and men has an important bearing on employment, because a critical channel for tax evasion is irregular, unreported or hidden employment. According to the literature surveyed in the national reports and summarized in the first chapter, irregular employment is still rather widespread in Southern European countries such as Greece,

Italy, Malta, Portugal and Spain, and in Eastern European countries such as Bulgaria, Estonia, Hungary and Poland. With the caution warranted by limited and fragmentary research on the issue, the evidence available for Bulgaria, Estonia, Greece, Hungary, Ireland, Italy, Norway, Poland, Portugal, Spain, Sweden and the UK suggests that (i) women are not systematically overrepresented in the black or grey labour market; (ii) however, they are less likely than men to combine regular and irregular work; (iii) irregular female work is more frequent at low levels of earnings; (iv) high monitoring costs, high or joint taxation, benefits assessed against family resources may all encourage irregular employment, but they are not the only factors at work. OECD evidence for Italy suggests, in particular, that fiscal drag can be important at low levels of earnings where hidden female employment is found more often.

In some important respects, the current design of income replacement provisions in the event of unemployment may be said to reflect the old stereotype of a male primary earner with a continuous, full-time life cycle profile. Owing to the increase in double earning and the expansion of atypical employment – temporary contracts in particular – the model has become obsolete for men and women. But it still remains more unfavourable to the latter.

Eligibility conditions in terms of minimum work requirement and benefits proportional to previous earnings often give rise to *de facto* differential treatment between men and women (allocation bias). All European countries grant unemployment benefits on the basis of these two principles, and only seven countries offer flat-rate (insurance-based) benefits – Greece, Poland and the UK – or quasi-flat rate benefits on account of non-strict proportionality with earnings – Belgium, Denmark, Ireland and Spain. First-job seekers – a relatively feminised group failing to meet the basic eligibility conditions for insurance-based benefits – are specifically targeted for financial support only in Finland, although here too restrictions apply. In the majority of other countries, they rely on provisions of social assistance which are less generous and are means-tested on family income.

The target groups. From a labour policy perspective, taxes and subsidies matter not only because they change income once it has been earned, but also because people anticipate their impact on income and accordingly decide whether and how much to work and to earn. At the decision-making stage, however, reasons other than taxes and benefits favour differential labour market attachment between groups, where attachment refers to employment continuity as well as

the number of hours worked. At the same time, some groups are more likely than others to alter their work commitment if taxes or benefits change their net earnings, i.e. they are more responsive to wage and fiscal stimuli. Differences in labour market attachment and in employment responsiveness are especially marked between men and women, but they may also be very pronounced among different groups of women.

Analysis of the actual impact of tax and benefits regulations, including biases, is therefore best conducted on clearly identified groups. The second chapter of this report has identified possible target groups based on employment indicators and on responsiveness to fiscal stimuli. The candidate groups include low-educated women, older women, (partnered) mothers of young children and single mothers. These last are more at risk of in-work poverty than employment exclusion, while the former tend to exhibit the largest employment gaps. Unemployed women represent an additional target group on account of their higher risk of inadequate income protection compared with men.

With the possible exception of single women, country-level research indicates that all these target groups exhibit comparatively high responsiveness to changes in net earnings with respect to hours of work or the probability of entering work – the so-called labour supply or participation elasticities. In other words, they are more likely to revise their decisions about whether or not to work and how many hours to offer in response to changes in net earnings, which makes them potentially more responsive to tax-benefit policy.

However, there are important differences among countries and groups of women. Across countries, the average woman is still more responsive to changes in net earnings than the average man, despite progressively higher female integration in the labour market. In fact, the largest gender differences in responsiveness are between married women and men, and they concern decisions on whether or not to take up employment, as well as on how many hours to offer. In contrast, there is hardly any difference between single men and women.

At the same time, progressive labour market integration is diminishing the strength of women's response in quite a few countries, especially in Continental and Scandinavian ones. Research on Austria, Belgium, Germany (the Eastern more than the Western part), Norway, Poland, Portugal and Sweden has found that if, say, a tax reform were to increase net earnings by 1 percent, the probability of taking on employment or of increasing hours of work would increase by less than

half a percentage point even among married women. In countries with low female employment, responsiveness is generally higher, although not consistently so.

Among women, partnered mothers with (small) children, poorly-educated women, older women and, to a lesser extent, lone mothers exhibit above-average responsiveness in most countries. The highest responsiveness is generally found at the bottom of the distribution of earnings for all groups. Depending on the country, these groups overlap largely or in part with those with lower labour market attachment or which are at risk of in-work poverty.

Labour market impact of taxes and benefits. Given large differences among countries and groups in the degree of labour market attachment and in responsiveness to earnings and fiscal stimuli, the OECD tax and benefits model has been used in the third chapter of this report for exploratory analysis of the impact of taxation on a country-by-country basis. The analysis focuses on three groups: mothers of two young children who contribute less than 45% to the combined earnings of the couple; lone mothers with two children; and single, unemployed women and men. The first group typifies secondary earners, the second epitomizes working women exposed to the risk of poverty, and the third accounts for an important segment of the unemployed. The findings are of interest in their own right but can also be used to enrich the set of indicators adopted to monitor financial attractiveness and employment inclusion in the National Reform Programs.

The first question that has been investigated is the extent to which work 'pays' for female secondary earners. The general finding is in line with those reported by OECD sources, namely that, before child-care expenses, work pays even for the 'average' secondary earner. Average Effective Tax Rates evaluated at mean earnings for the woman are below 50 percent in all 26 EU-SILC countries but 1, and below 30 percent in 15 countries. Also, the median value of the Marginal Effective Tax Rate evaluated between zero and average earnings is below 50 percent in 23 out of 26 countries, and below 30 percent in 14. [For a small increment in gross earnings the Marginal Effective Tax Rate shows what part of the increment is "taxed away" by taxes, social security contributions and any withdrawal of earnings-related social benefits. It is called Average Effective Tax Rate when computed for transitions from inactivity or unemployment into work at a given level of earnings.]

There are, however, three crucial qualifications to this general finding. First, the expectation that women are actually more discouraged from increasing work effort in joint taxation countries receives qualified support from the simulations carried out in this report, and stronger support from country level research. We found that the median value of the Marginal Effective Tax Rate (evaluated between zero and average earnings) is 13% higher in the 5 countries that feature joint taxation as the mandatory or default mode (Germany, France, Ireland, Luxembourg and Portugal) but more mixed results obtain at other levels of earnings. Research for Germany, France and the Netherlands indicates that reforms of the tax code towards greater individualization increase the likelihood for women to be in employment or to work longer hours, although the estimated order of magnitude varies across countries and with the research methodology.

A related qualification is that fiscal incentives are actually geared to part-time work in several countries. The Marginal Effective Tax Rate on initial earnings bears a positive and statistically significant relation with the incidence of part-time work. The correlation coefficient between the median value for the Marginal Effective Tax Rate (between zero and average earnings) and the incidence of part-time work among secondary earners is 0.46, and it is statistically significant at conventional levels. However, the long-standing debate on whether and to what extent part-time is to be encouraged has clarified that (a) preferences about part-time differ across countries and (b) it is important to distinguish between long part-time and very short hours or mini-jobs, for it is the latter that often trap women in low pay, employment exclusion, or poverty. Accordingly, any revision of the fiscal incentives to work part-time should be nuanced across countries.

A final, but very important qualification to the general finding that work pays for secondary earners is that it may not pay enough once child-care expenses have been included in the calculations. The specific finding is that the higher the implicit tax imposed by childcare expenses on mothers who wish to work, the higher the employment penalty associated with motherhood. The implicit tax imposed by motherhood is measured by the difference in the Net Income Gain (inclusive of benefits and exclusive of all taxes and contributions) before and after out-of-pocket expenses for childcare are incurred. The motherhood penalty is measured by the gap in employment rates between non-mothers and mothers of young children.

The second question addressed by means of simulations is to what extent the attempt to fight poverty among single mothers balances cash benefits against incentives to work. The findings

indicate that poverty prevention for this group currently prioritizes the traditional welfare approach over workfare in the majority of Member States. With Average Effective Tax Rates higher than 50% even before childcare expenses are factored in, single mothers face rather low incentives to enter work (at average earnings) in 18 out of the 26 EU-SILC countries, as benefits are withdrawn when they take up employment. At the same time, those who enter work at average earnings rise above the poverty line in all the countries by combining earnings and benefits.

The UK and Ireland have gone further than other countries in the adoption of the workfare approach by offering a combination of low (in fact negative) disincentives to work and high protection against poverty (for single mothers on average earnings). Reportedly, this combination is effective as long as childcare expenses are kept low or waived altogether; also, it does not avoid the risk of an employment-unemployment cycle at low levels of earnings. Finally, countries like France or Denmark indicate that different approaches can be successful: they combine good protection against poverty with high employment rates among single mothers, despite relatively high effective tax rates. The workfare perspective therefore commends itself when the unemployment rate among single mothers is sufficiently low, as it was in the UK before workfare provisions were implemented.

The final question addressed by means of simulation is the extent to which income replacement during unemployment reproduces the current disparity in pay between men and women since benefits are proportional to earnings in most countries. The simulation has been carried out for single men and women, and the findings indicate that the gender gap in the amount of (insurance based) unemployment benefits is narrower than the gender gap in earnings, but not much narrower. On average, single, unemployed women receive 11% less in benefits and 13% less in pay in the 26 EU-SILC countries considered (non-weighted average). Only in a minority of countries (Belgium, Denmark, Greece, Ireland, Poland, Spain and the UK) is the simulated gender gap in benefits zero thanks to flat or quasi-flat payment rules.

These figures for the unemployment and the earnings gap are likely to underestimate the respective values in the population at large, because differences in earnings between single men and women are known to be comparatively low. There are, therefore, reasons to reconsider benefits rules in case of unemployment.

Recent and future reforms. While the findings from the simulations underscore the importance of 'putting the gender into' fiscal policy, reforms of taxes and benefits in Member States over this decade have shown selective or little awareness of, and concern with, the potential gendered impact. The fourth and last chapter of this report surveys and discusses the main reforms to the tax and benefit systems of Member States in the current decade.

Overall, the national reports suggest that awareness of or concern with the potentially gendered impact of such reforms are not so high among policy markers but also in the population at large. A case in point is mixed interest in addressing joint taxation in countries where this option is still dominant. In fact, individualization of the tax system is no longer a priority in tax reforms. One reason for this is that countries with individualized systems are in the majority. Moreover, In the countries where joint taxation is in place there is no strong or politically explicit convergence of interests towards separate taxation. The most frequent motivation alleged for reluctance to move away from joint taxation is the risk of unfair treatment of one-earner couples, while there is little indication that issues such as those discussed in this report – the unpaid work bias or the secondary earner bias – have been adequately acknowledged in recent discussions.

The level and structure of incentives have been modified primarily by means of tax reduction and in-work benefits. In the East, where the radical tax reforms of the past five years have introduced lighter and flatter tax schedules, public debates reveal scant awareness of, or concern with, their potentially different implications for men and women. Flat or quasi-flat taxation systems have been implemented in Estonia, the Czech Republic, Slovakia, Romania and Lithuania, while Hungary and Slovenia have opted out. Reportedly, public attention has been monopolized by concerns about equity or fairness, with no clearly perceived gender dimension. Yet the reforms devised for these countries are of central relevance to women's labour market position and call for close monitoring of their impact in the years to come.

In Western Europe, the reduction in taxes or social security contributions has been less radical; but it has, arguably, paid limited attention to differential impacts across groups. According to the national reports, three fourths of the Member States have lowered tax rates, or increased non-tax allowances, widened income bands, reduced social security contributions or combined more than one such measure. Cuts have generally been moderate, but the reduction has often been across the board. With the exceptions of Iceland, Italy and the UK, taxes or social security rates have been reduced by less than 5 percentage points. Only in France have reductions been targeted on

low earners, and in Sweden reductions are officially credited with benefitting especially middle to low earners. For many of the countries offering some evidence, gains in employment have been modest, an outcome to which poor targeting has probably contributed.

Practically every country reports that child-related benefits have been topped up or newly introduced, which highlights that the childcare issue is now more prominent in the policy agendas of Member States. At the same time, with the increasing reliance on cash benefits the risk that the latter replace provisions in services or in leave time has raised concerns in more than one country – Austria and Sweden in particular – for fear that this may negatively affect female employment and hamper change in gender care roles.

In more than one country, disregard for childcare-related expenses is alleged to put the efficacy of in-work benefits at risk. To date, these benefits have been primarily targeted on disadvantaged groups – lone parents in particular – but their use is spreading to other countries and groups, such as returnees from unemployment and non-active persons or parents combining work and care. Member States with sizeable in-work benefits and for which some information is available – the UK, France and the Netherlands – consistently report important employment gains for the groups targeted. However, the quality of employment being created is controversial since part-time tends to predominate. Partial only compensation for child-care or/and partial individualization of benefits (e.g. because of means testing on family income in the UK) are alleged to be among the reasons.

The workfare approach has fostered both the introduction of in-work benefits and the revision of unemployment benefits. Reforms of unemployed benefits inspired by the approach combine tighter benefits with measures of activation, and they have been enforced in countries with comparatively generous provisions in the recent past – such as Germany, France, Austria or Sweden. Other countries, however, are joining the trend in Eastern and Western Europe. Tighter benefits have sometimes meant further restriction of access for individuals with less ‘standard’ or continuous work histories, such as women or younger workers, while activation, has sometimes translated into costly demands on the time of parents with care responsibilities. However in countries like Hungary the share of women actively searching for jobs and thus entitled to the most generous benefits has increased considerably.

If we look at trends rather than actual levels of unemployment benefits or the extent of coverage, countries in the South of Europe – Italy, Greece and Portugal – show some encouraging developments. In their attempt to catch up with the Member States with more generous or universal provisions, these countries are taking some steps towards greater standardization of payment across different groups of workers – e.g. employees of large and small firms – as well as towards wider coverage and less restrictive eligibility. In Portugal, for example, two of the groups for which future inclusion in the system is being considered are the self-employed (including entrepreneurs) and domestic workers.

National reports tend to concur that individualization of benefits in the guise of workfare has revealed important limitations for working women with care responsibilities. More in general, numerous, but often piecemeal and narrow-focused, changes in taxes and benefits over the past ten years have not really altered the basic characteristics of the current system in most (Western) Member States. In view of these limitations, can individualization of all benefits be a vision for fiscal policies in the future?

Critics of the full individualization of social entitlements object that the approach is premised on an adult worker household where both members of the couple are employed and care work is completely outsourced. Insofar as at least some care work cannot be bought or sold, it still matters who has the main care responsibility. If individualization means ignoring this responsibility, women may actually be put at a disadvantage. In principle, therefore individualization may offer an approach rich in vision for fiscal policy in the future provided that satisfactory answers can be found to the above criticism.

Another ambitious approach currently under discussion – gender-based taxation – goes beyond individualization and proposes introducing a bias in favour of women by lowering their rates in comparison to men's. This is a daring proposal that is arising considerable interest within academia and in the specialised media. However, the prospect of lowering rates for all women versus all men encounters difficulties because differences in responsiveness to changes in net earnings exist not only between men and women but also, and more importantly, among women, as shown in the second chapter of this report. While offering good 'food for thought', therefore, the proposal still raises some unresolved issues of feasibility.

Introduction

Before the economic crisis set in, there was evidence of some convergence on the Lisbon target employment rate for women (Eurostat Statistics in Focus 99/2008). Nevertheless, serious disparities persist across European countries and regions, and the crisis is hampering progress. In the second quarter of 2009, just two years away from the final Lisbon deadline, 13 Member States fell short of the target.

Some of the inter-country disparities in women's employment hide segments of informal labour; others mainly reflect structural, regional imbalances; yet others stem from inadequate incentives: work may not pay enough or only some types of work do so, e.g. part-time work or mini jobs. Large and growing segments of female labour, such as lone mothers, continue to face high risks of 'in-work' poverty. Moreover, women tend to be overrepresented among the unemployed. Men have quickly caught up with women's unemployment in the early months of the current crisis, and the male and female rates are practically equal at the time of writing, but evidence is surfacing that women are finding more difficult to go back into work (Hallgrimsson 2009). This notwithstanding, in a number of countries women are finding it still less likely to be eligible for the most generous income protection provisions, and in most countries they receive lower unemployment benefits.

The tax and benefit system is an important policy tool for re-shaping incentives to work, addressing in-work poverty or ensuring adequate income protection. Taxation policy, however, has traditionally been reluctant fully to acknowledge the importance of the gender dimension.

This is surprising in light of some well-known research findings. Variations in net (hourly) earnings, are often found to have little influence on men's decision to take up employment or remain in employment on a full-time basis. By contrast, women's choices concerning work are found to be more sensitive to variations in net earnings. In regard to employment, therefore, taxes and benefits are policy tools that can be more successfully targeted on women than on men.

At the same time, a large body of research – including the latest reports of this network (Fagan and Hebson 2006; Plantenga and Remery 2005, 2006; Bettio and Verashchagina 2009b; Villa

and Smith 2009) – documents that labour market outcomes are still disproportionately in favour of men in terms of pay, career prospects or income protection. In regard to furthering gender equality in the labour market, therefore, taxes and benefits could be used more extensively.

The 1984 study of the European Commission (EC 1985) was one of the first official documents to disclose that European tax systems discouraged female labour market participation. The document put particular blame on joint systems of taxation which manifestly favour the traditional division of labour between a male primary earner and a female homemaker or secondary earner. It was instrumental in persuading several countries to switch to individual taxation.

The improvement brought by the transition to individual taxation, however, was often off-set by an array of allowances and benefits which, in the attempt to redistribute income between households, ended up reintroducing biases in favour of the traditional division of labour. At the same time, the success in encouraging several Member States to opt for individualization of the tax unit temporarily diverted attention from gender issues in taxation. In view of the need to address persistent labour market inequalities and the urgency to augment female employment these issues should be brought back to the fore in European taxation policy.

This report revisits the issue along different dimensions. It first looks at gender biases in fiscal rules and practices, understood as ways in which the design features of income taxation and benefit systems hinder the pursuit by women of economic independence via participation in the labour market, or perpetuates inequalities of labour market outcomes between men and women.

The report then investigates the actual impact of existing regulations on work-related financialincentives and the degree of income protection against poverty or during unemployment. It does so by means of simulations and by focusing on selected groups of women, the target groups.

Using assessments by experts, the findings from the simulations and from investigation of regulatory biases, the report finally evaluates recent tax reforms in Member States from a gender perspective. Possible reform alternatives debated in policy or scientific forums are also evaluated.

The evidence from the national reports is collated with other sources in the various chapters. The first chapter tracks, classifies and discusses gender biases using the OECD database on tax and benefit systems together with the assessments by the national experts. The OECD database provides a standardized description of the tax-benefit systems across Member States.[1]

The second chapter combines employment statistics at the EU level with country evidence on the wage elasticity of the labour supply for men and women in order to identify the main target groups for tax and benefit policies. In line with the existing literature, the main groups among women are found to comprise married women with children below school age, lone mothers, low educated women and older women.

The third chapter uses the OECD tax-benefit model and the EU-SILC data on earnings to simulate work-related fiscal incentive effects on the target groups and to study the relationship between incentive effects and actual employment outcomes. Drawing from the findings in the previous chapters, the discussion in the national reports as well as specialized literature, the fourth chapter reviews the details of recent taxation reforms and their impact on women's employment, employability as well as gender equality. It also explores the potential and the limitations of selected policy approaches for the future.

In order to keep the report to manageable proportions, the focus is on income taxation and cash benefits, while other types of taxes are neglected. Also, retirement income and benefits are not part of the analysis, except for occasional reference purposes.

Throughout the report, the analysis is carried out chiefly on the supply side, i.e. taxes and benefits accruing to the workers, not the employer. The demand side is sometimes part of the broader discussion but not of detailed analyses. This should in no way be taken to imply that addressing the supply side is more effective than engaging with the demand side.

[1] http://www.oecd.org/document/3/0,3343,en_2649_34637_39617987_1_1_1_1,00.html

1. Gender biases in tax and benefit systems

Introduction

As Stotsky stated in her well-known 1997 journal article on gender biases in tax systems:

> Tax systems reflect a tapestry of decisions, made over many years. These decisions have been influenced by a variety of factors, including social attitudes about the respective roles of men and women. As a result, many tax systems exhibit gender bias—they treat men and women differently in ways that can negatively affect their decisions on whether and how much to work, their personal consumption habits, and their overall tax liability. [….] Gender bias may be both explicit and implicit. Explicit forms are specific provisions of the law that treat men and women differently. They are relatively easy to identify, since they depend largely on the language used in the tax code or tax regulations. Implicit forms of gender bias are provisions of the law that, because of typical social arrangements and economic behaviour, tend to have different implications for men and women. It is much more difficult to identify implicit gender bias, because it depends in large part on value judgments as to desirable social and economic behaviour, which may vary considerably from society to society and from one time period to another. (Stotsky 1997: 30. Emphasis added)

While the term 'bias' generally carries a negative connotation, it is used here to denote features of tax and benefit systems that yield clearly differentiated outcomes for men and women. Sometimes 'reverse gender bias' will be used to denote an outcome expected to favour women, while 'gender effects' will be used for a more generic reference, or when it is difficult to evaluate the precise impact of a given provision.

This chapter identifies and classifies gender biases in the tax and benefit systems of the Member States, discussing the potential effect on the labour market. Its main sources are the national reports and the OECD compilation of the main features of national tax-benefit systems. The first section deals with explicit biases, while the second focuses on the main forms of implicit bias, including the secondary earner bias. The summary concludes.

1.1. Explicit Bias

Glaring examples of explicit bias could be found in Europe no more than twenty years ago: only in 1993 did Ireland move from joint filing in the name of the husband, with an option for separate assessment on labour income for the wife, to an option for the wife to be the "primary taxpayer".

While major biases explicitly discriminating against women have been removed, some still persist, and a few have been introduced to empower women in their role of carers (Box 1).

Box 1. Traditional and reverse biases

Malta and **Greece** still report instances of provisions explicitly favouring a traditional division of labour between husband and wife.

- In Greece spouses are taxed separately on the basis of their respective incomes but they file a joint tax return. Although each spouse is formally held responsible for payment of the tax on his/ her income, the husband is formally responsible for submitting the tax return, and is the recipient of any refund or any claim for outstanding tax balances. Thus if she, the wife, is entitled to a refund she must claim it from the husband. An additional example from the Greek tax code is that of an income disregard, to which only fathers are entitled. For large families the amount involved is not negligible because it starts from €10000 for a family of three children or more. At the same time, mothers of more than two children are granted several tax allowances.

- The Maltese tax code retains more than one provision formally addressed to the male or the female member of the couple: a married man with a dependent wife is entitled to a higher minimum pension compared to all other beneficiaries; within married couples unemployment assistance is payable to the head of the household; finally, single or widowed persons are entitled to 'social assistance for carer' if they care for a relative on a full-time basis and the household does not include another person who is not in employment.

As of 2005, however, Maltese women, and not men, are entitled to a tax credit in favour of those who return to the labour market. This may be viewed as an instance of 'reverse gender bias' purporting to increase female employment.

Other instances of reverse bias are enforced in Northern countries with the manifest aim of empowering women in their capacity as main carers:

- In **Denmark** the child allowance is paid to the mother.
- **Sweden** has only recently moved from mandatory payment of allowance to the mother of the child to leaving the choice of the recipient to the couple, while maintaining the mother as the default option.

Direct payment to the mother is not entirely uncontroversial, even among feminist economists. It is feared that the practical concern to ensure that payment accrues to the actual carer may turn into an obstacle against change in traditional family roles. If the sum involved is large, paying mothers may not only entrench the idea of a female carer but could also discourage them from engaging in (additional) paid work. For this reason payment in several countries is to the 'main carer' instead of the 'mother'.

Source: national reports

1.2. Implicit bias

Implicit biases and, more generally, gender fiscal effects are pervasive and practically inevitable. *De facto* gender tax neutrality is rarely possible, since men and women exhibit dissimilar patterns of consumption, saving and investment, as well as the well-known differences in paid and unpaid work.

> *Taxation, with very few exceptions, alters both disposable income and the relative prices of both inputs to production and consumer goods, and thus affects a wide range of socio-economic decisions. For example, decisions by men and women about the time they spend in formal, informal and unpaid work are influenced by the impact of taxation on wages and disposable income. Decisions about savings, consumption and investment are also affected by taxes. (Barnett and Grown 2004: 20)*

Manifest examples of non tax neutrality outside income taxation are excise taxes on alcohol or tobacco, which are likely to fall disproportionately on men, or import duties likely to have a different incidence on products originating from female- and male-dominated industries. The balance among consumption, income, property or corporate taxes in total fiscal revenue inevitably raises gender issues.

Research has just started 'getting gender into' studies of the fiscal system, but many implications are still poorly known or understood. Ideally, one should look for gender biases and effects across the entire tax and benefit system. At the same time there are strong reasons for restricting the scope of the investigation.

One of the reasons for adopting a narrower scope in this report is to keep it to manageable proportions. As stated in the introduction, the focus is primarily on income taxation and cash benefits, but retirement benefits are not considered. As noted, moreover, this report looks primarily at the supply side, whereas taxes and benefits for employers are largely neglected.

The main reason for narrowing the scope is that the neutrality of (or a 'reverse bias' in) the tax and benefit system warrants investigation only if it is deemed to pursue clear, desirable goals. According to labour supply theory, taxes and benefits matter inasmuch as they influence actual take-home income, which in turn shapes decisions about work. This report's search for biases

therefore prioritizes analysis of the ways in which the taxation of labour income and the system of benefits may or may not facilitate the pursuit by women of economic independence, or reduce inequality in labour-market outcomes between men and women.

The literature is scant, and no agreed taxonomy of gender biases and effects yet exists. We propose a taxonomy comprising four non-mutually exclusive types :

- *Secondary earner bias*, implying higher taxation for women within couples;
- *Unpaid work bias*, implying differential treatment between paid and unpaid work;
- *Bias in tax compliance*, implying a higher risk that women will disappear into the grey or black economy in an attempt to evade taxes;
- *Allocation bias*, implying differential treatment between men and women as tax payers or recipients of benefits.

The secondary earner and unpaid work biases are very common, potentially important for choices about work and positively inequitable. Biases in tax compliance also matter for employment patterns, because they impinge on the divide between regular and irregular work, but they are relevant only where tax evasion is widespread. Finally, allocation biases do not always influence employment patterns, but they may distort the distribution of fiscal rights, responsibilities, and benefits, implying further inequities.

1.2.1 Secondary earner bias

There is no single definition of 'secondary earner'. In the sociological literature, secondary is used for a truly 'marginal' earner, financially dependent on another person or on public support, with intermittent or part-time employment (Hakim 2004: p. 66). In fiscal codes a secondary earner is either the member of the couple with the lower taxable income in the reference year or the one who returns to paid work during the year after a spell of inactivity/unemployment if both members earn a similar amount.

Women have come a long way from the days when they were stereotyped as 'pin money' earners, so that the view of secondary earners as truly 'marginal' needs updating. However, the within-household gap in earnings is still very wide, and a considerable proportion of the female population fits the tax code criterion of secondary earner.

Table 1 considers couples in the EU countries and classifies them by the share of income earnings contributed by the female partner. The classification specifies:

- one-earner couples where she does not work ('female partner has no earnings')
- couples where both work but she contributes less than 45% of the combined earnings ('female partner earns less')
- couples where both work and she earns between 45% and 55% of combined earnings ('equality in earnings')
- couples where both work but she earns more than 55% of combined earnings ('female partner earns more')
- one-earner couples where she is the only earner ('female partner is the only earner')

Table 1. Percentage distribution of couples within the EU by share of female earnings, 2007

Country	Number of observations	Mean dependency	Woman has no earnings (%)	Woman earns less than man (%)	Equality in earnings (%)	Woman earns more than man (%)	Woman the only earner (%)
AT	4,222	0.484	28.09	52.77	11.42	5.54	2.18
BE	4,062	0.336	22.85	46.63	18.51	7.68	4.33
CY	2,910	0.422	27.56	46.94	15.05	8.87	1.58
CZ	6,100	0.325	22.92	46.26	18.23	7.61	4.98
DE	8,798	0.429	24.23	51.19	10.23	8.80	5.55
DK	5,458	0.178	7.48	51.81	26.16	10.74	3.81
EE	4,258	0.282	17.52	49.55	15.64	11.55	5.73
ES	8,606	0.465	35.00	39.69	14.64	7.55	3.11
FI	7,024	0.194	9.31	53.27	17.03	13.41	6.98
FR	7,428	0.295	17.85	49.30	17.45	10.55	4.85
GR	2,316	0.516	42.40	33.85	15.80	6.04	1.90
HU	5,830	0.249	25.66	33.83	17.46	13.38	9.67
IE	2,716	0.448	32.03	44.04	8.98	9.20	5.74
IS	2,882	0.321	7.91	64.26	16.45	9.51	1.87
IT	9,954	0.484	37.53	39.02	13.40	6.31	3.74
LT	3,590	0.203	16.10	44.57	14.60	17.88	6.85
LU	3,538	0.435	31.15	44.04	12.83	8.03	3.96
LV	2,586	0.242	14.08	49.11	15.62	16.63	4.56
NL	9,130	0.437	19.93	60.28	10.78	5.76	3.15
NO	5,410	0.272	10.24	59.19	16.04	9.65	4.88
PL	9,702	0.301	31.48	32.61	13.61	12.12	10.18
PT	2,578	0.332	24.98	42.75	17.15	10.16	4.97
SE	6,116	0.214	8.70	54.45	20.05	11.77	5.04
SI	7,614	0.136	13.05	39.93	20.33	19.02	7.67
SK	3,788	0.260	15.84	48.15	23.18	9.50	3.33
UK	6,020	0.338	18.41	53.32	13.42	9.97	4.88

Note: *we consider only couples with at least one working partner, and exclude those in which at least one partner is self-employed or retired.

Source: Authors'calculations on EU-SILC 2007

Women's advances in the labour market are underscored by the considerable proportion of couples in which the female partner earns more, or in which there is near equality of earnings between the partners (a five percent tolerance band around the 50% mark has been considered in order to allow for measurement error, temporary differences, etc.). This proportion ranges from a minimum of 16.54% in the Netherlands to a maximum of 39.4% in Slovenia, the simple average across the 26 countries in the table being 26.2%. However, this leaves between 53.0% and 80.9% of couples (respectively in Slovenia and Austria) where the female partner earns less or does not earn at all. Even if a more stringent criterion is used to identify secondary earners, e.g. cases where she earns at most 40% of combined earnings, the couples exhibiting significant disparities in earnings would still be likely to account more than two thirds of the total in countries like Luxembourg, Spain, Greece, Italy, Germany, Ireland, Austria and the Netherlands.

Being a secondary earner matters in any fiscal system with some progressivity and some jointness. Let us clarify the issues involved by means of a very simplified example. Imagine a married couple-and-child household where, initially, she stays at home to look after the child while he works full time and earns €30,000 per year. Subsequently, she enters the labour market and earns €15,000 per year.

Consider a progressive and a flat rate personal income schedule. The first schedule has two rates, respectively 15% up to €15,000 and 30% on higher incomes; the second taxes all income at 20%. Finally, distinguish between joint taxation and individual or separate taxation. Under separate taxation, the unit of taxation is the individual, and his and her earnings are counted and taxed separately. Under joint taxation, the unit of taxation is the household and taxable income is computed as some function of the couple's joint earnings. Let us assume the simplest of cases, i.e. a full aggregation system where the different earnings are simply summed up.

If income is taxed uniformly at 20% then the combined tax liability of the two spouses is €9,000 under joint or under individual taxation, and it does not really matter who enters work first. In other words, the unit of taxation is inconsequential if the tax schedule is flat.

With the progressive tax schedule, by contrast, the couple would still pay €9,000 under individual taxation, the female spouse contributing €2,250 in taxes and the male spouse

contributing €6,750. Under joint taxation, however, he would continue to pay €6,750, but she would now be liable for €4,500, and her average tax rate would be 30% compared to 22.5% for him. Thus the combined effect of progressivity and joint assessment of tax liability is to raise the tax burden for the secondary earner in the couple.

Joint taxation rarely exists in the form hypothesized here because it would yield disadvantages over individual taxation and no advantage if the tax schedule were progressive: as just noted, if her and his earnings were simply summed up to determine taxable income, their combined tax liability as well as her own tax liability would be higher.

For this reason, joint taxation often takes the form of so-called income splitting. In a pure splitting system, partners are treated as if each earns a half share of the combined income within each tax bracket. This is equivalent to multiplying the individual rate schedule by 2. Under pure splitting, our progressive schedule example would thus feature a 15% tax rate between €0 and €30,000 and a 30% rate above €30,000. Note that this does not eliminate the secondary earner bias: the combined liability for the two spouses is now down to €9,000, but each of them contributes €4,500 despite the fact that she earns one half of what he does.

Income splitting can be adjusted in order to reduce the secondary earner bias, but not to cancel it out. For example, if the individual tax rate is multiplied by 1.7 instead of 2, then the new schedule would feature a 15% rate up to €25,500 earnings, and 30% above. The combined liability would rise slightly to €9,675 compared to the full splitting but the distribution of the tax burden between the spouses would be more equal: he would contribute €5,175 while she would pay €4500, with a consequent reduction in her surtax.

Finally, couples may be given the option of choosing between individual taxation and splitting. This clearly reduces the incidence of the secondary earner bias but, once again, it does not remove it. Thus no form of joint taxation avoids the pitfall of secondary earner bias.

The EU study carried out in 1984 (EC 1985) was among the first official documents to show how widespread the secondary bias was at that time. It made clear that European countries could not afford to discourage female participation and was instrumental in persuading several countries to revise their codes and switch to individual taxation. Partly thanks to the stance taken by the EU, joint taxation is far less common now than it was in the eighties. Nevertheless, in

France, Liechtenstein, Luxembourg and Portugal couples are jointly assessed. Ireland and Germany feature joint taxation, respectively with an option for individual taxation or the right to be individually taxed when this is more advantageous; conversely individual taxation is the default in Spain and Poland, but an option for joint assessment is offered. Some elements of jointness remain in the Belgian, Estonian, Greek, Icelandic and Norwegian income tax codes, although the unit of taxation is the individual (see Table 2).

However, joint taxation of income is only part of the problem. Even where the tax code is individualized, the benefit system is often not so, or not entirely. Child related allowances, credits or benefits, social assistance and housing allowances are often assessed against family, not individual, income. Eligibility for benefits is also frequently means tested on a family basis; Last but not least, several tax systems grant a 'non working spouse allowance' which is lost if the spouse in question takes up employment. Thus, when the secondary earner enters work or returns to work, the increase in family income causes a reduction or removal of benefits which is equivalent to an additional tax. Thus the secondary earner bias is reintroduced through the back door of benefits and allowances.[2]

As shown in Table 2, the overwhelming majority of the 15 countries with individual taxation use family income to determine the amount of two or more benefits, especially social assistance and housing benefits, which are among important benefits (Table 2).

[2] To clarify with numbers, reconsider our running example of individualized taxation in a progressive schedule regime. Now improve the realism of the example with the assumption that the couple is eligible for family allowances and the latter represent 6% of family income up to the threshold of € 30,000 and 3% afterwards. When she enters employment she will actually disburse €2,250 in taxes (0.15*€15,000), but her taking up employment will also cause family allowances to decrease from €1800 to €1350: the latter loss of €450 raises her effective tax rate from 15% to 18%.

Table 2. Tax and benefit system in Europe

Country	Individual taxation (1)	Joint taxation (2)	Transferability of own income allowance (3)	Dependent spouse allowance/ credit (4)	Benefits assessed against family income						
					Universal social assistance (5)	Own income allowances/ credits (6)	Child allowances/credits or benefits (7)	Childcare allowances/credits or benefits (8)	Housing benefits (9)	In-work benefits (10)	Unemployment benefits (11)
AT	+			+	+		+	+	+	None	
BE	+	+[1]		+	+	+			None		[12]
BG	+				+	None	+	None	None		
CY	+			+[13]	+			+	+	None	†‡
CZ	+	2005-07		+	+		+		+	+	
DE	+[14]	+			+	+	+	None	+		
DK	+		+	+	+			+	+	None	
EE	+	+[2]	+		+	+			+	None	
ES	+	+[3]		+	+	+	+	+	+	None	
FI	+				+			+	+	None	
FR		+			+	+			+	+	
EL	+	+[4]	+		None		+	+	+		
HU	+				+		+	+	+		
IE	+[5]	+			+			+	+	+	†‡
IS	+	+[6]	+		+	+	+		+	None	
IT	+			+	None	+	+	+	+	+	
LI		+			+	None	+	+	+	+	†‡
LT	+				+				+	None	
LU		+			+			None	+	None	‡
LV	na	na	na	na	na	na	na	na	na	na	na
MT	+[7]				+		+	None	+		+†
NL	+			None[10]	+		+	+	+		
NO	+	+[8]	+		+				+	None	‡
PL	+	+[9]			+		+		+	None	
PT		+			+	+	+	None	+		
RO	na				+			na	+	na	
SE	+				+			+	+		
SI	+				+			+	+	[11]	
SK	+			+	+				+	None	
UK	+				+			+	+	+	

Note: '+' means Yes (column 1-4)/Assessed against family income (column 5-11); 'blank' means No/ Not assessed against family income; 'None'- there is no this type of benefit; na – information is not available. [1] couples file a joint return and are jointly assessed in case of insufficient income from self employment of one spouse; [2] married couples can file a joint return. Because, however, the system has a tax allowance and a flat rate, the implications are limited to the transferability of the allowance and a few other benefits; [3] family units have the option of filing their tax returns on a joint basis; [4] family firms file a joint tax return; 5 either spouse may opt for separate assessment, in which case the tax payable by both spouses must be the same as would be payable under joint taxation; [6] non wage income of married couples is taxed jointly; [7] each person is considered individually for tax purposes unless married and living together with his/her partner and opting for a married rate tax computation; [8] joint taxation is also possible, and is more favourable if one of the spouses has little or no own income; [9] couples have the option to file a joint tax return; [10] income based supplementary tax credits for the dependent spouse will be introduced in 2009; [11] only for disabled; [12] depends on family status; [13] only in case of unemployment or receipt of social assistance; [14] couples have the right to be taxed individually when this is more advantageous to them; †/‡ there is a supplement for dependent spouse/children.
Source: OECD 2007 country chapters and national reports

1.2.2 Paid work bias

It is interesting to enquire why individualization has not been pursued fully, with the result that in some individualized tax systems the secondary earner biases are not much weaker than in countries enforcing the splitting system (see next section). A thought-provoking answer offered by McCaffery (2008) is that the rhetoric of one-earner families being treated 'unfairly' under individualized taxation remains popular and has led to renewed attempts to 'compensate' these families by offering an array of benefits, allowances, tax breaks and so on.

The argument that one-earner families are treated 'unfairly' by individualized taxation systems deserves a closer look. According to the *'couples neutrality' principle*, the distortion is real. This principle states that a two-earner couple with the same combined earnings as a one-earner couple should pay the same amount in taxes. If the tax schedule is progressive, however, the latter pays more under individual taxation. Reconsider the example of two spouses earning €45,000 between them and facing a progressive schedule of 15% up to the €15,000 slot and 30% above. If the system of taxation is individualized and the two spouses share earnings equally, the combined tax liability is €9,000, while it rises to €11,250 when he is the sole earner. Thus individualized system of taxation avoids the pitfall of secondary-earner bias but seems to penalize one-earner versus two-earner couples.

At the same time, the couples neutrality principle assumes that within one-earner families the 'non-earner' is truly inactive, i.e. does not produce goods or services of use to the household. But if this assumption is questioned, the presumption of a loss for one-earner families under individualized taxation loses its cogency.

> …all married couples with children—and hopefully all people, period—know full well [that] the "stay at home" spouse and parent is providing tremendously valuable services, including child rearing and home care. ….. The critical point is that [..] comprehensive "income" tax systems, simply ignore[.] imputed income. Tax falls on monetary income, in cash or cash equivalents. Looked at another way, consider how easily manipulated conceptions of "neutrality" are. … the "equality" in "couples neutrality" is one in observed, monetized income, which is easy to see as an arbitrary variable. Suppose instead that we posited a norm of "child care neutrality." … The two earner couple… have child care costs, which they must pay in cash, that one earner

> households… typically do not have. Thus the norm of "child care neutrality" could (simply) mean a general deduction for paid child care from the income tax (McCaffery 2008).

A similar argument has been made before , but it was framed in terms of ability to pay (Nelson 1996). The fiscal literature supports a notion of equity viewed as equal taxation of the same ability to pay. If this view is adopted, a couple with one homemaker spouse and a given monetary income has a higher ability to pay than a couple in which both adults take up paid employment in order to earn the same monetary income. The former household should therefore be taxed more, instead of being granted 'compensatory' benefits and allowances.

Childcare costs are part of the costs that a homemaker may have to bear in order to enter paid employment. Additional costs are travels, eating out, laundry, phone calls and so on. However, childcare is by far the heaviest burden on average. OECD sources estimate that, for a two year old child, households in 10 out of the 20 EU countries for which harmonized data are available faced typical childcare fees net of childcare benefits equivalent to 10% of the national wage or higher (OECD 2007a: Figure 4.1).

Several European countries still violate the 'child neutrality' principle, and others comply with it only partly. Practically all EU Member States grant child benefits, but such benefits do not compensate for work-related child care costs since they are granted to all families with children, whether or not one spouse is a homemaker. A minority of countries allow for child care costs to be (partly) deducted via Working Family Tax Credits or in other forms. Scandinavian countries ensure major deductions 'at source' by offering universal rights to child care at heavily subsidized fees.

Another widespread source of unpaid work bias is the granting of the dependent spouse allowance. Because income from unpaid work is not imputed by tax systems, a dependent spouse allowance can actually be seen as a tax on the family that does not receive it, i.e the two-earner family. Yet the provision features in the tax systems of many European countries as in Table 2 (Austria, Belgium, Cyprus, Czech Republic, Denmark, Italy, Slovakia and Spain).

1.2.3 Bias in tax compliance

Are women more or less tax compliant than men? The issue of compliance has an important bearing on employment – female employment in particular – because a critical channel for tax evasion is irregular, unreported or altogether hidden employment. Yet fiscal data are still gender-blind in all but a minority of countries, making it difficult to answer this question.

The incidence of irregular and unreported employment can in fact be used as a (rough) indicator of tax compliance. With the caution warranted by huge problems of comparability, the evidence from national reports, summarised in Box 2, suggests that:

- Where the informal economy is sizeable, e.g. Italy, Portugal and Spain alongside Hungary, Bulgaria, or Poland, women are an important part of the phenomenon.
- The share of women in the black or grey labour market is reportedly higher in some countries (Italy, Spain and Hungary) and not in others (Sweden and Poland). Owing to vastly different research methodologies this evidence is far from conclusive.
- In both Sweden and Italy women are less likely than men to combine regular and irregular work. In Sweden, in particular, when they are involved in irregular employment they tend to put in longer hours, which indicates that irregular work is more often undertaken as an alternative to a regular activity than in addition to the latter.
- In all the countries for which some evidence is reported, irregular work for women is found more frequently at low levels of earnings.
- In Ireland and Spain women are motivated to work in the irregular economy also by the desire to avoid higher taxes under the joint filing system or to avoid loss of benefits for other family members.

Overall, in countries where tax evasion is important, non-tax compliance does contributes to keeping down ‘official’ or ‘visible’ participation among female low earners, and in several of these countries employment rates are significantly below the Lisbon target (e.g. in Greece, Italy, Spain, Hungary and Poland among the countries reviewed in Box 2).

Box 2. Tax evasion and irregular employment among women and men

In **Bulgaria** taxation is recognized as a factor stimulating informality in employment. In this sense both international and national experts advise policy-makers to reduce tax rates and to expand the tax base. The reduction of social insurance taxes has been viewed as major progress in this direction.

In **Estonia** tax evasion can mostly be found in small firms and construction, as well as the agricultural sector (Kriz et al. 2007). Evasion is more common among individuals who work part-time, are of non-Estonian ethnicity, have relatively low education and have low earnings. The share of males and females engaged in undeclared work is equal. However, there are clear differences in economic activity which reflect the overall gender composition of sectors. Males dominate in agriculture, hunting and forestry and construction, while females are mostly concentrated in health and social work, hotels, restaurants and education (Purju et al. 2004).

In **Greece** informal sector is estimated to be large in size, but there is no evidence as to it's gender composition.

In **Hungary** the hidden economy (including black employment and other forms of tax evasion) is estimated to be 20-25% of GDP. Tóth (2006) puts it size at about 17-18% in 2006. Based on the analysis of aggregate data from income tax returns and VAT payments for 2005, Krekó and Kiss (2007) conclude that taxable income equivalent from a quarter to a third of GDP is left undeclared in Hungary. Recent study by Elek et al. (2009) indicates that the incidence of undeclared work is higher among men.

In **Ireland** there is evidence that women in low income households only access low paid and low hours of work (or informal work) in order to avoid the negative impact of their earnings on welfare payments to other members of the household (Barry et al. 2004).

In **Italy** high political and administrative costs of effective monitoring are an important factor accounting for low tax compliance among self-employees and professionals. An additional factor that encourages tax evasion is the presence of fiscal drag. As the Italian system envisages no form of compensation for the effects of inflation, fiscal drag is sizeable and it bears a disproportionate impact on low income earners, giving them extra incentives to evade from taxes. Thus women could be overrepresented in the grey and the invisible labour market. Current evidence is consistent with this possibility, although not conclusive. The Istituto per la Formazione Professionale (ISFOL 2007: Tab.1, p.2) recently estimated a 14.5% share of 'irregular' employment out of total female employment in 2001, 3.9 percentage points higher than the corresponding figure for men.

In **Norway** an estimated 20-30 percent of the employment growth has been due to labour immigration (Statistics Norway 2009). Most of them are men working in the construction sector, but also in agriculture, many as unregistered workers. There are niches of informal work within domestic services and care services, filled with women. The former is increasing, while the latter is likely to be declining.

In **Portugal** an informal economy rate was estimated to be at high 22.1% in 1999 (Antunes, 2006). According to a recent study by Schneider (2009), Portugal has the third higher weight of informal economy in the GDP (19.5%) among the 21 OECD countries analysed:
"In Southern Europe the quality of services, which are provided by the government, is much lower than in Central and Northern Europe. Also, people there have lower tax morale, and on average, the tax and social security burden is not so much lower than in Central Europe. The financial crisis will cause a clear reversal in the recent multiple-year decline of shadow economies in the western world (Schneider, quoted in Expresso, 14.09.2009)"

In Spain the underground economy is set at around 20% of GDP according to latest reports, one of the highest figures in the EU15. Estimations posit the number of women in irregular jobs at more than half million, which represents around 17% of working women against 12.7% for men. Since women are considered secondary earner and their income taxes are higher under the joint filing, it is them who usually avoid formal employment.

In **Sweden** women both buy and work less in the black market than men, but the former work more hours on average than men. It could be argued that the reason for this is the gender segregation in the black labour market, which seems to be at least as high as in the "white" labour market. Women's work is mainly performed in enterprises and most of it in restaurants and shops. Men's black work is mostly done in dwellings (carpentry work, painting, tapestry etc.) and seems to more often be an extension of their "white work".

In **the UK** there is no data on tax avoidance through the informal economy. In general research on the informal economy finds a pattern of gender segregated employment and wage inequalities which mirror those of the formal economy. On this basis, and assuming no gender differences in rates of non-compliance it is likely that the scale of revenue lost through non-compliance is greater for men given their greater earnings potential (e.g. in rates paid for moonlighting in construction trades compared to those for informal childcare).

Source: national reports

Fighting against tax evasion is a complex task which falls well outside the scope of this report because the vulnerability of a tax system to evasion also depends on systemic factors such as culture and labour-market institutions. At the same time, evidence from the national reports indicates that different ways to counter tax evasion have differential and often conflicting effects on female and male employment.

The conventional wisdom approach in any attempt to counter fiscal evasion is to reduce the tax burden. Yet high taxation can be both a curse and blessing from a female employment perspective. On the one hand, the heavier the burden the higher the incentive to evade or avoid taxes, and the higher the risk that women and men will end up in the grey economy. On the other hand, higher taxes yield larger revenues with which to finance public sector jobs that often go to women, or care services that support women's employment (Barret and Grown 2004).

Owing to this potential trade-off, some attempts to reduce tax evasion are more problematic than others from a female employment perspective. For example, reducing the number of tax brackets down to two (a no-tax area below a given threshold and a flat rate above) may increase incentives for part-time employment but reduce them for full-time employment, depending on the threshold and the flat tax rate (Fray 2009, Plomien 2009, Ellingsæter 2009, Leetmaa and Karu 2009).

Attempts to curb evasion by eliminating so-called fiscal drag raise fewer objections. Fiscal drag occurs when reference monetary values for income thresholds, tax allowances or benefits are not indexed against inflation, causing low and middle earners to lose benefits or to move upward to the next tax bracket when their nominal income rises. Low earners are especially exposed to these risks, and may well respond with tax evasion. In Italy, for example, the tax system fails to provide in-built mechanisms to compensate for fiscal drag, and the country's recent experience illustrates how this may negatively affect low-earners. As in other countries, tax evasion in Italy is highest among the self-employed, but current research shows that it is also high among low-paid wage employees, women in particular (Bettio and Verashchagina 2009a). At the same time, OECD calculations show that between 2000 and 2006 the impact of legislation aimed at reducing tax pressure at low levels of income was entirely or largely offset by fiscal drag, depending on the type of family (OECD 2007b: Fig. S.4, p.33).

1.2.4 Allocation bias

Allocation biases are fairly varied because they arise from rules which attribute taxable income and tax preferences between partners, set eligibility conditions for benefits, or identify benefits recipients. To recall an earlier example, direct payment of the child allowance to the main carer is an instance of a formally neutral but actually biased allocation rule which favours mothers, though not necessarily their employment. However, the 'main carer' rule is a rare instance of 'progressive' allocation, while there are more examples of 'regressive' instances. Some are detailed in Box 3 and range from imputation of women's contribution to their partners within family firms (Greece and Italy) to making tax credits transferable between partners (the Netherlands), to attributing tax allowances and credits to the highest earner (Belgium).

Potentially distortive allocation rules are more common in unemployment benefit systems than they are in the tax code. The principles of social insurance whereby eligibility is conditional on having spent some time in work and benefits proportional to earnings can be unfavourable to women. As is well known, whether the minimum work requirement is measured in time units or in paid social security contributions, the higher it is, the lower the likelihood that women are eligible for benefits. The reason is that women's labour market attachment is generally weaker. In a number of countries, moreover (EC 2008), women are overrepresented among young first-job seekers with no labour market experience who are automatically excluded from insurance-based benefits.

Failing to meet the standard eligibility requirements entails different consequences in different countries (Table 3). In some countries a two-tiered eligibility system is applied with lower benefits granted to jobseekers who meet less stringent requirements. As of 2009, for example, Irish unemployed with fewer than 260 contributions are entitled to between 9 and 12 months of benefits, while those above this contribution threshold are entitled to between 12 and 15 months. In other countries a less generous 'unemployment assistance' scheme is available for those who fail to meet some of requirements. In Hungary, for example, such assistance is offered only to those who are still unemployed after the unemployment insurance has expired, while in Austria, Greece, Spain, and Ireland unemployment assistance is targeted on a variety of groups that fail to meet one or more eligibility criteria, but it is often means tested.

Table 3. Benefits available to the unemployed

Country	Minimum employment and/or contributions required (1)	Unemployment assistance if standard eligibility requirements are not met (2)	Benefits in proportion to previous earnings (3)	Flat rate benefits (4)
AT				
BE				†
BG				
CY				
CZ				
DE				
DK				†
EE				
ES				†
FI				
FR				
GR				
HU				
IE				†
IS				
IT				
LT				
LU				
LV				
NL				
NO				
PL				
PT				
SE				
SI				
SK				
UK				

Note: † payments are not strictly proportional to earnings, and we call these systems quasi-flat rate
Source: OECD 2007 country chapters and national reports

In France and Germany, the similarity between unemployment assistance and social assistance, i.e. means-tested provisions targeted on disadvantaged groups, is even more explicit: in Germany social assistance has coincided with unemployment assistance since the 2005 welfare reform. In countries like Sweden, and Finland, however, unemployment assistance is more universal in character. In Sweden it can be claimed by all job-seekers, the only condition being that they have worked for at least six months, two of which can be replaced by time on parental leave or compulsory military service. In Finland the Labour Market Support scheme is explicitly aimed at

first-job seekers and re-entrants. It imposes no employment or contributions conditions, although other restrictions apply. It is means tested, with some exceptions.

Rules defining the amount of benefits and the replacement rates also matter for gendered outcomes. Proportional replacement whereby unemployment benefits are paid in ratio to previous earnings tend to treat women comparatively worse than flat rate benefits do, simply because the average woman earns less than the average man. While flat-rate benefits are common in unemployment assistance schemes, they are rare in standard benefit ones. As Columns 3 and 4 in Table 3 indicate, only three countries grant flat-rate unemployment benefits: Greece, Poland and the UK. Four more countries offer quasi-flat rates owing to non strict proportionality of benefits to earnings (Belgium, Denmark, Ireland and Spain, see Table 3).

Other sources of distortion operate in unemployment benefit systems besides eligibility criteria or replacement rates. Some systems are rather elaborate and introduce multiple distinctions among different labour-market groups based on sector, size of firm, unionisation, or other features. Each of these distinctions is a potential source of additional gender effects, but the variety is such that an additional report would be required to describe it.

Box 3. Allocation biases in the tax code of five countries

For a **Greek** family business, the income of the assisting spouse is added to that of the partner who legally runs the business. Since the overwhelming majority of assisting spouses are women, their income (and work) is automatically attributed to the husband. In order to avoid this shortcoming without encouraging tax avoidance – i.e. the attempt to attribute income to the spouse with the lowest marginal tax rate - **Italian** assisting spouses are imputed a share of the overall income produced by the firm and taxed accordingly. As of 2009, however, if the reported business income falls below a minimum threshold and the family firm employs no wage labour, the income produced by assisting family members, including the spouse, is entirely attributed to the firm's head.

The main implicit bias in the **Dutch income** tax system arises from the transferability between fiscal partners of the general tax credit introduced by the 2001 Income Tax Act. Transferability implies that any partner who cannot make full use of their own tax credit - usually women - can transfer the latter to the other partner, usually men. The underlying rational is that all couples should be able to count on the same tax credits, whether or not both members work. *De facto*, however, this favours one-earner couples and increases the family income on which women may depend, eroding their own incentive to work. De Mooij's (2007) simulations showed that female participation would rise by 9.5 percentage points if transferability was removed, and the policy of the present government is to phase it out gradually over the next twenty years.

Attributing tax allowances and credits to the highest earner has effects similar to those of the Dutch transferability rules, since such reductions generally accrue to the male partner. **Belgium** is a case in point with regard to allocation of tax allowances for dependent children. In **Italy** the child tax credit is split equally between the parents, as a rule, but accrues entirely to the principal earner if the spouse's net tax liability is less than half the child credit.

The **Czech Republic** has a complex income-related system of parental allowance. The allowance amounts to 40% of own earnings, and may be granted to an employed parent, provided another adult in the household takes care of the child on a full-time basis. It is evident that households benefiting the most from this rule are the ones where the high earning parent (the father in all probability) claims the allowance while the low earning parent cares for the child at home. Even if relatives were able to take care of the child on behalf of the parents, it would still be profitable for the father to claim the allowance.

Source: national reports

Concluding summary

Current tax and benefit systems reflect policy decisions influenced over the years by the prevailing ideologies which may have generated gender bias. While the term 'bias' generally carries a negative connotation, it is used here to denote features of the tax and benefit system that yield clearly differentiated outcomes for men and women. Analysis of bias in this chapter has prioritized the ways in which the taxation of labour income and the system of benefits may or may not facilitate the pursuit by women of economic independence, or reduce inequality in labour-market outcomes between men and women.

Explicit bias springs from the text of the law. Although it has generally been removed from current tax codes, it can still be found in some countries. In a few Southern countries (Greece and Malta in particular) explicit gender biases persist from the past. In some Northern countries - notably in Denmark and, until recently in Sweden - the payment of selected child benefits to 'mothers' rather than 'parents' or 'the main carer' may be seen as 'reverse bias', although it simply responds to the need to ensure that the money is received by the actual carer.

Implicit gender bias is widespread. The working taxonomy used in this report distinguishes among 'secondary earner bias', implying the higher taxation of women within couples; 'unpaid work bias', implying differential treatment between paid and unpaid work; 'bias in tax compliance', implying a differential risk for men and women of disappearing into the grey or black labour market in an attempt to evade taxes; and 'allocation bias', implying differential treatment between men and women as tax payers or recipients of benefits.

The secondary earner bias and the unpaid work bias carry the highest risks for the degree and the quality of women's integration into the labour market. The within-household gap in earnings is still very wide, and a considerable proportion of women can still be classified as secondary earners, although much fewer fit the stereotype of marginal earners. The share of couples where the female partner does not earn at all or earns significantly less (i.e. contributes less than 45% to the combined earnings) ranges between 53% in Slovenia and 81% in Austria. The (non-weighted) average for the 26 countries in the EU-SILC database is 69%.

The secondary earner bias is inherent in joint taxation systems. The earlier EU call for transition from joint to individual taxation in order to eliminate this bias was successful, but joint taxation (generally the income splitting variety) is still important within the Union. In France, Germany Ireland, Liechtenstein, Luxembourg and Portugal couples are jointly assessed, but in Germany and Ireland couples have the right to individual taxation if the latter is more advantageous. Poland and Spain give the option between individual and joint taxation. Some elements of jointness remain in the Belgian, Estonian, Greek, Icelandic and Norwegian income tax codes, though the unit of taxation is the individual. The remaining countries enforce individual income taxation.

Even where the tax code is individualized, the benefit system is often not so, or not entirely. The overwhelming majority of the 15 countries with fully individualized taxation use family income to determine the amount of two or more benefits, especially social assistance and housing benefits. While it is well understood that assessment against family income answers the need to channel benefits towards less affluent households, its gender implications are often discounted.

The tax treatment of childcare costs is a major source of 'unpaid work bias'. Only a minority of countries allow for significant deductions of childcare costs via tax credits or in other forms. Scandinavian countries ensure major deductions 'at source' by offering universal rights to child care with heavily subsidized fees. Another widespread source of unpaid work bias is the granting of the dependent spouse allowance.

The issue of tax compliance among women and men has an important bearing on employment because a critical channel for tax evasion is irregular, unreported or altogether hidden employment. With the caution warranted by limited and fragmentary research on the issue, the evidence available for Bulgaria, Estonia, Greece, Hungary, Ireland, Italy, Norway, Poland, Portugal, Spain, Sweden and the UK suggests that (i) women are not systematically overrepresented in the black or grey labour market although the evidence is not conclusive; (ii) however, they are less likely than men to combine regular and irregular work since they undertake irregular employment more often in alternative than in addition to a regular job; (iii) irregular female work is more frequent at low levels of earnings; (iv) high monitoring costs, high or joint taxation, benefits assessed against family resources may all encourage irregular employment, but they are not the only factors at work. Fiscal drag has proved important at low levels of earnings where hidden female employment is found more often.

In some important respects, the current design of income protection provisions in the event of unemployment still reflects the old stereotype of a full-time prime or sole earner, the male beneficiary. In particular, eligibility conditions in terms of minimum work requirement and benefits proportional to earning often give rise to *de facto* differential treatment (allocation bias). All European countries grant benefits on the basis of these two principles and only three offer flat-rate benefits. First-job seekers – a relatively feminised group failing to meet the basic eligibility conditions for insurance-based benefits – are specifically targeted for financial support only in Finland, although here too restrictions apply. In the majority of other countries they rely on provisions of social assistance which are means tested on the basis of family income. With the increasing exposure of women to unemployment and changing family roles, the current systems of unemployment benefits should be rethought.

2. Impact of taxation: the groups of interest among women

Introduction

To what extent do gender biases in tax and benefit system matter for labour market outcomes, and what are the groups most exposed to them? The answer to this question is part of the broader answer concerning the extent to which and for whom taxes and benefits matter.

From a labour policy perspective, taxes and subsidies matter not only because they change income once it has been earned, but also because people anticipate their impact on income and accordingly decide whether and how much to work and to earn. At the decisions making stage, however, responses to tax and benefit provisions differ considerably. Different labour market groups exhibit different labour market attachment. That is, they are more or less likely to be in employment or to work longer hours for reasons other than taxation, e.g. out of different income roles in the family, the pattern of labour demand, or regulations on working hours. At the same time, some groups are more likely than others to alter their work commitment when taxes or subsidies affect their wages and earnings and we may refer to them as groups with higher employment responsiveness. Differences in labour-market attachment and in employment responsiveness are especially marked between men and women, but they may also be very pronounced among different groups of women or of men.

Analysis of the actual impact of tax and benefit regulations, including biases, is therefore best conducted on clearly identified groups. The groups of choice – to which we shall also refer to as 'target groups' – depend on the policy objectives to be pursued. This chapter identifies possible target groups when policy focuses on enhancing women's economic independence and furthering the equality of labour-market outcomes. The next chapter will investigate the actual impact of tax and benefit regulations on some of these groups.

2.1. The target groups

Targeting needs goals. From the standpoint of this report, the demands that can be made of fiscal policy are

(i) that it pays special attention to female employment, because women are more at risk of being out of employment or in marginal employment situations;

(ii) that it redresses persistent gender disparities in labour market outcomes. Tax policy may counter such disparities indirectly by promoting good-quality employment. It can also be used to directly address specific concerns such as in-work poverty, which affects growing segments of female employment, or the kinds of disparities in income protection and social security coverage that were discussed in Chapter 1.

Possible target groups of women may be located among those with lower labour-market attachment, risks of in-work poverty or inadequate income protection. What follows briefly reviews employment indicators for these candidate groups, while the next section considers responsiveness to changes in (net) wages and earnings, hence to tax and benefit policy.

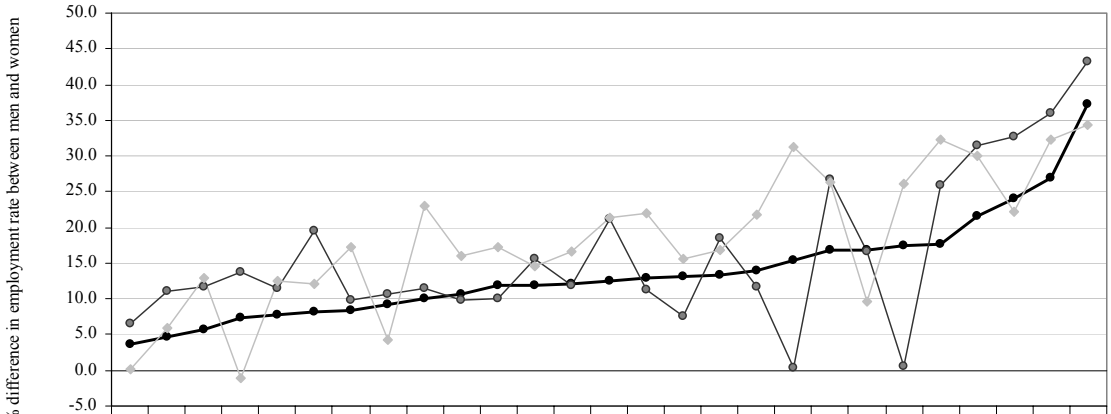
Target groups are not necessarily disadvantaged in an absolute sense, although some may be. Mothers of young children, for example, are generally more at risk of being out of employment or of working short hours even if their wage or working conditions are not poor. If the objective is to encourage employment, the challenge that tax policy faces on the supply side is to make work 'pay more' for mothers of young children and other such groups. There follows a brief review of the statistical evidence.

Groups with lower labour market attachment are closely monitored by the indicators used to track progress in the European employment strategy. With a EU27 mean, full-time equivalent (FTE) employment rate oscillating around the 70% mark in the current decade, the average working-age men in good health and not at school is clearly expected to be employed and work on a full-time basis.[3] Not so for women whose FTE figure remains below the 50 percent mark (49.8% in 2007, before the financial crisis struck). Large differences in employment rates are found among partnered females with young dependent children, low-educated women and older women. All these groups are also more at risk of irregular and short-time work.

Chart 1 below compares the gender employment gap in the working population at large (GEG or percentage difference between the employment rates of men and women) with the gaps among low educated workers (ISCED 1) and among older workers (55-64 years): countries are ordered by the overall gap.

[3] From Employment in Europe 2007, Eurostat: Luxembourg (key labour market indicators)

Figure 1. Gender Employment Gap (GEG), 2007



	FI	SE	LT	EE	DK	LV	BG	FR	SI	DE	UK	PT	RO	NL	PL	HU	BE	AT	SK	IE	LU	CZ	CY	ES	IT	EL	MT
All	3.6	4.7	5.7	7.3	7.8	8.1	8.4	9.3	10.1	10.7	11.8	11.9	12.0	12.6	13.0	13.1	13.4	14.0	15.4	16.8	16.9	17.5	17.6	21.5	24.1	27.0	37.3
Low educated	6.5	11.0	11.7	13.7	11.5	19.6	9.8	10.6	11.5	9.9	10.1	15.7	11.8	21.2	11.2	7.6	18.5	11.6	0.3	26.8	16.7	0.5	25.9	31.4	32.7	36.0	43.1
55-64 yrs	0.1	5.9	12.9	-1.1	12.5	12.2	17.3	4.3	23.1	16.1	17.3	14.6	16.7	21.4	22.0	15.5	16.9	21.8	31.3	26.3	9.6	26.1	32.2	30.0	22.1	32.2	34.4

Source: Authors' calculations on 2009 Compendium (EC 2009)

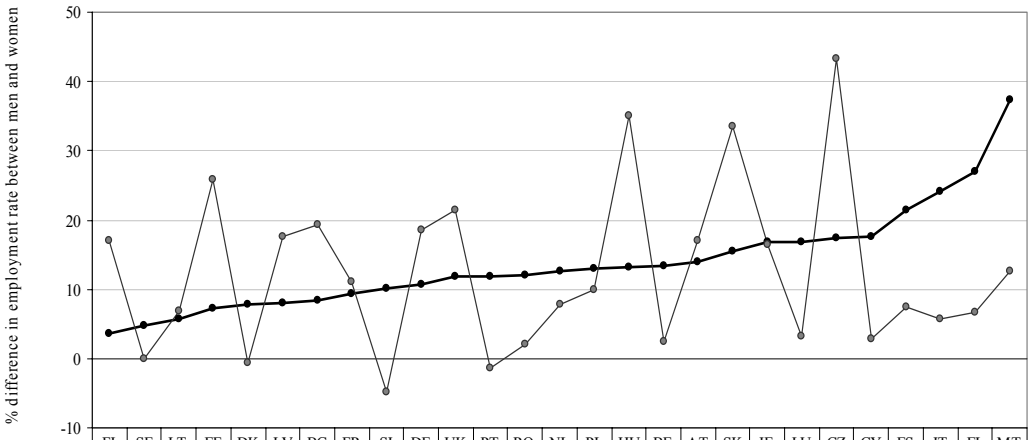
The three gaps tend to move together, with exceptions occurring more frequently for Eastern countries. As a rule, the employment gaps for the low educated and for older workers are wider than in the working population at large, denoting that age and poor education contribute disproportionately to differences in employment between women and men. On average, low education depresses women's employment relative to men more than old age does: the EU27 value for the employment gap between older men and women is 17.9% compared to 19.2% for the gap between low-educated men and women. Low education is especially important for the five countries with the highest overall gender employment gaps: Malta, Greece, Italy, Spain and Cyprus, all of which are Mediterranean countries.[4]

Mothers of small children are especially at risk of being out of employment or of working very short hours. The motherhood employment penalty – i.e. the percentage difference in the employment rate for women aged 20-49 without and with small children (0-6 years) – averages 12.6% within Europe (EU27). Figure 2 depicts the motherhood penalty against the overall employment gap, with Member States again ordered by the latter. The two gaps do not move together. If anything, they tend to move in opposite directions at both ends of the female employment spectrum: in some Eastern European countries with high female employment – Estonia, Latvia, Lithuania – motherhood takes a heavy toll. In Southern countries, where female

[4] Current educational attainment for women are as high or higher than those for men in most countries. This will reduce the size of the female group at risk of non employment or underemployment – the poorly educated - but need not decrease this risk within this group.

employment is low, working women are a more self-selected groups with overall higher chances of work continuity throughout maternity. However, Nordic countries manage to combine high female employment with a relatively minor motherhood penalty.

Figure 2. Gender Employment Gap and the Impact of Motherhood, 2007 [5]



	FI	SE	LT	EE	DK	LV	BG	FR	SI	DE	UK	PT	RO	NL	PL	HU	BE	AT	SK	IE	LU	CZ	CY	ES	IT	EL	MT
Gender Employment Gap, 15-64	3.6	4.7	5.7	7.3	7.8	8.1	8.4	9.3	10.1	10.7	11.8	11.9	12	12.6	13	13.1	13.4	14	15.4	16.8	16.9	17.5	17.6	21.5	24.1	27	37.3
Impact of motherhood, women 20-49	17.1	0	6.9	25.8	-0.7	17.6	19.4	11	-4.9	18.5	21.5	-1.4	2	7.9	9.9	35.1	2.5	17.1	33.5	16.5	3.2	43.2	2.9	7.4	5.8	6.6	12.6

Source: Authors' calculations on 2009 Compendium (EC 2009)

Unlike partnered mothers, single mothers are more at risk of in-work poverty than of being out of the labour market. Being in work is an effective way to secure oneself against the risk of poverty and social exclusion, but it is not always enough. Low wages, part-time employment or the type of family in which one lives may generate poverty despite being 'in work'. The evidence available at European level suggests that, on average, women in employment are not at risk of poverty more than men are (Statistics in Focus 5/2005: Tab. 1), but lone parents in work are an exception.

The incidence of lone-parent families is growing in Europe, and women account for around 90% of these households. On average, the employment rate of core age (25-49) single mothers is marginally higher than that of other women (69% against 67%: Statistics in Focus 5/2004: Tab. 6) but their risk of in-work poverty is much higher: in EU15 practically one in every five lone-parent households suffers from in-work poverty (Table 4 below).

[5] There is an issue of comparability for the employment rates of mothers in Figure 2, since mothers on leave are counted towards the employed in some countries but not in others. The same issue arises with any statistics on female employment, but it could be more serious for lone mothers.

Table 4. Lone-parent households in EU15, 2001

Indicator	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	EU15
% share of lone-parent households in all households with dependent children	9	6	8	4	3	9	7	4	5	11	8	4	9	22	17	**9**
% share of lone mothers in lone-parent households	93	88	96	91	88	88	99	86	95	88	95	86	86	74	93	**91**
% of lone mothers in wage employment or self-employment (25-49 yrs)	59	80	60	80	82	73	68	76	94	53	84	77	80	na	58	**69**
% incidence of in-work poverty in single-parent households	8	4	22	17	29	16	15	11	17	30	11	30	6	6	22	**19**

Source: ECHP, 2001 (Statistics in Focus 5/2004 and 5/2005)

Unemployed women and older women tend to be at risk of inadequate income protection when protection is insurance-based, as for unemployment or retirement benefits. Gender disparities in unemployment benefit provisions have been briefly documented in the previous chapter, while retirement provisions fall outside the scope of this report.

2.2. Target groups: responsiveness to work-related financial incentives

When fiscal policies are aimed at sustaining employment, their effectiveness hinges critically on how responsive individuals are to changes in net wages and earnings. The higher the responsiveness, the greater the chances that lowering taxes will result in employment gains. Take, for example, the proposal of redistributing the same tax burden so that women are taxed less and men more (the so-called gender-based taxation discussed in chapter 4). The proposal works on the assumption that women are considerably more responsive than men. If this assumption holds, women will react to lower taxes by working more, while higher taxes will have little influence on men's work decisions.

However, if fiscal policies are aimed at countering poverty or ensuring adequate income protection, low responsiveness can be an advantage because benefits can be bestowed without running the risk of adverse work choices. Responsive groups are problematic for these policies because they need provisions able to strike a fine balance between granting benefits on the one hand and ensuring work incentives on the other. This is the rationale for making in-work benefits conditional on earnings.

Knowledge about responsiveness is important in both cases. Individual reactions to changes in taxes and benefits can be tracked directly, but they are more often captured indirectly via responses to changes in net earnings. The most widely used indicator of responsiveness to fiscal

Box 4. Measuring employment responsiveness to taxes and benefits

To the extent that the objective of taxation policy is employment, the ideal indicator with which to measure responsiveness to fiscal policy is the tax elasticity of employment, i.e. the percentage change in employment in response to a small change in a given tax rate or in the rate/amount of a specific benefit. However, this measure is only available *ex post* and is not easy to compute.

An indirect, but much more common, measure which can also be used *ex ante* is the elasticity of the labour supply. Various types of labour supply elasticities are relevant, but three are especially important. These are:

- **Labour supply elasticity,** which measures the percentage change in hours worked in response to a small percentage change in the net earnings; sometimes it is also referred to as uncompensated wage elasticity or wage elasticity tout court;
- **Participation elasticity**, which measures the percentage increase (decrease) in the probability of entering employment in response to a small change in the net earnings;
- **Cross-wage elasticity**, which applies to couples and measures the employment response of one spouse to a small change in the net earnings of the other spouse.

incentives is elasticity. *Participation elasticity* measures the percentage change in the probability of working in response to a small percentage change in net earnings; *labour supply elasticity* measures the percentage change in hours worked following variations in net earnings. For example, a reduction of taxes causing net wages to increase by 0.5 percent is expected to increase employment by 1 percent if the value of the participation elasticity is 2. Values above 1 denote an elastic supply, while values close to 0 denote a rigid supply.

One of the most frequent findings in labour research is that women's choices about work are more responsive to changes in net earnings than are those of men, reflecting a lower commitment on their part to securing monetary income for the family, or higher constraints. However, the strength of the response is generally found to decrease over time as women progressively integrate into the labour market.

Moreover, not all women are equally responsive, and the question of interest here is the comparative responsiveness of the different subgroups, especially those identified above as possible fiscal targets by means of employment indicators.

In order to answer this question, the national experts reviewed research on labour-supply elasticities for different employment subgroups. Priority was given to the latest research, but studies referring to earlier periods were included when no recent and comparable information was available. Table A1 in the Appendix reports the values of the elasticities in detail, by country and employment subgroup, together with information on the authors and the research methodology of the studies. Table 5 below highlights some key findings for men and women as well as for different groups of women.

The research findings confirm that, in comparative terms, women's labour supply is still more elastic than that of men. In all the ten countries for which relevant research is reported (Belgium, the Czech Republic, Denmark, Estonia, Spain, Finland, Ireland, the Netherlands, Norway and Poland: second column of Table 5), elasticity with respect to hours of work is higher for (all) women compared to (all) men; in the Czech Republic higher female elasticity has been found with regard to the decision to participate rather than the choice of hours.

When the comparison with men is restricted to married individuals, married women are found to be considerably more responsive with regard to both the decision to participate and the amount of hours worked (second column of Table 5). The presence of children tends to increase married women's responsiveness, and that of children below school age amplifies the effect. Research endorsing this conclusion is reported for Austria, Spain, Portugal, Sweden and the UK.

Table 5. Summary findings on female labour-supply elasticities

	Higher for women than men			Higher for married than single women	Higher for lone mothers than single women	Higher for women with children	Higher for women with children below school age	Higher for low educated/ low skill women	Higher for low earners	Higher for older women	Higher for choice of hours than participation decision (all or married women)
	All	Married	Single								
AT		Y	Y				Y*				N^
BE	Y**	Y	N						Y		
CZ	Y*										
DE		Y**		Y**							Y^
DK	Y**								Y**		
EE	Y**										Y
EL											N§
ES	Y**	Y**	Y**			Y**				Y**	
FI	Y**				Y**						
FR				Y**							
IE	Y**	Y**						Y**			
IT		Y							Y		N
NL	Y**				Y**			N			
NO	Y**										Y
PL	Y**	Y	Y*		N						
PT						Y					
SE			Y**	Y**	Y**		Y**		Y**	Y**	
UK		Y			Y		Y**	Y			

Note: higher or lower means more than 10 percentage points different in the relevant direction
Key: Y- yes; N - no; ** elasticity with regard to choice of hours; * elasticity with regard to the decision to enter employment (participation elasticity); no asterisk denotes both hours and participation elasticity;
^ for married women only; § the comparison is between the findings for all women and married women in two different studies and should be treated with caution
Source: Table A1 of the Appendix

Among single individuals, elasticities are higher for women than for men in some countries (Austria, Poland, Spain and Sweden), but in many others gender differences are not significant. Since unmarried, young women are comparatively more exposed to the risk of unemployment, they are a possible target for unemployment benefits. Lower responsiveness to changes in earnings on their part is good news in this case because it reduces the risk that more generous benefits will discourage active search and lengthen unemployment spells.

If we look at the absolute values of elasticities rather that in comparison with men, recent estimates turn out to be rather low for women in a surprisingly large number of countries. For married women– who are far more responsive than the rest – the latest estimates of participation elasticities are below 0.5 in four out of the six countries providing such estimates: Belgium Germany, Norway and Poland. Wage elasticities of hours are below 0.5 in Austria, Belgium, Germany (both East and West, but much lower in the former), Poland, Portugal and Sweden, 6 out of the 14 countries reporting values for married women.

The highest responsiveness in terms of participation or hours of work is reported for some very low employment countries (Greece, Italy and Spain in particular) and three countries with a high share of part-time (Ireland, the Netherlands and the UK) (Table A1, Appendix). Eastern countries tend to report low values of elasticities even where female employment is low. However it must be born in mind that employment for women there was not stable over the past decades: it fell drastically with the transition, but it is now picking up again.

Comparisons among women yield further results of interest. If financial incentives are negative – e.g. because taxes increase – women in Austria, Italy or Greece are reportedly more at risk of quitting employment than of reducing hours of work compared to women in Germany, Estonia or Norway. Put otherwise, participation elasticities are higher than labour-supply elasticities in the former group of countries.

Low skill or low education perhaps exert the single largest influence on the level of women's employment responsiveness. Women in the lowest part of the distribution of earnings (below the median or among the low qualified) show elasticities close to 2 in Italy, Belgium and Ireland. Research for Denmark and Sweden confirms higher elasticity at bottom deciles, although the reported values are lower overall. There is also some evidence – notably for Italy and Spain – that the supply of older women is more elastic than that of women in central age groups.

Lone mothers are found to be more responsive than single women in three out of the four countries for which this comparison can be made (the Netherlands, Finland and Sweden) while there is no strong evidence that they are more responsive than partnered mothers. Relatively high responsiveness for this group of women is a mixed blessing because it heightens the conflict between using benefits and encouraging employment in order to reduce the risk of poverty.

A final result of interest concerns variations in net earnings of the spouse rather than own earnings (cross-elasticity: see Box 4). Positive variations generally elicit a negative response from partnered women, i.e. a decrease in hours of work or an increased propensity to quit work as the husband earns more. However the implied effect is small because the vast majority of studies reports values for cross-elasticities often close to 0.

Overall there is considerable overlap between the target groups identified by means of employment indicators and those most responsive to changes in net earnings. The latter include married women with (small) children, poorly-educated women, older women and, to a lesser extent, lone mothers. The greatest responsiveness is generally found at the bottom of the distribution of earnings for all these groups, as well as in general.

Concluding summary

Analysis of the actual impact of taxes and benefits regulations, including biases, is best conducted on clearly identified groups because responses to taxes and benefits provisions differ considerably between men and women, but also among women. Insofar as fiscal policy can be asked to promote female employment and to redress persistent gender inequalities in labour-market outcomes, possible target groups among women can be those with lower labour-market attachment, risks of in-work poverty, or inadequate income protection. Target groups may not be disadvantaged in an absolute sense, although some may be so.

This chapter has identified possible target groups based on employment indicators and on potential responsiveness to fiscal stimuli. According to two widely-used labour-market employment indicators – gender gaps in employment and the risk of in-work poverty – candidate groups include low-educated women, older women, (partnered) mothers of young children and single mothers. These last are more at risk of in-work poverty than employment exclusion, while

the former tend to exhibit the largest employment gaps. Based on the evidence from the previous chapter, moreover, unemployed women represent an additional target group on account of higher risk of inadequate income protection compared with men.

With the possible exception of single unemployed women, country-level research indicates that all these target groups exhibit comparatively high responsiveness to changes in earnings with respect to hours of work or the probability of entering work - the so called labour supply or participation elasticities. In other words, they are more likely to revise their decisions about whether or not to work and how many hours to offer in response to changes in net earnings, hence in tax-benefit provisions .

There are important nuances that matter for policy in the findings on work-related responsiveness to fiscal incentives (via changes in net earnings). Across countries, the average woman is still more responsive than the average man, despite progressively higher female integration in the labour market. The largest gender differences in responsiveness are between married women and men, and they concern decisions about whether or not to take up employment, as well as on how many hours to offer. In contrast, there is hardly any difference between single men and women.

At the same time, progressive labour market integration is diminishing the strength of women's response in quite a few countries, especially in Continental and Scandinavian. Research for Austria, Belgium, Germany, Norway, Poland, Portugal and Sweden has found that if, say, a tax reform were to increase net earnings by 1 percent, the probability of taking on employment or of increasing hours of work would increase by less than half a percentage point even among married women. In countries with low female employment, responsiveness is generally higher, although not consistently so, and in three countries with a high share of part-timers - Ireland, the Netherlands and the UK - the estimated responsiveness for (all) women is also comparatively high either with respect to participation or hours of work.

Within countries, however, partnered mothers with (small) children, poorly-educated women, older women and, to a lesser extent, lone mothers exhibit responsiveness higher than the average. The highest responsiveness is generally found at the bottom of the distribution of earnings for all groups. Depending on the country, these groups overlap largely or in part with those having lower labour-market attachment or being at risk of in-work poverty.

The implications of these findings are that, overall, women are still a better target for fiscal policies than are men. However, policy ought to differentiate between countries and groups because women's responses vary considerably in strength across different Member States as well as within them. From a policy perspective, moreover, high responsiveness is welcome if the objective is to encourage employment, but it may create conflicts if the objective is to counter poverty or boost income support. In particular, lone mothers' responsiveness to changes in wages and earnings is sufficiently high to require establishing a fine balance between encouraging work via taxation and increasing benefits in order to directly counter poverty. In contrast, single women are one of the lowest response groups. Lower responsiveness is helpful in their case, since any additional benefit that improves income protection during unemployment would run a correspondingly low risk of discouraging active search and lengthening unemployment spells.

3. The labour market impact of taxation for women: evidence from the OECD tax-benefit model

Introduction

This chapter selectively explores evidence on the impact of tax and benefit provisions on employment patterns, poverty and income protection among women and *vis-à-vis* men.

Three questions are addressed by means of comparative analysis of the Member States, specifically (i) to what extent the tax unit (joint versus individual taxation), fiscal incentives, and the implicit tax imposed by childcare expenses encourage or penalize paid work for women; (ii) how successful the current combinations of employment incentives and direct benefits are in preventing poverty for female groups at risk and (iii) to what extent unemployment benefit regulations reproduce the gender gap in earnings.

Depending on the question, the focus is on one of three groups: respectively, mothers of two young children who contribute less than 45% to the combined earnings of the couple; lone mothers with two children; and single, unemployed women and men. The first group typifies secondary earners, the second epitomizes working women exposed to the risk of poverty, and the third accounts for an important segment of the unemployed. While poor single mothers may be considered disadvantaged in some absolute sense, the other two groups exemplify conditions that are likely to affect a large proportion of women over the life-cycle. The findings in this chapters are of interest in their own right but can also be used to enrich the set of indicators adopted to monitor Guidelines 19 of the European Employment Strategy (on employment inclusion and financial attractiveness of jobs).

The OECD tax-benefit model (Box 5) is used in combination with EU-SILC data to simulate fiscal outcomes and to construct fiscal indicators for the chosen target groups. Section 1 presents the fiscal indicators. Sections 2 to 6 compute the indicators by means of the OECD model and employ them to answer the chosen questions. The concluding section summarizes the findings and discusses policy implications.

Box 5. Simulation of fiscal outcomes by means of the OECD tax-benefit model[6]

The OECD routinely carries out extensive simulations of taxation outcomes by means of its own tax-benefit model. Simulated outcomes can, in turn, be used to calculate indicators of income protection or of financial incentives (disincentives) for specific fiscal provisions, and anticipate possible labour-market behaviour.[7] Examples of simulated outcomes are how much unemployed people with given characteristics lose in benefits if they take up employment, depending on the previous levels of earnings; or how much a married spouse with two children gains from increasing her/his hours of work depending on her/his own level of earnings and that of her/his partner. The model makes some strong behavioural assumptions, in particular that the take-up rate of all benefits is 100% among eligible people. On these assumptions, outcomes are simulated by applying the statutory tax-benefit rules in the country of interest to different family types and for different levels of earnings (see e.g. Carone et al. 2004, Immervoll and Barber 2006 and regular OECD reports).

The features, advantages and disadvantages of the model are documented in OECD publications (see earlier footnote) but will be recalled here whenever they are relevant to the simulations that are carried out. The simulations in this chapter differ in two important respects from the routine OECD simulations. The first difference concerns reference earnings. Simulated fiscal outcomes depend crucially on the level of earnings used for the computations. The OECD uses hypothetical earnings expressed in terms of the overall average for the country. For example, net income for one of the spouses in a couple is computed by assuming different, hypothetical levels of earnings for the other spouse, e.g. 33, 66, 100 or 133% of the country's average value. Distinctions by sex play no role in this model, since all that matters is the level of earnings. We explicitly distinguish by sex and use actual values for earnings, each of which is specific to the target group involved in the simulation. For example, we simulate outcomes for low-educated, partnered women by assuming that they typically belong to households where she earns less than her partner, i.e. less than 45% of the combined earnings. We then simulate outcomes for her on the basis of actual, average earnings for him in such households, e.g. € 62056 per year in the Danish example developed below. Not only does this inject greater 'realism' into the simulation exercise, but it facilitates analysis of gender relevant outcomes. The earnings figures that we use are derived from the latest wave of the European Household Panel (EU-SILC).

The second difference concerns estimates of childcare costs. Our simulations use 2007 values for childcare costs that have been made available by the OECD for this report, but have not yet been used elsewhere. As argued earlier with reference to the unpaid work bias (Chapter 1), childcare costs are an implicit tax that impinges considerably on the employment of mothers. While the OECD does not routinely consider childcare costs in simulating taxation outcomes, it has devoted to the issue a chapter of a regular report where, however, childcare data older than 2007 have been used (OECD 2007a).

3.1. Indicators of work-related fiscal incentive effects and of income protection

Other factors besides fiscal policy influence net earnings, and other factors besides net earnings influence decisions about work, making it difficult to identify the independent effect of taxation. The standard way to proceed is to resort to sophisticated econometric estimations capable of yielding ex-ante predictions (simulations) or of measuring ex-post effects of taxation on individual choices about work. However, either it is costly to obtain solid comparative evidence

[6] The alternative to the OECD tax-benefit model is the EUROMOD (http://www.iser.essex.ac.uk/research/euromod), which is a microsimulation model (see e.g. Immervoll et al. 2008 or Lelkel and Sutherland 2009 for the extension to Eastern European countries). The main advantage of the OECD model from our perspective is that the information is updated and available for 26 European countries.

[7] See the series Taxing Wages, Taxes and Benefits as well as the online tax-benefit model at: http://www.oecd.org/document/3/0,3343,en_2649_34637_39617987_1_1_1_1,00.html

across countries with these models or the findings are valid locally, and differ considerably depending on country, year, types of data and research design. All the findings, moreover, are considerably influenced by the *a priori* assumptions in-built in the model about how people respond to changes in taxation. For all these reasons, econometric research at national level is often too heterogeneous to yield comparable results for specific subgroups. At the same time appropriate comparative research is scant.

The OECD model can be used for less ambitious, but transparent, comparative analysis well focused on target groups. As noted, the model simulates a large range of tax and benefit outcomes as a function of the chosen characteristics of the family, the chosen level of earnings, and so on. We use it to derive two types of indicators: incentive effects indicators and income protection indicators.

3.1.1 Indicators of work-related fiscal incentive effects

The three basic indicators proposed by the OECD in order to measure incentive effects of fiscal provisions are the Marginal Effective Tax Rate (METR), the Average Effective Tax rate (AETR), and the Net Income Gain (NIG).

The Marginal Effective Tax Rate shows what part of an increment in gross earnings is "taxed away" by taxes, social security contributions and any withdrawal of earnings-related social benefits. The higher the value of the METR, the weaker the incentive to secure additional earnings, or equivalently, to increase hours of work.

Typically, the METR is computed over small earnings increments, and it is therefore suitable for studying variations in working hours. However, the same formula can be used for larger increments and, in particular, for transition from no paid work to gainful employment at specified levels of earnings. In this case, the measure is called *Average Effective Tax Rate (AETR)* (Carone et al. 2004, p.10). When the transition is from inactivity to work, the AETR is also known as *'Participation Tax'*. It *shows the amount of additional taxes and lost benefits relative to gross earnings for a person who has just entered or re-entered work* .The *a priori* expectations are that if participation taxes are high, individuals are more at risk of employment exclusion.

For an illustration, take the case of Denmark exemplified in Box 6. The Box shows how incentive indicators are derived and displayed in the OECD model. All the charts in the Box map earnings and indicators for a Danish mother of two young children living with her partner. In this example the mothers' earnings fall below 45% percent of the couple's earnings, i.e. she earns less than 82% of what he does. She is therefore more likely to behave as a secondary earner.

According to 2007 EU-SILC data, in such Danish households the average earnings of the male partner are € 62,056 per year, compared to € 30414 for the female partner. According to the OECD tax-benefit model, at this level of earnings, she faces a Marginal Effective Tax Rate of 42 percent, implying that, when all taxes and benefits are factored in, she pays out to the government 42 cents for every additional euro she earns. At higher level of earnings, the Marginal Effective Tax Rate rises to 62% because the Danish system is both a progressive and a high tax system. On paper, therefore, the Danish system does not encourage high earnings, i.e. long hours of work, among secondary earners.

Box 6. Marginal Effective Tax Rate, Average Effective Tax Rate and Net Income Gain

This box illustrates how the Marginal Effective Tax Rate, the Average Effective Tax Rate and the Net Income Gain are computed and displayed using the OECD tax-benefit model. Calculations refer to Denmark – chosen for merely heuristic purposes – and to mothers of two children aged 3 and 2, respectively, who earn less than 45% of the combined income of the couple. This family type has been selected to represent households where women frequently behave as secondary earners because they work shorter hours, because they are on low per-hour earnings, or because both conditions apply. Table B in the Appendix reports the EU-SILC figures for average annual earnings for this and other family types used in the simulations.

By model construction, all the monetary variables in the chart are expressed in terms of the OECD Average Wage (AW henceforth), whose 2007 value for Denmark is €46,493. In our simulation the AW serves merely as a unit in which all variables are expressed. Its actual level is irrelevant to the outcomes that the model computes.

Along the horizontal axis, 'her' earnings vary from 10 to over 100% of AW.[8] 'His' earnings are fixed at € 62,056, the EU-SILC average for the male partner in the type of family just hypothesized (which corresponds to 133% of the OECD AW figure). Actual average earnings for women in this type of family in Denmark amount to € 30,414 , i.e. 65% of the OECD AW figure.

Figure 3 shows how the **Marginal Effective Tax Rate** increases in successive steps as the woman increases her earnings. Small spikes appear when the increase in taxes or social security first jumps to the next, higher, level. Owing to the progressive tax schedule enforced in the country, the METR continues to rise from 42% at initial earnings to a maximum of 62%. However, the steepest rise occurs at high earnings, while variations at low-to-middle earnings are very minor. The largest probable effect of this profile for the METR is a disincentive on long hours.

[8] The charts do not report earnings below 10% of AW, because this would correspond to very marginal positions such as 4 hours per week at average hourly earnings or 8 hours at half average hourly earnings. Also, at earnings close to zero the METR or the AETR can be very high owing to minimum payments for social security contributions. Note that the simulation considers a woman entering employment from inactivity, therefore she may loose social assistance benefits when entering employment, but not unemployment benefits.

One way of synthesizing the information in the chart on the METR is to compute the median value of the latter over a specified range. A meaningful range is for earnings between zero and the average wage for the mother in question. In the Danish case this median value is 65%.

Figure 3. METR for the female partner in a couple with two children, where she earns less than 45% of the combined earnings, Denmark 2007

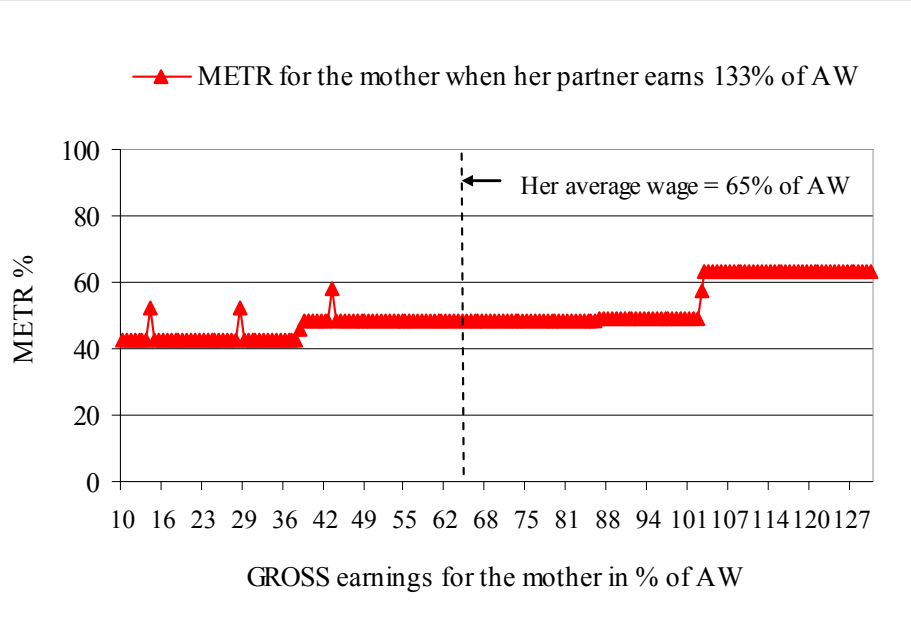


Figure 4 maps the **Average Effective Tax Rate** for exactly the same Danish mother. The values of the AETR are initially higher because of minimum social security payments, but they stabilize at around 50% for earnings in the range of 16 to 47 thousand Euros per year (corresponding to the values between 36% and 107% in the Figure).

Figure 4. AETR for the female partner in a couple with two children where she earns less than 45% of the combined earnings, Denmark 2007

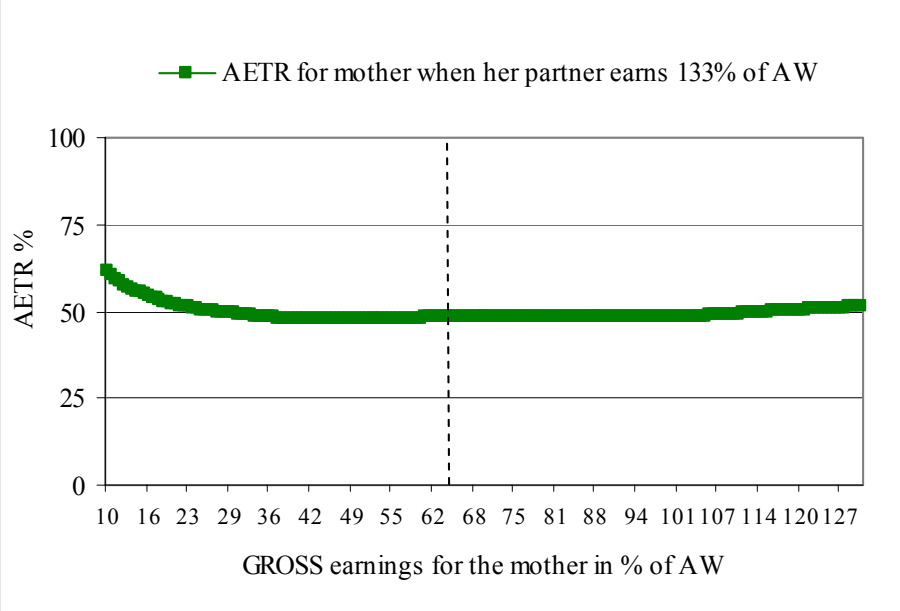
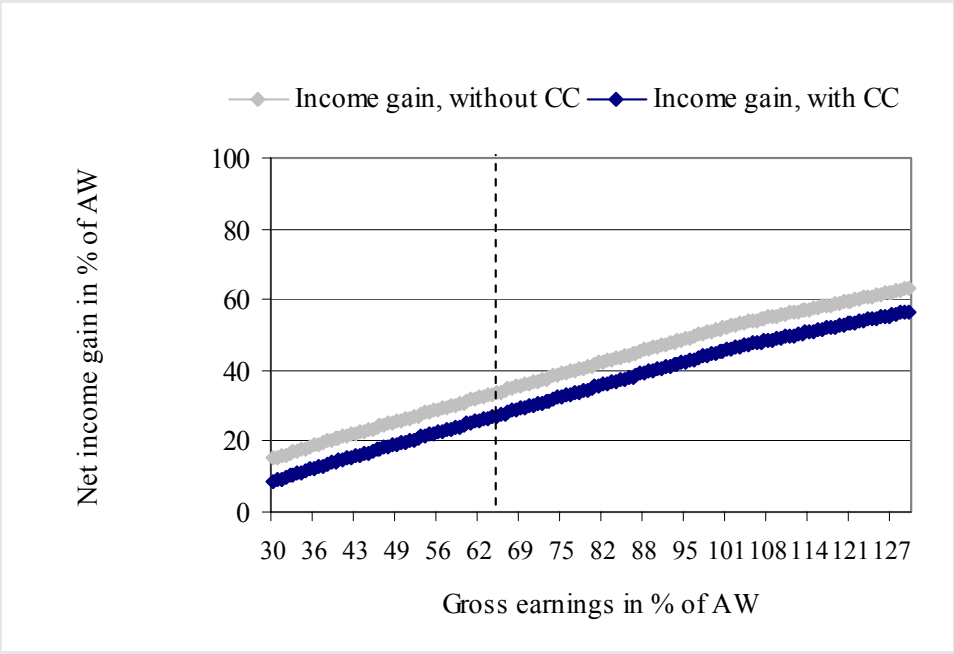


Figure 5 maps the Net Income Gain for the Danish mother in our running example, as she enters employment at different levels of earnings. The income gain – taken in ratio to the AW – is measured along the Y axis. The novelty of this chart with respect to the previous two is that the gain is computed in the presence and the absence of childcare out-of-pocket expenses. These are childcare fees for two children aged 2 and 3, and they are estimated by the OECD to amount to € 2,990 per year.

Figure 5. Net Income Gain for the female partner in a couple with two small children where she earns less than 45% of the combined earnings, Denmark 2007



The calculations in this Figure are built on the assumption that full-time childcare services are bought at the moment when the mother enters employment, even if she works short hours. Since this is unlikely to happen, the 'realistic' section of the Figure starts from earnings corresponding to long part-time or to full-time hours, i.e. above 30% of AW. At average earnings, her income gain net of taxes, benefits and childcare expenses is € 12,764, i.e. less than half of the gross earnings. While this result depends on the relatively high level of taxation in the country, childcare expenses contribute with a small implicit tax of 6.5% of AW.

Source: simulations using the OECD tax-benefit model and EU-SILC data for 2007

To return to the example of the Danish mother, if she takes up a job yielding €30,414 per year (average earnings for the group), she owes the government €14,660 in taxes and social security contributions, but loses no benefits, which corresponds to a moderately but not prohibitively high AETR of 48.2%.

Behavioural economists argue that absolute amounts, and not only relative amounts, matter, i.e. the amount of earnings that are taxed away matters *per se* and not only in ratio to gross earnings or in comparison to what other people earn. An equally salient way to look at work incentives *considers the absolute value of the increase in net income from taking employment, called the Net Income Gain (NIG)*. Clearly, the expectations are that the higher this value the greater the work effort (measured in hours or probability to enter employment). For the Danish mother in the example, the Net Income Gain if she enters employment at average earnings is €15,754 compared to €30,414 in gross earnings.

So far, however, childcare expenses have not been accounted for. Suppose now that the Danish mother pays out of her pocket average fees of €2,990 per year corresponding to the OECD estimate for the full-time care of two small children in a typical Danish facility. If these fees are viewed as an implicit tax on earnings, then both the Average Effective Tax Rate and the Net Income Gain change. The latter goes down to €12,764, which suggests that having to pay for childcare reduces the financial attractiveness of work even in one of the most developed welfare states in Europe.

3.1.2 Indicators of income protection

Fiscal outcomes simulated by means of the OECD model can also be used to construct indicators of income replacement. Two measures are proposed here, respectively the ratio of net income to the poverty threshold at given earnings and the gender gap in unemployment benefits.

The ratio of net income to the poverty threshold indicates if and to what extent people in work escape poverty by combining net earnings and benefits. The computation is straightforward. Values higher than one indicate that earnings plus net benefits are enough to escape poverty. The more the indicator exceeds 1, the higher the distance from poverty; the closer it is to 1, the higher the probability that people earning less than the reference amount face poverty. Below, this indicator is calculated for a single mother with two children on average earnings (for the group) who, in the Danish case cashes a net income equivalent to 1.35 the poverty threshold.

Like the pay gender gap, the gender gap in (insurance based) unemployment benefits computes the percentage difference between the benefits received by women and those received by men[9]. As seen in the first chapter, in the vast majority of countries the amount of unemployment benefits depends on previous earnings as well as on personal (and family) characteristics. This indicator shows to what extent existing inequalities in pay are reproduced by inequalities in income replacement during unemployment. In Denmark the gender gap in benefits is zero because the gap in earnings is narrow, and there are earnings brackets within which the amount of unemployment benefits does not vary (quasi-flat benefits).

[9] Payments are simulated for the first month of unemployment and exclude any social assistance.

3.2. Incentive effects and the secondary earner bias

The basic question about secondary earners that can be investigated by means of indicators of fiscal incentive effects is to what extent work pays in different countries. A related and important question is to what extent joint taxation still lowers work-related incentives. The analysis of biases in chapter 1 argued that, all other things being equal, joint systems of taxation discourage participation or longer working hours among secondary earners. But it also showed that the 'all other things being equal' clause may not hold, because individual taxation systems introduce elements of 'jointness' via benefits, allowances, credits and so on. Below, we explore the relevance of the unit of taxation by comparing incentives for secondary earners in countries with individual versus joint taxation.

As in the previous Danish example, secondary earners are typified by married women with 2 young children in households where she earns less than 45% of the combined labour income. Incentives effects are captured by the level of the Marginal and the Effective Tax Rates before out-of-pocket childcare expenses are incurred. Table 6 lists the Marginal and the Average Effective Tax Rates for this group of women. The AETR is evaluated at the group average earnings value (from EU-SILC), while the figure reported for the METR is the median value between zero and average earnings. The full range of values for the METR and the AETR are displayed by the Charts collected in Figures A and C of the Appendix (for more details see the preceding footnote).

For women in this group both the AETR and the METR are primarily influenced by the tax and social security schedules rather than by benefits, because the earnings of the husband is sufficiently high to rule out eligibility to benefits such as social assistance or housing[10]. The overall (non-weighted) average for the AETR across Member States is below 30%. The story is different for each country, since disparities across countries are marked, but values are below 50 percent in all 26 EU-SILC countries except one, and below 30 percent in 15 of the countries. If out-of pocket childcare expenses are disregarded, incentives for mothers to enter work at average earnings are sufficiently high in the vast majority of countries.

[10] Quoting from Carone et al. (2008: p. 16) " *The general impression is that in almost all countries, METRs on individual and household incomes in excess of 67% APW are entirely determined by income tax and SSC while benefit withdrawals tend to only play a role below 67% APW*". In our simulation benefits other than family-related (which are universal except in Italy) are present when the woman start working in four countries: France, Latvia, Iceland and the UK.

Table 6. Work incentives for female secondary earners
(married woman with 2 small children earning less than 45% of the couple's earnings)

Country	Average Effective Tax Rate	Marginal Effective Tax Rate
	Point estimate at EU-SILC average earnings for the group	Median value in range 0 - average earnings
AT	22.0	18.1
BE	37.0	41.8
BG	-	-
CY	6.3	6.3
CZ	32.3	29.1
DE	47.7	50.9
DK	48.2	42.9
EE	24.0	24.0
EL	18.9	16.0
ES	19.3	7.0
FI	45.4	19.4
FR	-4.9	27.5
HU	34.7	17.0
IE	17.2	56.0
IS	44.5	44.3
IT	31.0	22.0
LI	-	-
LT	21.4	30.0
LU	26.7	33.3
LV	20.3	9.0
MT	-	-
NL	33.4	31.5
NO	20.5	25.7
PL	29.6	32.8
PT	25.3	34.4
RO	-	-
SE	22.6	26.0
SI	40.4	34.6
SK	73.2	29.9
UK	12.2	65.0
Non weighted average: all	28.8	29.8
Non weighted average excluding joint taxation countries	30.3	27.2
Non weighted average for joint taxation countries (DE, FR, IE , LU, PT)	22.4	40.4

Note: The values of average earnings for the group computed from EU-SILC 2007 are provided in Table B of the Appendix. For METR values see Figure A in the Appendix.
Source: Authors' calculations using OECD tax-benefit model and EU-SILC 2007

AETR values appear to correlate with the general level of taxation rather than the unit of taxation, which is not surprising when comparisons are made between countries. Germany, Denmark, Finland, Iceland, Slovenia and Slovakia report values higher than 40%. Most of them are high taxation countries, while only Germany operates a joint taxation system. As a further indication that the unit of taxation does not discriminate between countries as expected, the mean AETR value for the 5 countries with mandatory or default joint taxation included in the OECD

model – France, Germany, Ireland, Luxembourg, and Portugal – is lower than the overall average.[11]

Marginal effective tax rates behave more in accordance with expectations. Median values for the METR are spread across a wider range of values than for the AETR, but they are below 50 percent in 23 out of 26 countries, and below 30 percent in 14 countries. However, the 4 countries where joint taxation is the mandatory or the default mode feature among the top ten scorers (Germany, Ireland, Luxembourg and Portugal). Also, the mean value of the METR in these 5 countries is 13% higher than elsewhere, and the difference between them and the rest of countries is statistically significant at 4%. At other level of earnings, however, the results are more mixed, with fewer of the joint taxation countries featuring among top scorers.

On the whole, the overall level of taxes seems to obscure any clear-cut divide between countries in regard to incentives to enter work. By contrast, there is qualified support that the divide is significant with regard to incentives to increase hours. Of course, these findings must be taken with more than the usual caution, because they depend strongly on the assumptions made about earnings, and specifically on which average figure is chosen and at which level incentives are simulated.

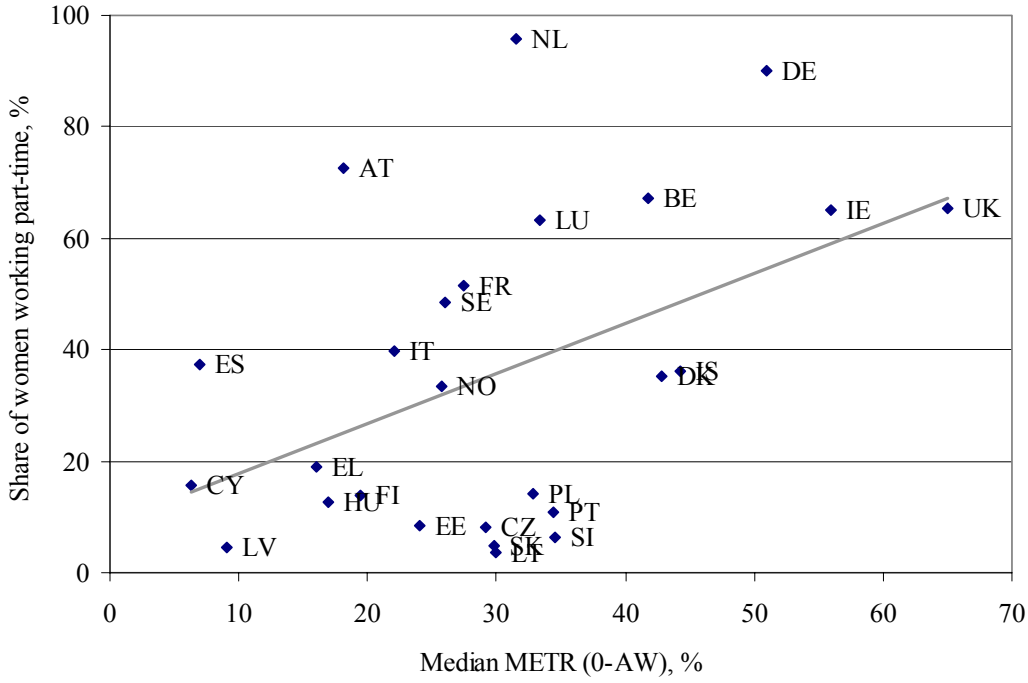
More importantly, analysis of cross-country differences as carried out here must be complementary to country level research, since comparisons between individuals within a country are at least as relevant as comparisons between countries. Research for France and Germany simulating transition from joint to individual tax assessment indicates that the change would increase the likelihood for women to be in employment or to work more hours. Additional simulations for countries retaining elements of jointness – e.g. the Netherlands – reach similar conclusions. However the order of magnitude of the simulated effects differ by country and study. [12]

[11] Poland and Spain are excluded from the list because they operate individual taxation with an option for joint taxation and we do not know how frequently the option is taken up, while we may presume that joint assessment predominates where it is the default mode. Liechtenstein is a mandatory joint taxation country but is not included in the simulations because it is not included in the OECD tax-benefit model.
Since a single point estimate may be misleading, the AETR was compared across countries at earnings higher and lower than the average, but the results were similar. France contributes considerably to lowering the average AETR for the group thanks to the Minimum Insertion Income, a social assistance provision that beneficiaries may retain for a while when they re-enter work.
[12] Germany: Steiner and Wrohlich 2004 and 2007, among others, quoted in Maier and Carl 2009; France: Echevin 2003 quoted in Silvera 2009; The Netherlands: De Mooij 2007 quoted in Plantenga 2009.

3.3. Incentive effects and short working hours

Since part-timers are overrepresented among secondary earners, the next relevant question that may be addressed by means of simulations is whether persistence in a part-time status is influenced by taxation. If the marginal tax rate is high at initial earnings – e.g. from zero to the median or average value – this is likely to discourage rises in hours of work, even if the unit of taxation is the individual. An additional reason for this expectation is that secondary earners comprise participants with higher-than-average responsiveness to taxation, as found in chapter 2. The evidence displayed in Figure 6 below corroborates the expectation.

Figure 6. Part-time share among secondary earners and the Marginal Effective Tax rate
(married woman with 2 small children earning less than 45% of the couple's earnings)



(Pearson: 0. 46; sig. 2%)

Source: for METR values, see charts at the end of the chapter; part-time figures are computed from EU-SILC 2007, authors' calculations.

For each country in Figure 6, the median value of the Marginal Effective Tax Rate for female secondary earners is paired with the overall share of part-time. Secondary earners are still typified by mothers of young children who contribute less than 45% to total earnings for the couple. As before, the median value for the Marginal Effective Tax Rate is evaluated at earnings between 0 and the EU-SILC average for this group; the share of part-timers is also calculated within the group.

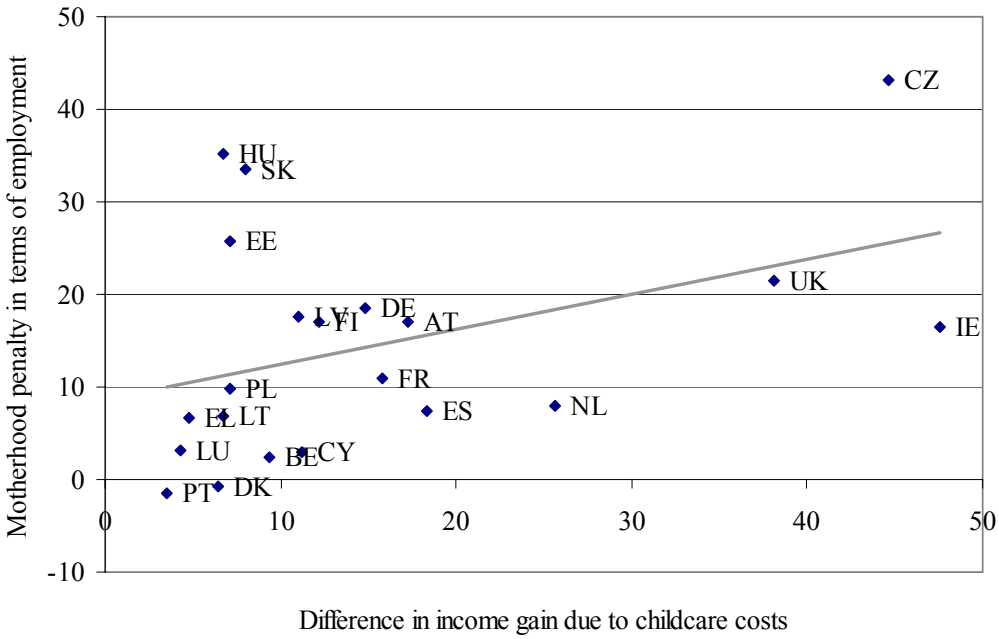
The two indicators – median METR and part-time share – generally move together, and the association is statistically significant. The Pearson correlation is 0.46, positive and significant at 2% level. If the Eastern countries are separated out, the value of the (Pearson) correlation increases but becomes less significant (5%). The findings are similar if the share of part-time is computed for all the women in employment rather than in the selected subgroup.

3.4. The unpaid work bias and the motherhood penalty

All the simulations carried out so far disregard out-of-pocket childcare expenses, as noted. This section looks at the factual importance of childcare expenses as an implicit tax that discourages employment among secondary earners with care responsibilities. The incentive indicator for this purpose is the Net Income Gain.

The scattergram in Figure 7 illustrates the correlation between (i) the motherhood penalty reviewed in chapter 2 and (ii) the difference in the Net Income Gain due to childcare expenses evaluated at average (EU-SILC) earnings for the married woman as in the example (see Box 6). Only 21 countries are included in the computations because estimates of childcare costs are not available for all the 26 EU-SILC countries.

Figure 7. Motherhood penalty and difference in income gain due to childcare costs
(married woman with 2 small children earning less than 45% of the couple's earnings)



Correlations: Pearson 0.41 (sig. 6%), Spearman 0.43 (sig. 5%)

Source: For motherhood penalty see Compendium 2009, income gain - authors' calculations on OECD model.

The difference in Net Income Gain due to childcare costs can be viewed as a 'fiscal motherhood penalty', and standard labour supply theory would predict that it moves in the same direction as the employment motherhood penalty. This is broadly confirmed by the findings. If all the 21 countries are considered - as in Figure 7 - the Pearson correlation amounts to 0.41 and is significant at 6%. However, the share of part-timers can be high among secondary earners, and part-timers are unlikely to resort to full-time care (as it is assumed in this simulation). Accordingly, countries with more than 20% of part-timers among secondary earners were dropped from the sample. As a result the correlation gained value and significance (Pearson 0.59, sig 5%) indicating that the association between the fiscal and the employment penalty may be more than a casual finding.

3.5. Tax-benefit provisions and in-work poverty

To what extent has fiscal policy been effective in fighting poverty among single mothers? Workfare or activation policies have developed in the USA and in Europe largely in response to changing family structures and gender roles, in particular the rising importance of single-parent families facing a high risk of poverty. The workfare approach ties benefits to actual work effort (earnings or hours of work) because it recognises that a trade-off may arise between granting adequate benefits on the one hand and offering adequate employment incentives on the other. While the workfare perspective is still the subject of heated debate from various perspectives, including gender (Fagan and Hebson 2006; Handler 2004), the success of the UK workfare policy package in raising the employment rate among single mothers has gathered further consensus (see below and Chapter 4).

The following simulation uses indicators for incentives and income protection to assess comparative success across Member States in balancing the two sides of the trade-off. The incentive indicator is the Average Effective Tax Rate, while the ratio of net income to the poverty threshold is the income protection indicator. Both the Average Effective Tax Rate and the net income are evaluated at average earnings for an employed single mother of two children. The poverty threshold is also specific to this type of family. Owing to incomplete information on special provisions for single mothers, childcare expenses are disregarded.

Average Effective Tax rates evaluated at mean earnings turn out to be often high for single mothers. The non-weighted mean value is 56.7%, but the variance is also very high: from –

21.25% in the UK to +87.8% in Denmark. The negative values for the UK and Ireland are equivalent to net subsidies and are due to 'important' in-work benefits (see also Chapter 4). In the remaining countries the AETR are generally above, and sometimes well above, the 50% mark (with the exception of Italy and Greece).

At average earnings, the simulated net income for single mothers (including benefits) is consistently above the poverty line across Member States. As noted, however, the lower the difference between net income and the poverty threshold, the higher the risk of poverty for mothers earning below the average, especially if childcare is not heavily subsidized. In ten countries net income exceeds the poverty threshold value by no more than 25% – Austria,

Table 7. Employment Incentives and poverty for single mothers (2 children)

Country	AETR, at EU-SILC average earnings for the group	Ratio of Net income to Poverty threshold
AT	80.08	1.09
BE	72.05	1.26
BG	-	-
CY	72.39	1.08
CZ	74.91	1.18
DE	87.50	1.22
DK	87.80	1.35
EE	46.05	1.24
EL	19.14	1.61
ES	50.85	1.22
FI	70.15	1.33
FR	53.43	1.48
HU	40.07	1.61
IE	-8.31	1.87
IS	70.00	1.13
IT	8.77	1.34
LI	-	-
LT	50.78	1.42
LU	61.00	1.23
LV	86.89	1.18
MT	-	-
NL	78.05	1.23
NO	83.72	1.09
PL	77.96	1.59
PT	47.62	1.85
RO	-	-
SE	61.01	1.29
SI	81.08	1.07
SK	42.05	1.34
UK	-21.25	2.42

Note: the poverty threshold for single mothers with two children corresponds to 1.6 times the value of the national threshold for a single person. The latter is 60% of the national median equivalised income (Eurostat: EU-SILC 2007).
Source: Authors' calculations using OECD tax-benefit model and EU-SILC 2007

Overall, the findings confirm that the traditional welfare approach to preventing poverty among single mothers is still popular. While this means that fiscal incentivesto enter work at average earnings are frequently low, the finding from the above simulation is that in a sizeable minority of countries low incentives are not traded off for benefits that warrant extensive protection against poverty.

The UK and Ireland stand in contrast, because they have gone furthest in applying the workfare recipe. Thanks to the combination of generous in-work benefits, both countries record a negative Average Effective Tax Rate, as well as a net income more than twice as high as the poverty threshold. However, the UK grants free childcare, but not so Ireland, where high childcare expenses may weaken the motivation to work or increase the risk of in-work poverty (Fagan 2009; Barry 2009).

3.6. Unemployment benefits and differential income protection

Arguably, unemployment benefit systems were originally designed with the male breadwinner beneficiary in mind, and they remain unfavourable to women in several countries despite repeated changes over the years (see Chapter 1). The OECD model can be used to verify whether the rules defining the amount of unemployment benefits actually reproduce, mitigate or exacerbate the existing gender gap in earnings.

In this last simulation exercise, the (insurance based) unemployment benefit for a single woman during the first month in unemployment is compared to that for a single man under the assumption that the respective previous earnings correspond to the average value for their groups (single male and female workers, respectively) . The main reason for focusing on single people is to simplify the interpretation of the results. The drawback is that the results give a much rosier picture on gender disparities because the labour-market position of single women is rather similar to that of single men, much more so than in the working population at large. Moreover, in order to compute benefits, the OECD model makes assumptions about the average profile of the unemployed which fit a male rather than a female worker, e.g. having 18 years of experience in the labour market.[13] As a result both the earnings gap and, *a fortiori*, the gap in benefits are

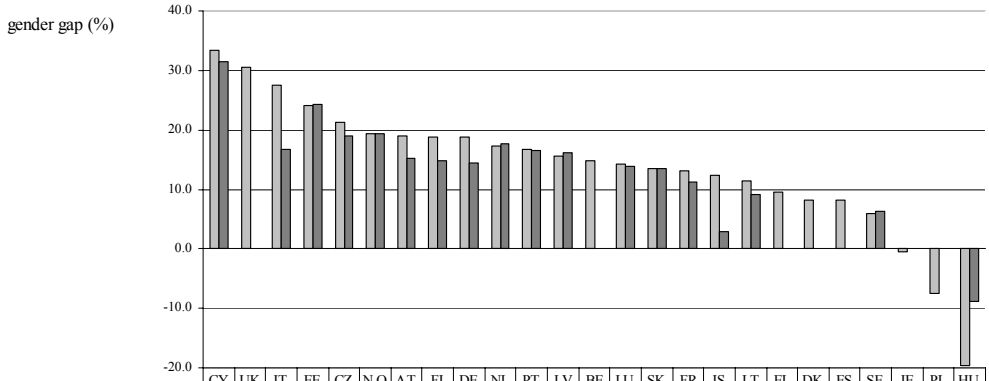
[13] The OECD model simulates benefits for a person aged 40 assuming an uninterrupted work history of 18 years, which fits women much less than men. Yet another limitation is that, in presence of more than one provision, the model only considers the most widespread scheme, which may not be the most generous or the least selective. An

likely to underestimate the values in the overall population (respectively the working population and the unemployed)

Figure 8 pairs for each country the gap in gross annual earnings and the simulated gender gap in unemployment benefits among single persons. As expected, the gender earnings gap is narrow among single workers: only 5 countries report values above 20% – Cyprus, the UK, Italy, Estonia and the Czech Republic – and 2 Eastern countries actually report higher earnings for single women: Hungary and Poland.[14]

Reassuringly, the gap in unemployment benefits is smaller than the earnings gap: if we compute the respective cross-country average values, the two gaps are very close to each other, with the earnings gap amounting to 13.7% and the unemployment benefits gap to 10.8%. Most of the credit for the 3 percentage points reduction in favour of the latter goes to the 7 countries reporting zero values. Three of these countries – Greece, Poland and the UK– furnish flat-rate benefits statutorily. In the remaining four countries – Belgium, Denmark, Ireland and Spain – benefits are quasi-flat: they are proportional to earnings but only between earning brackets.

Figure 8. Gender gap in average earnings and in unemployment benefits, 2007 (single men and women)



	CY	UK	IT	EE	CZ	NO	AT	FI	DE	NL	PT	LV	BE	LU	SK	FR	IS	LT	EL	DK	ES	SE	IE	PL	HU
gender gap in average earnings (%)	33.3	30.6	27.5	24.1	21.3	19.4	19.1	18.9	18.8	17.3	16.6	15.6	14.9	14.2	13.5	13.2	12.3	11.4	9.6	8.3	8.2	5.9	-0.4	-7.6	-19.5
gender gap in unemployment benefits (%)	31.5	0.0	16.8	24.4	19.0	19.4	15.2	14.8	14.5	17.7	16.5	16.2	0.0	13.9	13.4	11.2	3.0	9.2	0.0	0.0	0.0	6.3	0.0	0.0	-8.8

Source: Authors' calculations using OECD tax-benefit model 2007 and EU-SILC 2007

However, when there is no other source of income to fall back on, a reduction in benefits of 11% or more is important. Gender differences in unemployment protection, in fact, make a case for flatter benefits, since absolute amounts do matter when income is close to subsistence.

example of provisions overlooked by the model is the *Cassa Integrazione Guadagni (wage supplementation fund)* in Italy, which covers a non-negligible share of the unemployed population and continues to be the most generous provision in the country; yet eligibility is still biased in favour of production workers employed in large firms, who are more often men than women.

[14] This latter finding should be taken with caution because the number of observations is small in this group, especially for smaller countries.

Concluding summary

Using the OECD tax-benefit model in combination with EU data on earnings, this chapter has provided preliminary evidence on the actual and potential importance of fiscal policies for selective concerns about female employment and gender-related disparities.

Work-related incentives for secondary earners. The first concern that has been addressed is to what extent work pays for female secondary earners. The general finding is in line with those reported by OECD sources, namely that, before child-care expenses are incurred, work pays even for the 'average' secondary earner. Average Effective Tax Rates evaluated at mean earnings for the woman are below 50 percent in all 26 EU-SILC countries but 1, and below 30 percent in 15 countries. Also, the median value of the Marginal Effective Tax Rate evaluated between zero and average earnings is below 50 percent in all the countries but 3, and below 30 percent in 14 countries.

There are, however, three crucial qualifications to this general finding. First, the expectation that women are actually more discouraged from increasing work effort in joint taxation countries receives qualified support from the simulations carried out in this chapter, and stronger support from country level research. We found that the median value of the Marginal Effective Tax Rate (evaluated between zero and average earnings) is 13% higher in the 5 countries that feature joint taxation as the mandatory or default mode (Germany, France, Ireland, Luxembourg, and Portugal), but more mixed results obtain at other levels of earnings. Research for Germany, France and the Netherlands indicates that reforms of the tax code towards greater individualization increase the likelihood for women to be in employment or to work longer hours, although the estimated order of magnitude varies across countries and with the research methodology.

A related qualification is that incentives are actually geared to part-time work in several countries. The Marginal Effective Tax Rate on initial earnings bears a positive and statistically significant association with the incidence of part-time work. The correlation coefficient between the median value for the Marginal Effective Tax Rate (between zero and average earnings) and the incidence of part-time work among secondary earners is 0.46 and is statistically significant at conventional levels.

A final, but very important qualification to the general finding that work pays for secondary earners, is that it may not pay enough once child-care expenses have been included in the calculations. The specific finding is that the higher the implicit tax imposed by childcare expenses on mothers who wish to work, the higher the employment penalty associated with motherhood. This is indicated by the fact that the difference in the Net Income Gain before and after out-of-pocket childcare expenses are incurred correlates positively and significantly with the gap in employment rates between non mothers and mothers of young children.

These findings are preliminary and contingent on the assumptions made in simulating fiscal indicators. However, they afford a general policy indication and more specific policy implications. The general indication is that, with the progress made towards individualization of the tax unit, other features of the tax system have acquired importance in boosting work incentives among secondary earners, namely individualization of benefits, deduction of childcare expenses, and lower effective tax rates at the initial level of earnings. However, the implications differ in the three cases. Individualization of benefits is a possible goal that all Member States could share, since non-individualization is the rule rather than the exception (see Chapter 1). The level of taxation at initial earnings impinges on the incidence of part-time, but the long-standing debate on this issue has clarified that (a) preferences about part-time employment differ across countries and (b) it is important to distinguish between long part-time and very short hours or mini-jobs, for it is the latter that often trap women in low pay, employment exclusion or poverty. Any revision of the incentives to work short hours in-built in the tax schedule ought, therefore, to be nuanced across countries. As for child-care expenses, the fiscal leverage should not crowd out alternative policies, such as the public provision of subsidised services. In fact, the latter may be preferable in countries with low female employment because they are expected to have a greater job creation potential (Bettio and Plantenga 2004 and 2008, Plantenga and Remery 2009).

Risk of poverty among single mothers. The second concern that this chapter has addressed is the risk of poverty for growing segments of female employment, and specifically among single mothers. The simulations carried out confirm that poverty prevention for this group currently prioritizes the traditional welfare approach over workfare in the majority of Member States. This is reflected in the finding that single mothers face rather low incentives to enter work at average earnings in 18 out of 26 countries because of the implied withdrawal of benefits. At the same time, they can combine earnings and benefits so as to rise above the poverty line in all the countries.

Two problems are left unsolved. The first is that low incentives to enter work increase the risk of single mothers being out of work, and therefore more heavily exposed to poverty. The second is that not all countries trade off low incentives for extensive protection against poverty for mothers in work. In some countries, lone mothers on average earnings are just above the poverty line, implying that the risk of poverty is real for those on lower earnings. Ten countries fit this case in our simulation - Austria, Cyprus, the Czech Republic, Germany, Estonia, Spain, Iceland, Luxembourg, Norway, and Slovenia.

From a policy perspective, however, this does not imply that workfare is consistently a superior alternative. While we found that in the UK and in Ireland workfare has yielded a good combination of low (in fact negative) disincentives to work and high protection against poverty (for single mothers on average earnings), if childcare expenses are high – as in Ireland – they erode both advantages. Also, Taylor's (2008) longitudinal study for the UK (2008) shows a common cycle of employment followed by unemployment among low-waged mothers, with only some being able to step into employment on a stable basis. More importantly, countries like France or Denmark combine good protection against poverty with high employment rates among single mothers, despite relatively high effective tax rates. The workfare perspective therefore commends itself when the employment rate among single mothers is sufficiently low, as it was in the UK before workfare provisions were implemented.

Disparities in unemployment benefits. The final concern addressed in this chapter is gender disparities in income replacement during unemployment. The simulated gap in unemployment benefits is lower, on average, than the corresponding gender pay gap. In the specific case of single people the gap in unemployment benefits is 10.98% against 13% for the gender pay gap, and both are bound to be lower than in the population at large. Only in a minority of countries (Belgium, Denmark, Greece, Ireland, Poland, Spain and the UK) is the simulated gender gap in benefits zero thanks to flat or quasi-flat payment rules. However, there is no reason for complacency. The fact that differences in benefits between men and women are lower than differences in earnings does not mean that they are unimportant. Benefits are often close to subsistence minimums, and any reduction counts. This calls for reconsideration of the full proportionality-with-earnings principle for unemployment benefits, an issue to which we shall come back in the following chapter.

One spill-over effect of the findings in this chapter is that they may serve to re-consider the set of indicators currently adopted to monitor the European Employment Strategy, and specifically Guideline 19 ("*Ensure inclusive labour markets, enhance work attractiveness, and make work pay for job-seekers, including disadvantaged people, and the inactive).* While this task is outside the scope of this report, Box 7 discusses some of the options.

Box 7. The European Employment Strategy: suggestions for indicators monitoring Guideline 19

Two fiscal indicators are currently adopted to monitor progress towards guideline 19 in the National Reform Programs, respectively:

- **19.M6 or Low Wage Trap Indicator.** It is "*defined as the marginal effective tax rate on labour income taking into account the combined effect of increased taxes on labour and in-work benefits withdrawal as one increases the work effort (increased working hours or moving to a better job). Calculated as the ratio of change in personal income tax and employee contributions plus change (reductions) in benefits, divided by increases in gross earnings, using the "discrete" income changes from 34-66% of AW*" (EMCO Report, 1/05/2009: 4). It is available for single people and for one earner couples with two small children.
- **19.M7 or Unemployment Trap Indicator (19.M7).** It is defined as "*the marginal effective tax rate on labour income taking into account the combined effect of increased taxes and benefits withdrawal as one takes up a job. Calculated as one minus the ratio of change in net income (net in work income minus net out of work income) and change in gross income for a single person moving from unemployment to a job with a wage level of 67% of the AW*" (EMCO Report, 1/05/2009: 4).

In view of the results obtained in this chapter, there may be scope for improving this set of indicators. A general source of improvement is resorting to EU-SILC data to compute reference earnings. Use of EU-SILC average earnings figures instead of OECD average wages affords a more satisfactory sectoral coverage (including coverage of public sector employment). Moreover, and in analogy with what has been done in this report, EU-SILC data can be used to distinguish between men and women - or among other sub-groups of interest - and to consider the entire distribution of earnings.

From the point of view of female employment, moreover, the indicators in question are less than fully informative. Indicator 19.M6 in particular, does not capture **the potential fiscal disadvantage of being a secondary earner** or of **persisting in a marginal employment status** (e.g. by working very short hours) because it is computed for single earner households, not for two earner couples with one member in a secondary role. The main reason for this limitation is that, once the principal earner in the couple earns more than two thirds of the OECD average wage (AW) all the important benefits that are assessed against family income are lost, thus removing the potential disincentive of benefits withdrawal for an additional earner. However, there is more than one exception to this rule, as highlighted in footnote 10. Also, and more importantly, in joint taxation systems income aggregation is a source of potential disincentive in addition to benefits withdrawals, and this calls for ad hoc indicators.

In this chapter we have gone part of the way towards constructing such indicators by calculating average and marginal effective tax rates for our chosen typology of secondary earners - partnered mothers of young children contributing less than 45% to the couple's earnings. However, our measures need further refinement to become fully-fledged indicators. For example, the median AETR in Table 6 cannot be used to assess the potential fiscal disadvantage of being a secondary earner within a joint taxation country, as noted in the text.

Perhaps the most important reason why the current set of indicators deserve reconsideration is that **child-care costs are not accounted for**. The biggest challenge here is collection and regular updating of fully comparable data beyond what the OECD already provides. As for the relevant indicator, the **Difference in Net Income Gain** before and after child care expenses are factored in has the advantage of being simple and transparent.

Concerning indicator 19.M7 on unemployment traps, these are relevant to women as well as men, but so are gender **disparities in income protection during unemployment**. In order to capture such disparities we have used **the gender gap in income replacement** (during month one of unemployment). To keep the analysis simple, we have confined it to single men and women, which may underestimate disparities. However, the combined use of EU-SILC data and the OECD model allows for more general indicators.

4. Tax and Benefit Policy: Assessment of Recent Changes and Future Proposals

Introduction

The previous chapters identified some key areas for taxation policies from a gender perspective. These were the individualization of taxes and benefits, the structure and level of work incentives, childcare expenses and income protection against poverty or during unemployment. With the partial exception of individualization, all these areas have witnessed considerable policy activism over the past decade across Member States.

Individualization of the tax system is no longer the priority in tax reforms. One reason for this is that countries with individualized systems are in the majority. An additional reason is that there is no strong or politically explicit convergence of interests towards separate taxation in the countries where joint taxation is still the dominant mode. Individualization of the benefits system has been addressed selectively – i.e. via activation measures for the unemployed or via in-work benefits – and partially – i.e. in-work benefits are often means tested on household income.

The level and structure of incentives have been modified primarily by means of tax reduction and in-work benefits. Very few Member States fail to record at least one instance of reduction in taxes or social security contributions since 2000, but rarely have these reductions been targeted on specific female groups – low earners, female part-timers or other. Countries which have introduced in-work benefits are still in the minority, although it is a rapidly growing minority. In-work provisions are generally well-targeted, especially where they have been introduced to alleviate poverty for disadvantaged groups. Benefits explicitly aimed at reducing the cost of children to parents – from 'bonus bebè' (a lump sum granted when a child is born) to tax allowances, child or childcare benefits, and refund payments for out-of-pocket childcare expenses – have been instituted anew or made more generous in the majority of countries, but many of these changes have been incremental. Several countries have also revised unemployment benefit eligibility and payments: those with the most extensive provisions have tightened them. Some of those with inadequate or fragmented benefits have made them more generous or they have expanded eligibility.

Drawing primarily from the national reports, this chapter reviews these developments by asking two main questions, specifically (i) to what extent do the measures being implemented reflect knowledge of and concern with the relevant gender issue and (ii) to what extent have newly implemented policies been successful in raising employability and the level of employment among women or in furthering equality in labour-market outcomes.

Change in tax-benefits systems over this decade has been guided primarily by the workfare approach and the belief that tax reductions are good for employment, and hence for the economy. With the important exceptions of reforms in transition countries, in the majority of the other countries reforms have not fundamentally altered the features of tax and benefit systems in place. Yet this report documents how current systems are often inadequate in responding to the demand for integration of women into the labour market 'on a par' with men. Future change therefore requires a broader and different vision. The policy review in this chapter concludes with a (very brief) evaluation of two policy approaches that promise such a vision, full individualization of social entitlements and gender-based taxation.

The chapter begins by examining the reasons for scant attention to remaining issues of individualization of the taxation system in Western and Eastern European countries (section 1). Within the broader discussion on the impact of tax reductions in Member States, the radical reforms of the mid-2000s in some Eastern countries receive special attention in section 2. In-work benefits are reviewed next, with the focus on their impact on the level and quality of female employment (section 3). Section 4 draws attention to the increasing cash transfers towards children. The penultimate section reviews recent reforms of unemployment systems and assesses their impact on gender disparities in income protection. By focusing on the individualization of social entitlements as well as on gender-based taxation, the final section explores the desirability, but also the feasibility, of embracing more far-seeing approaches to fiscal reforms.

4.1. Joint taxation outlasts reforms

Previous chapters have discussed the potential shortcomings of joint income assessment for women's labour market position. Public debates accompanying recent reforms have largely neglected or underplayed these issues. Women and men in Portugal, France and Germany, the three large countries where joint taxation is still the dominant mode of assessment, apparently

show little interest in moving to individual tax codes. The secondary earner bias is sufficiently well understood in all these countries, and it is backed by statistical evidence that gains in female employment would follow if individual taxation was adopted, although uncertainty remains on the order of magnitude (see chapter 3). Yet opposition to change is motivated by foreseen equity losses for low income, sole earner families (Box 8).

The attitude of the Dutch government stands in contrast. In the Netherlands the government apparently cares about the gain in female participation that both De Mooij (2007) and Jaumotte et al. (2004) predicted would follow the removal of the transferability of the tax allowance between spouses, and it has pledged to gradually withdraw the provision.

While Germany, Portugal or France all have long histories of joint taxation, the potential drawbacks of joint assessment – and gender issues in general – were largely neglected also in Eastern European countries whose fiscal systems have been overhauled in the past decade. The radical reforms introduced in Bulgaria, the Czech Republic, Lithuania, Romania and Slovakia between 2004 and 2009 are often described as featuring flat rate taxation. Individualization of the tax system may, therefore, appear to be a non-issue because, in a pure flat rate system, the choice between joint and separate taxation is irrelevant. However, the newly reformed systems are quasi-flat rate rather than classic flat-rate systems (Bakos et al. 2008) featuring an initial tax allowance or more than just one rate. The allowance is often sizeable, and it works like an initial income bracket at zero rate (see the examples in Chapter 1).

In quasi-flat rate systems individualization of the tax unit matters and yet the issue has hardly been raised during the reform process. In Estonia, for example, where a flat rate system was enforced back in 1994, a spouse tax allowance is granted when the combined earnings of the partners fall below a given threshold. However, no allowance is envisaged for social security contributions. Despite income tax exemptions, therefore, taxes and the tax wedge are comparatively high for low-skilled workers, with inevitable discouraging effects (Rõõm 2003). That said, the current Estonian tax and benefit system is deemed ‘relatively gender neutral’ on the whole (Leetmaa and Karu 2009).

In the Czech Republic, the 2005 reform actually featured joint taxation, although the system went back to individual taxation in 2008. Not so in Poland, where taxpayers are still given joint taxation as an option. Unlike Estonia and the Czech Republic, Poland still has a progressive

rather than a quasi-flat system, although it is moving in the latter direction: the top rate (40%) was recently abolished and only two rates have been retained.

Box 8. Gender and horizontal equity in joint versus individual taxation

In Portugal, where the taxation system turned into a full income splitting system in 1996, ...
.... the legislator felt the need to declare that "in no case, can the only earner of a one earner couple pay higher taxes than in the condition of single." The marriage penalty seemed to be a matter of concern. (Ferreira 2009)

In France the issue of joint taxation remains very controversial:
.....an economist used the following title for an article "Against individualization of rights". The author, Sterdyniak (2004), refused to come out in favour of the feminist approach (which defends the economic independence of women) or neo-classical analysis, which is based on the hypothesis of a financial and fiscal incentive for women's employment. Sterdyniak studies the economic impact of returning to employment for the second member of the couple according to the type of tax return. When women take employment paid at the level of the SMIC [minimum wage], the gain is small if she is alone or with a husband who does not work, because the couple loses social benefits (RMI and housing benefits).... Separate taxation is attractive for all couples who pay tax and earn more than the SMIC, but not less. Also, separate taxation does not have an impact in those cases where the disincentives for women to work are greatest (households that do not pay tax). ....However, according to Sterdyniak, separate taxation enables women who return to employment to earn more, but households where only one person is economically active are taxed more. Individualization reduces the redistribution of the fiscal system" (Silvera 2009).

In Germany,
"....Although there is an ongoing controversial debate about all these points the majority view among public finance experts and in the political system is that there is no need or no chance in changing the overall system and taxation principles. The difference in the amount of taxes paid by married couples is considered to be the logical consequence of progressive taxation, given the widely accepted norm that the tax system should not discriminate against marriage and – at the same time - should be neutral with respect to the distribution of incomes within the households. In the opinion of these experts income splitting guarantees that married couples, given a certain household income, will be charged always the same amount of income tax, no matter how income is distributed among the spouses. It therefore also implies that no married couple will pay higher taxes than a single individual with the same household income. However, the tax neutrality towards the income distribution between the spouses underestimates the effect of marginal tax rates on labour supply, division of work etc... and leads to a non-neutrality towards marital status.

There are political debates about the taxation system but we think that there will not be any major changes in the recent years. All political parties are aware of the problems connected with the joint taxation as described in the paragraph above, some parties developed ideas like the real income splitting (SPD and Green party) or family splitting (CDU/CSU), but none of them will be able to change the system unless they decide to follow a different policy related to women's and especially mother's roles". (Maier and Carl 2009)

Source: national reports

4.2. Flatter and lower income taxes

Instances of tax reductions over the current decade also tell a story of limited knowledge, recognition and monitoring of the specific implications on gender outcomes, including employment and employability. However, the story is somewhat different in Western European countries – where changes have often been limited but some evidence on employment impacts is available – and in Eastern Europe, where changes have been radical but scant evidence is reported.

Twenty four national reports highlight some tax cuts since 2000 in the guise of lower tax rates, lower social security contributions or higher allowances and tax credits (Box 9). The financial crisis is encouraging additional reductions in an attempt to prop up income, consumption and employment. However, rarely, if at all, are female employment or gender equality reported as being the primary motivations. Indeed, cuts have been implemented across the board with few exceptions; notably in France tax reductions have been targeted on low earners, and in Sweden reductions are officially credited with benefitting middle to low earners. This may have been motivated by electoral goals, but it runs counter to evidence that different groups respond differently to fiscal incentives and, specifically, women versus men and employees on low earnings versus those on high earnings (Chapter 2; Aaberge et al. 2002).

In Western countries, however, most of the reductions in tax or social security rates are modest – below 5 percentage points. Iceland, Italy (for social security contributions) and the UK are exceptions, as detailed in Box 9. The Box also reviews evidence on the employment impact of the reductions, which, however, is generally available for anticipated rather than actual effects and for Continental and Northern more than Southern countries. This is regrettable in view of the previous findings that Southern women are more responsive to change in earnings and taxes(Chapter 2). Overall, the findings suggest that in Continental and Northern countries a reduction in the fiscal burden has had a positive, but modest, effect on employment. This is broadly consistent with the findings on the responsiveness to fiscal stimuli, which tends to be lower in these countries. But it may also reflect poor targeting, although in Finland, for example, ongoing experiments with low wage subsidies are not fulfilling expectations (Sutela 2009).

Reforms in Eastern countries implemented around 2005 were much wider in scope, as noted. They promised transparency and efficiency, especially with regard to tax evasion and employment incentives. Emphasis was placed in particular on the desirability of redistributing the tax burden away from personal and labour income towards consumption or environment taxes. This partly responded to the EU's call to harmonize taxation of goods and services across Member States, and it partly reflected a clear choice at national level.

The scope of the reforms in the East justifies the expectation that they will have non-negligible and differential implications for the employment and earnings of men and women. Such differences, however, did not raise specific concerns at the time of implementation since the debate concentrated on broader issues of equity.

Box 9. Tax cuts in Member States and their employment impact

Austria The 2009 tax reform came into force retroactively as of January 2009 in an attempt to combat the economic crisis. Tax rates were lowered, the tax-free threshold went up from €10,000 to €11,000/year and the threshold for paying the highest tax rate of 50% was raised from €51,000/year to €60,000/year. According to estimates by Rossmann (2009), the overall employment effect will be modest. Lower tax rates should lead to the creation of 15,000 jobs between 2009 and 2010, while higher thresholds should increase working hours. Compared to the dramatic increase in unemployment, these increases are rather minor. If unemployment keeps going up at the same dramatic rate, average unemployment in 2009 is set to considerably exceed the record peak of 252,000 unemployed in 2005. Unemployment figures of 400,000 jobless in January 2010 are no longer unthinkable.

Belgium In October 2000, in the middle of an economic upturn, the Belgian Federal Government announced an ambitious income tax reduction programme. The estimated impact of the reform was a significant expansionary effect on growth and employment. However, simulation exercises taking into account alternative measures in order to ensure a budget in equilibrium come up with much more modest effects on employment ("revenue-neutral" tax reform). From a gender point of view, the effects remain small, in line with labour supply elasticities. As shown by Orsini (2008), the tax reform could have multiple aspects that might trigger off either income or substitution effects. These effects neutralise each others' impact so that *in fine*, the overall impact is very small.

Bulgaria Until 2000 the total annual income was taxed in accordance with annual progressive scale, the highest marginal rate being 40%. Since 2000 rated decreased, and in 2007 the highest rate became 24% and the lowest 10%. In 2008 a flat rate of 10% was introduced. The possible employment impact of implementing flat rate income tax was estimated as 0.11% in 2005, 0.81% in 2006, 0.83% in 2007 and 0.61% in 2008 (Tzvetkov and Vasilev 2007).

Cyprus Since the 2002 reform, the taxation system has been based on individual income taxation with a higher tax-free labour income. No evaluation is available for the employment impact of reform.

Czech Republic In 2006 the government introduced a new 15% flat rate tax system which came into effect from January 2008. It was estimated that middle income earners will not be significantly affected while taxes would go down significantly among high income earners. Indirect taxes were increased and expenditure on social benefits was reduced. To date there is no evaluation of the employment impact of the reform.

Denmark Since 2008 the Danish government has been reducing income tax on employment and it has introduced the concept of tax freeze to ensure that no-one will be subject to? higher taxes. The newly-created Tax Commission expects the tax cut to increase the labour supply by about 19,200 additional workers. This will be achieved mostly by abolishing medium income bands and lowering the rate for top bands.

Estonia The flat rate system was introduced back in 1994. Since 2000, minor year-to-year changes have taken place. The marginal tax rate has been lowered from 0.26 in 2000 to 0.21 in 2009; the general tax allowance has increased from 614 € per year in 2000 to 1746 € in 2009. Staehr (2008) finds that economic incentives do affect the participation decisions of individuals, but not the number of hours worked by individuals already employed.

Finland The reduction in income taxes dates back from the 1990s and is still ongoing. In particular, employees' income tax was reduced in 2008 and then again in 2009. The taxable income thresholds were increased by about 2% from 2007 to 2008 and then again by about 4% from 2008 to 2009. Marginal taxes were lowered first by 0.5 % points and then by 1.0-1.5% points. According to empirical research, generalized tax reductions probably have very minor employment effects: estimates put the tax elasticity of the labour supply at around 0.3 percent (Piekkola 2006; Honkanen 2007). On the other hand the regional employer tax exemption experiment did not prove to have produced any employment effects (Korkeamäki & Uusitalo 2006), and the same seems to apply to the currently ongoing experiment of the low wage subsidy.

France Taxes have recently been reduced for low but taxable incomes. No impact evaluation is reported.

Germany An increase in the tax-free income band has been recently implemented – from € 7,834 to €8,004 starting from 2010 – with all the remaining bands sliding upwards. No empirical evident is available to date as to the employment impact of the reform.

Greece Since 2000, the tax-free band has been gradually widened, and taxation of incomes at the upper end of the income distribution has been reduced. At the same time the tax burden on medium incomes has been raised by shrinking the income bands, by increasing the lower and intermediary marginal tax rates, and by lowering the top rate threshold. There is no research on the actual or foreseen impact of the aforementioned reforms on patterns of participation or hours of work.

Hungary Between 2000 and 2002, the government radically reduced social insurance contributions (by 10 percentage points), almost doubled the value of the statutory minimum wage, and exempted from taxes incomes below the minimum wage. On applying the labour demand elasticities in Kertesi and Köllő (2002) to the data on the wage distribution, it can be estimated that the demand for unskilled labour may have declined by some 6 percent as a

result of the increase in minimum wages. The impact is likely to have been large in the textiles industry, assembly-line production and tourism, where women predominate.

Iceland In 1994, two tax rates were introduced in order to increase the progressiveness of the tax system that had been characterised only by one tax rate on all income beyond the personal allowance. The second tax rate (5%) on higher income was abolished stepwise from 2003 to 2007 as it was believed to disadvantage young families who needed to work overtime in order to pay off mortgage loans. No employment impact assessment is reported.

Ireland Income bands have been widened and the tax exemption thresholds increased since 2008, which is too recent for assessment. According to the CORI Justice organisation, any future income tax changes should be concerned with changes to either tax credits or tax bands rather than to tax rates in the context of achieving fairness, for example, through increasing tax credits rather than decreasing tax rates or through increasing tax credits rather than widening tax bands, which has the advantage of helping to address in-work poverty (Cori Justice, 2008).

Italy The tax schedule has undergone repeated changes since 2000, with the net effect of reducing the gap between bottom and top rates, but no estimation of the employment effect for women is available. A considerable reduction in social contribution and payroll taxes was introduced in 2006 and it is estimated to have reduced the tax burden by an amount equivalent to 6.3 percent of the gross wage between 2006 and 2007 (Guerra and Giannini 2008). However, it may not have had much impact because of the combined effects of the fiscal drag and the recession. The latter has also obscured any possible impact of the de-taxation of overtime enacted in 2008.

Lithuania Personal income tax in Lithuania was reduced from 33% in July 2006, to 24% per cent on 1 January 2008. As from 1 January 2009, moreover, all income, except for income from distributed profits, is subject to personal income tax at the rate of 15%. There are no studies available on the impact of tax reforms on patterns of employment or hours of work.

Luxembourg A reform of the income tax system was implemented in Luxembourg in 2001 and 2002. The main aspects of this reform are the reduction of the number of the income bands and of the maximal marginal tax rate (from 46% in 2000 to 42% in 2001 and to 38% in 2002), leading to less progressivity in the system. No evidence on the impact of the reform is available.

Malta Following the recent widening of the income bands (continuously over 2001-2008) an increase in labour supply is expected, but no empirical evaluation is available so far.

Norway In 2006 an increase in the basic tax deduction on wage income and a reduction in the levied surtax took place (Dagsvik et al. 2008). Thus, the difference between tax on wage income and capital was reduced, which was expected to stimulate the labour supply. Studies suggest that the impact of the 2006 reform on single men and women was negligible.

Poland As a result of the reforms aimed at reducing taxes and contributions on labour costs, the tax wedge decreased considerably between 2006 and 2009 (calculated for a single earner at 67% of an average wage) from 42.5% to between 39.5% or 38% for a single earner at 67% of the average wage. Moreover, for the 2009 tax year, the marginal income rates have been lowered. These changes may thus lead to increased demand for, and supply of, (formal) labour (PK March 2008, PK December 2008).

Slovakia Since 2004, the progressive personal income tax rates has been replaced by a flat tax rate of 19%.
No employment impact assessment of the reform is available to date.

Spain The 2003 reform aimed at reducing the tax burden among lower income families by decreasing the lowest tax rate from 18% to 15%. Moreover, the income tax reform of 2003 included a deduction for working mothers with children under three years old ("maternity deduction") – a universal benefit that does not depend on income – and the most important deduction for working women with children. No employment impact assessment is reported.

Sweden The on-going tax reform started in 2007 with the implementation of the in-work tax credit. The main aim is both to lower the average tax rate so as to ease access to the labour market, and to reduce the marginal tax rate for low and medium income earners in order to make work pay more. A number of studies have been conducted on the potential effects of the in-work tax credit. Ericson et al. (2009) evaluated the in-work tax credit and lower level of taxation in the country, and estimated that the employment rate and working hours will increase, while unemployment, sickness, housing, social allowances and disability pension and old age pension will decrease. However, it should be noted that these estimates are premised on the assumption that there is sufficient labour demand.

United Kingdom In 2008 a tax rate of 20% replaced the starting and basic rates (respectively 10% and 22%). To compensate for the increased tax burden among low earners both the initial tax allowance and the Working Tax Credit for low-income working households (received by the main earner) were increased.

Source: national reports

Slovenia and Hungary, in particular, opposed the '2005 reform' on grounds of equity. The main criticism against the proposed reform was that flat rates disproportionately favour higher income while taxes on consumption shift the burden of taxation disproportionately onto the less wealthy.

In Hungary: "[the] *introduction of flat-rate tax systems... has been debated in the past decade....Supporters of flat rate tax systems expect that it delivers significant results in three domains. First, lower marginal tax rates increase labour supply, ... Second, lower marginal tax rates are less likely to induce tax evasion, thus improving tax compliance. Third, the system simplifies taxation, which helps to save administrative costs and reduce tax evasion. A further, indirect effect may ensue if investors interpret the introduction of a flat tax system as an indication of a strong government administration committed to reforms, making the country more attractive to capital flows. ....The most important reason for refusing such reform in Hungary is increase in income inequalities. It is argued that the reform primarily favours high-income groups and significantly reduces the redistribution effects of the tax and social support system, whose function is to mitigate income inequalities. While the adverse redistribution effects may be avoided by setting the flat rate at a higher level, this would dampen the expected incentive effects (Benedek and Lelkes, 2005)."(Frey 2009)*

In Slovenia, *"...the radical reform programme proposed by the former government in 2005 was strongly opposed by a considerable part of public, academic community, trade unions and political opposition that voiced their criticism in the media as well as by means of public protests and demonstrations. Critics objected to the radicalism of reforms in conditions of stable and positive development in Slovenia, and most of them expressed fear that a reform package (including flat tax system, privatisation of public services, higher labour market flexibility, liberalisation of social security system) would lower the level of social security and polarize the society in a way that is in conflict with basic values in Slovene society (such as equality, fairness, solidarity)". (Kanjuo-Mrcela 2009)*

From a gender perspective, Slovenia is the Denmark of the Balkans, with top scores in gender pay ratios, participation rates, or hours worked by women. Hence the suspicion with which the 2005 reform package was treated was not unjustified. At the same time, evidence from Slovakia suggests that apprehensions about losses of equity may be partly misplaced: reportedly, the reform benefited all types of families in the country except single people:

"[data] show that the only worsening in the real income situation [due to the reform] concerns the group of singles.... All other groups experienced income gains.... In comparative terms the reform benefitted most the low income, one earner families with two children." (Piscová and Bahna 2009)

Equity or efficiency stem from both sides of fiscal systems, revenue and expenditure. On the expenditure side the 2005 reforms often rationalized provisions making them universal (e.g. in Estonia). On the revenue side, however, lower taxes inevitably mean lower benefits. A telling example from the Czech Republic of how reduced benefits may backfire on gender equity is the introduction of a healthcare fee:

"....The public finance reforms introduced since 2008 mean a major decrease of direct income taxes especially for high income groups of the population and an increase in indirect taxes – VAT - on basic foodstuffs, pharmaceutical products, paper products, books, newspapers, certain medical equipment, heating, social housing. Together with the decrease in social benefits expenditures, unemployment benefits and with the introduction of healthcare fees this development has a significant impact on groups of population with low income, families with children and single parent families mainly led by women. The fact that women constitute the majority of the low income population, leave the labour market for long periods of time to care for small children, head the majority of the single parent families, and take care of children's health...indicates that the reforms may have a significant negative impact on the female population". (Krizkova 2009)

Above all, lower taxes mean fewer services, and if the market does not replace the public services foregone with the reform, this may mean lower female employment. Precious little evidence is available on the employment changes driven by the reforms in the East, partly because the financial crisis may be interrupting or obscuring any underlying trend. Gains estimated for Estonia concern participation, not hours of work, while they are modest for Bulgaria, overall. Poland is the only country where income taxes have been falling since 1996, long enough to generate some employment effects. Here, female employment has dropped by some 10% in the meantime, and any significant boost from the latest round of tax reduction (2006) is likely to be obscured by the current crisis (Plomien 2009). However, aggregate trends in employment result from complex interactions among a number of factors – particularly during transition from planned to market economy – and the level of taxation is just one of them.

4.3. The spreading of in-work benefits

In-work benefits are rapidly becoming the main type of subsidy available to groups at risk of both poverty and employment exclusion, and in some countries they have replaced earlier subsidies to low wage earners. They have been introduced in several Eastern European countries as part of the recent tax reforms, or on their own. But it is primarily 'old' Member States, especially the English-speaking countries that are leading this wave of fiscal innovation.

Such benefits are cashed conditional on taking up employment. The amount paid varies with own earnings or work effort (e.g. hours of work) and, depending on the country, on the work status or income of the partner. The fact that eligibility is made conditional primarily on own earnings is a step towards individualized benefits, although means testing continues to be used in some countries. As indicated in Chapter 3, moreover, linking benefits and earnings eases the trade-off between incentives and assistance. However the experience of various countries indicates that in-work benefits improve the likelihood of transition into paid work but not necessarily into good quality work. Much depends on the specific design of the provision.

The UK pioneered the introduction of these benefits with the Working Income Tax Credit (WTC), but other forms have been designed since then. Box 10 lists the provisions in Western European countries, featuring a total of 11 countries. In the second half of 2000 in-work schemes in fact picked up, spreading to countries as different as Sweden and Malta. Provisions also widened in scope and now cover lone parents, returnees from unemployment or non activity, but also parents combining work and care.

The UK Working Tax Credit (WTC) was (and still is) a key tool in the *'New Deal for Lone Parents'* launched in 1997. Ten years since, lone mothers have increased as a group (HM Treasury 2006), but their employment rate has risen by 12.5 percentage points and the number claiming income support has fallen by more than 200 thousands. Evaluations credit government policies for about half of these gains (Gregg and Harkness 2003, DWP 2003), but some commentators highlight the difficulties for lone parents to secure stable employment (Women's Budget Group 2006).

A specific criticism is that the payment of the WTC to the main earner rather than splitting it between the couple reinforces the man's control of resource flows into the household (see Fagan et al. 2004; for further details also Fagan 2009). Despite these and other criticisms, the WTC is often portrayed as a success story. Schemes monitored in other countries lead to more sobering conclusions. The French version of the English Tax Credit (PPE) has been the subject of numerous studies and, while results differ from one study to another, a common finding is that the employment effect is small: for example, according to two competing estimations, women's non-employment declined by between 0.4% and 10% (Laroque and Salanié, 2003: Ines model). Some of these studies, moreover, indicate that PPE is equivalent to a subsidy to part-time, de facto favouring a one-and-a-half earner household (Silvera 2009); the same criticism has also been brought against the WTC in the UK (Giullari and Lewis 2005). In Belgium, the transition from the original tax credit scheme to the new employment bonus is deemed positive because the former mainly encouraged entry into part-time, whereas the latter is well targeted on the low skilled and promotes full-time employment. In quantitative terms, however, the effect is modest (some 4000 additional jobs as of 2009: Meulders 2009).

In the Netherlands the Earned Income Tax Allowance was converted into an Employment Tax Credit in 2006, *The Employed Person's Tax Credit.* A simulation exercise estimates the ensuing decrease in (overall) unemployment at 0.27%, and the increase in female participation at up to 1.5%, although the latter is partly compensated by a decrease in the male supply (De Mooij 2007).Also, the introduction of the 'supplementary combination tax credit' (Box 10) enhances the system of individual tax credits for all employed persons first introduced in 2001, to the benefit of second earners and lone parents. However, the actual impact of this positive incentive on women's labour supply may be offset by accompanying changes in tax credits for children which raise the income for low-income parents regardless of their employment status (Fagan, Grimshaw and Rubery 2006).

An earnings-related tax credit has not yet been introduced in Norway, but simulations suggest that it would have a strong effect on participation, since it would substantially reduce the probability of being in parental care rather than in the labour market (Kornstad and Thoresen 2006). By contrast, in Finland, where the Partial Care Allowance is paid to parents who reduce their working hours, the amount being paid has apparently been pitched too low, producing minor employment effects. Finally, in Sweden, Greece or Malta, where limited forms of in-work benefits have been introduced in recent years (Box 10), no evidence is (yet) available.

Box 10. In-work tax benefits in Western European Countries

Belgium. A refundable tax credit was granted for low earned income by the tax reform of 2001. In 2004 it was replaced by a *work bonus* amounting to a reduction in personal social contributions. The work bonus reform was fully implemented in 2006.

France. *The PPE (Prime Pour l'Emploi or Employment Tax Credit*) was introduced in 2001. It aims at helping the economically active who are on low pay via a tax credit (or reduction), in order to encourage them to stay in, or increase, their economic activity. PPE is thus based on individuals' income, but partly takes account of the family situation.
The *RSA (Revenu de Solidarité Active - Active solidarity income*), which has already been introduced experimentally in some regions, will be generalized in July 2009. RSA is minimum income for people who do not work and additional income for those who work. The amount that is given via RSA is calculated to represent up to 60-70% of additional income.

Finland. *The Partial care allowance* can be paid to parents who reduce their working hours to a maximum of 30 hours a week with a child aged under 3 or in the first or second grade at school. The allowance is EUR 70 [..] a very low compensation for the loss of income for parents who reduce their working hours. There is evidence that parents do not use the partial care leave opportunity as often as they would really like to because of economic reasons, among others.

Germany. The German tax system allows *a lump sum* to be subtracted from the taxable income. In combination with the tax splitting system and the initial tax allowance this ensures that a large proportion of low-earning people (individuals and households) pay contributions but no taxes on their income.

Greece. Since 2000 the registered long-term unemployed have been entitled for one year to an in-work benefit if they take a part-time job of at least four hours daily. The provision is meant to make long part-time attractive among male long-term unemployed.

Ireland. *Back to Work Allowance (BTWA):* This provides a transitional payment for people who have been long-term reliant on social welfare payments and who are returning to work. People participating in the scheme retain a percentage of their social welfare payment along with secondary benefits for a period of up to three years. *The Family Income Supplement (FIS)* is only available to low income households with children. To qualify for a payment, the family must have a minimum of 19 hours paid employment a week. The FIS received is 60% of the difference between net family income and the income limit, which applies to the family. Thanks to the *Continued Child Dependent Payment (CCDP) i*f a person has been receiving Jobseeker's Allowance or Jobseeker's Benefit for at least 12 months and a full-rate Increase for a Qualified Child, she can continue to get the Increase for a Qualified Child for 13 weeks if she takes up work that is expected to last for at least 4 weeks. The *Part-Time Job Incentive (PTJI) is a* scheme for people who have been receiving Jobseeker's Allowance for 15 months or more where the recipient receives a flat rate weekly payment instead of Jobseeker's Allowance. Once an entitlement to the payment is established, it is not affected by income. The *Revenue Job Assist* is an additional tax allowance for people, who have been unemployed for 12 months or more, or single parents, who have been similarly unemployed and who are now returning to employment.

The Netherlands. In 2001 the Earned Income Tax Allowance was converted into an Employment Tax Credit. *The Employed Person's Tax Credit* (EPTC) exists for all persons earning a wage or income from business or freelance activities. The maximum amounts are reached if one earns more than €17,729. The amount rises with age, reaching € 2.201 for persons aged 62, 63, and 64. This is intended to improve elderly participation. Finally, there are some family benefits which are designed to enhance the work/family balance and improve the position of vulnerable groups in the labour market respectively.
Some family benefits are concerned with increasing work-family balance and improving the position of vulnerable groups in the labour market. The *Combination Tax Credit* is conditional on having a child below the age of 12 and earning more than € 4,542. If these two conditions are fulfilled, the family may receive an amount of € 112 on a yearly basis. *Supplementary Combination Tax Credits* exist for lone parents and lower-earning partners up to an amount of € 746 to promote these groups' integration into the labour market. To be eligible for supplementary combination tax credits, one must be also eligible for normal combination tax credits.

Norway. In 1998 a major reform of the benefit system for single parents was introduced. The aim was to move lone mothers from benefits to employment.

Malta. In 2005, a tax credit for women was introduced in Malta's tax-benefit system. Women are eligible if they have not reached retirement age and return to employment after having been absent from any gainful occupation for at least five years.

Sweden. The first step towards an in-work tax credit was taken on 1 January 2007, a second on 1 January 2008, and a third on 1 January 2009.

UK. The current *Working Tax Credit (WTC)* was introduced in 1997. It replaced an earlier and narrower variant, and since then has been extended and refined (see Fagan et al. 2004 for further details on the evolution of this benefit). Eligibility rests on being employed for a minimum number of part-time hours and includes a *Childcare tax credit (CCTC)* for lone parents and dual-employed parent families. The WTC is paid to the main earner in dual-employed couples, the CCTC to the main carer.
In principle the WTC encourages a more equal sharing of paid work in low-income couples because the assistance with childcare costs is only available if both partners work at least 16 hours per week. The WTC is withdrawn at a marginal rate of 39% once a low level of taxable income is reached, and is based on joint assessment of income for couples.

Source: national reports

4.4. Increasing cash transfers towards children

As illustrated in Table 8, about three fourths of the countries report that child-related benefits having been topped up or newly introduced, underscoring the fact that the cost of children issue is now more firmly entrenched in the policy agenda of Member States. However, most of these changes are hardly novel, and several are limited in their scope.

Table 8. Provisions to lower the cost of children

Country	Newly introduced child-related provisions	Topping up of existing provisions				
		Higher Birth bonus	Higher Child /childcare allowances/benefits	Higher Tax credits for children	Higher Deductions of childcare costs	Lower childcare fees
AT						
BE						
BG						
CY						
CZ						
DK						
DE						
EE						
EL						
ES						
FI						
FR						
HU						
IE						
IS						
IT						
LI						
LT						
LU						
LV	na	na	na	na	Na	na
MT						
NL						
NO						
PL						
PT						
RO						
SI						
SK						
SE						
UK						

Source: National reports

Consistently with its tradition of high cash transfers, Austria tops the list with parental leave benefit in 2002 being replaced by a childcare benefit for all mothers (or fathers). Moreover, between 2004 and 2009 new allowances and tax credits towards children or childcare were enacted , and the existing child benefits were topped up.

The favour with which cash transfers towards children have been treated by policy makers throughout Europe in this decade has raised concerns that this form of support may be growing at

the expense of service provisions in kind. One telling example in this regard is the recently introduced child home allowance in Sweden whereby parents of very young children are given the option to care for their child at home and are compensated for it. The scheme is similar to that already enforced in Norway and Finland and is expected to reduce both employment and hours of work among mothers of small children on low earnings (Nyberg 2009).

4.5. Tightened and targeted unemployment benefits

As in the case of tax reductions, the tightening of unemployment benefits is a long-standing trend reinforced by the current crisis. It is often associated with measures of 'activations', i.e. incentives, support and assistance to actively search for jobs and accept them. As such, it is consistent with the workfare philosophy and can be viewed as progress towards individualization of benefits within an 'adult worker' model where both members of the couple work. To date, however, insufficient attention has been paid to women's needs as mothers, and this has seriously limited the extent to which tightened benefits and activation measures have actually improved employability among women.

On reviewing reforms of unemployment systems during the first half of the 2000s, Fagan, Grimshaw and Rubery (2006) and Fagan and Hebson (2006) list as major developments the 2005 *Hartz Reforms in Germany,* which also served as a template for reforms in other countries (Box 11), the *ARE* 'return to employment' allowance in France, the 'Work and Social Assistance' Act (2004) in the Netherlands, and other reforms in Austria and Portugal. New additions to the list are Ireland, Hungary, Poland, Slovenia and Sweden:

- In Sweden significant changes in unemployment benefits took place in 2007. Changes included tighter rules for computing normal working hours and a day's earnings; lower benefits after 200 days of fruition; cancellation of the right to receive benefits during breaks in full-time education, and elimination of the option to deduct from taxes fees paid to the unemployment insurance societies or to the unions.
- In Slovenia, starting with 2007 beneficiaries/recipients of financial social assistance are obliged to accept all kinds of jobs or activities in the non-profit sector for which they are physically or mentally able.
- In Poland, the level of benefits has been raised for the first three months but lowered subsequently; more importantly, the maximum fruition period has been shortened to 12 months, down from 18, and a lone parent supplement has been cancelled.

- Finally, In Ireland the number of contributions required to access jobseekers' benefit has doubled starting from 2009, and the maximum period of fruition has been cut by 3 months.

Box 11. Unemployment benefits in Germany after the Hartz reforms. Who is gaining?

Unemployment benefits in Germany are split into two different sub-schemes: UB I which is based on the unemployment insurance principle and paid as a proportion of previous earnings (60% without children and 67% with children); UB II, which is a means-tested, minimum-based level of social assistance paid to those unemployed persons who no longer receive UB I because the period of fruition has come to an end.
Sixteen percent of eligible women receive UB I against 84% for UB II, whereas among men the figures are 18.5% and 81.5%, respectively (BA 2009). The lower share for women is entirely explained by the conditions of eligibility, which require long periods in employment for at least 15 hours a week.
The Harz reforms subjected the UB II allowance to means testing after 2004. This decreased benefits for better-paid men and women. It is likely that a larger proportion of married women than married men lost entitlement since testing takes the income of the partner into account.
There may be winners from the reforms, single people and lone parents being likely candidates. However, all data point to the fact that there are more losers than winners, and that the number of women who lose is bigger than the number of women who win.

Source: Maier and Carl 2009

In short 'more of the same' summarises recent trends in the reforms of unemployment benefit systems in countries with relatively generous provisions. However, in Hungary there was an attempt to compensate restrictions with additional provisions. As part of the 2005 labour market reform, existing unemployment provisions were replaced by job-search support schemes that are available only for jobseekers, people who want to return to work and actively seek for work and do their best to find a job. However, in order to avoid making any group of unemployed people worse off, the Job Search Assistance was introduced thus compensating any reduction in the average daily benefit with a longer entitlement period. The reform was successful in raising the share of those actively looking for a job among the recipients of unemployment compensation. The share went up by about 12 percentage points among both men and women (Frey 2009).

In Southern countries, moreover, given more restricive or fragmented provisions, there is less room for widespread cuts or tighter requirements, and convergence to the standard of other European countries has selectively resulted in more generous provisions:

- The ongoing trend in Italy is towards the scaling down of old, generous but very selective schemes like the Wage Supplementation Fund (*Cassa Integrazione*) in favour of the standard and less selective scheme (*Indennità di disoccupazione Ordinaria*). In 2007 (but with effect from 2008) the replacement rate for the standard scheme was raised from 40% to 60% and the period of fruition was lengthened from 8 to 12 months. Women stand to gain as they are more frequently eligible for the standard scheme (Bettio and Verashchagina 2009a).

- In Spain, the 2002 'Compromiso de Activitad' (job-seeker agreement) is a relative mild example of 'activation' where tightened eligibility requirements are partly balanced by a provision ensuring automatic payment of benefits from the day of employment termination, independently of any legal dispute with the employers (Maria Redriguez de la Heras 2003).

- In Portugal a controversial proposal to extend unemployment benefits to the self-employed (including entrepreneurs) has generated broader debate on which group should be prioritised among those currently excluded from benefits. Domestic workers – a highly feminised group – are the unions' candidate. They make up an increasing proportion of labour in the expanding care sector, and they are currently excluded from benefits in both Portugal and Spain (Ferreira 2009; Gonzalez Gago 2009). Such debate helps move the demands of domestic workers into the spotlight.

Overall, the above developments endorse the mixed assessment that ongoing reforms of unemployment systems has already received from the experts of this network (Fagan and Hebson 2006). The basic arguments behind such mixed evaluation are worth recalling:

" … First, women typically suffer more than men from any tightening of conditions for unemployment insurance benefits given that in most countries they are more likely to be unemployed and in many countries women have lower benefit eligibility because of greater discontinuity in their work history; second, the expansion of household-based benefit assessment is also clearly retrograde from a gender equality perspective'(see Box 11 for Germany)

.....

The impact of increased job-seeking requirements on women depends on the details of the overall policy package. It may be interpreted as a positive step towards an 'adult-worker' Nordic model of gender equality rather than the 'male breadwinner' expectation about gender roles that persists in many welfare states. However, such a policy shift is punitive unless complemented by good access to childcare, active labour market programmes and jobs which offer decent pay and working hours. On this consideration, the evidence suggests that developments to support women's integration are uneven, often uncoordinated and lag behind the reductions in benefit support. With regard to active labour market programmes, there have been some improvements in access for inactive and unemployed women under the EU employment strategy (Rubery 2002, Rubery et al. 2003; 2004). However, the scale of such programmes varies across countries, as does the attention to gender issues.....

The increased job search requirements placed on mothers are also occurring in the context of political effort to expand childcare services in relation to the Barcelona target in most countries. For example, a positive element of the Dutch and German benefit reforms is explicit local coordination between employment agencies and childcare services to improve provision for job seekers with care responsibilities (and a similar increase in support in the UK via the childcare tax credits discussed previously). However, the ability of low-income women to sustain employment in most Member States is severely constrained by continuing problems of childcare shortages, high costs or unsuitable opening hours (Fagan, Grimshaw and Rubery 2006: 581-2).

Because of the erratic attention paid to gender in the many instances of unemployment benefits revisions, gains and losses for women are variously distributed among the countries. But a frequent drawback is the failure to adopt an integrated and clear policy strategy capable of including women 'at par' in the system.

The evidence reviewed thus far lends itself to some policy suggestions. A flat-rate payment can counter existing disparities in the amount of benefits, as discussed in Chapter 2, and it would meet the requirements of transparency, simplicity, and lower administrative costs. The drawback could be that the rate is set too low in order to avoid strong disincentives among low earners. However, a weakly proportional or a quasi flat rate system would gain some of the advantages of a flat rate system while moderating the principal risk. For substantive equality to advance, moreover, the rules on eligibility and 'activation' should be revised. Eligibility needs to be made more inclusive, as the debate in Portugal highlights. Extension of eligibility to the self-employed, or to domestic workers should be considered where these groups are still excluded. Also, allowance should be made for growing 'atypical' employment positions such as involuntary part-time employment: available statistics do not generally consider this category, but there is evidence for countries like Sweden that the numbers involved are not negligible (Smith 2009) . For the reasons summarised above (*Fagan, Grimshaw and Rubery 2006)*, moreover, activation measures should ensure that applicants are not at a disadvantage because of their parenting role or the actual availability of affordable care services.

4.6. Visions for future reforms: individualization of social entitlements and gender-based taxation

With the important exception of reforms in Eastern European countries, changes in taxes and benefits over this decade have been plentiful, but they have not radically altered the features of the systems in place.

Future change may benefit from more vision, as promised by the call for greater individualization of social entitlements and for gender-based taxation. A debate is currently underway in some academic and civil society circles on the merits and shortcomings of these policy approaches (Meulders 2009; Silvera 2009; Bettio and Verashchagina 2009a; Plantenga 2009; Fagan 2009; Gonzales Gago 2009), the contentious issue being to what extent individualization of benefits and gender taxation can promote gender equality.

To reiterate what is implied by individualized benefits, the principle is similar to that of individual taxation: both members of a couple are potentially eligible for benefits, and, more importantly, the income of one partner has no effect on the eligibility of the other (Orsini 2008). However, the analogy with the individual tax unit hides controversial issues. Some argue that the call for full individualization of social entitlements is predicated on a model of the 'adult worker household' where all adults are in employment, and care or housework can be fully commodified or 'outsourced', i.e. purchased on the market or accessed via the state. The drawback, the argument goes, is that many European economies are still far from full commodification and that it may not be possible, or indeed desirable, to fully outsource care. Consequently, the problem of sharing unpaid care work remains, and may actually put women at a disadvantage (Siim 2001; Giullari and Lewis 2005).

A few examples drawn from the discussion in the preceding sections help clarify the problems involved. When in-work benefits are not made conditional on the family's or the partner's income, they do represent an unambiguous move towards individualization. However, if care is *de facto* the primary responsibility of the female partner, and childcare services cost too much, feature short service hours or poor quality care, women will still be more likely than men to work part-time, especially if the tax-earnings profile encourages shorter hours. Unemployment benefits are another example. The principle itself of insurance is consistent with individualization.

Nevertheless, women are placed at a disadvantage if they cannot truly 'choose' not to interrupt or reduce work in order to care.[15] Similar considerations hold for measures of activations.

Sweden has gone a long way towards the individualization of entitlements and the outsourcing of care, but some important benefits are still a source of gender disparity:
"…There are almost no subsidies to support a single earner family: rather, there is individual taxation as opposed to joint taxation, and child allowances rather than tax deductions for dependent children. Earnings-related pensions have been constructed around high payroll taxes (which result in low earnings for a family wage). The widow's pension was phased out after 1989, on the basis that women were fully integrated in the labour market. At the end of the 1990s, only 4 per cent of Swedish women were full-time housewives, compared with a 26 per cent average in the EU. A pure individualised worker model expects that benefits and services will be connected to workforce participation, rather than being derived from a spousal relationship, residence or citizenship status. In this respect, Sweden departs from the pure individualised model since an essential feature of Swedish social policy is universalism, as with the child allowance and the basic pension that is linked to residence or citizenship. Nevertheless, the most generous benefits are income and work related, such as unemployment and sickness benefits, and earnings-related pensions" (Hobson 2004:4; emphasis added)

All this suggests that individualization per se may be necessary, but not sufficient, for substantive gender equality. The UK case, for example, shows the contradiction between increasing enforcement of individualized entitlements and equally increasing reliance on means testing (Millar 2004). Since getting rid of means testing may be too costly (because the number of claimants would bloat beyond financial sustainability), some commentators propose partial individualization schemes such as combining a 'care or home responsibilities credit' with a partially individualized working tax credit (McLaughlin et al. 2002).

Gender-based taxation not only presupposes individualization of the tax unit but goes further by proposing lower rates for women than for men and a consequent redistribution of the tax burden in favour of women (Alesina and Ichino 2007). This is allegedly justified on grounds of economic efficiency as well as equity. It is economically efficient because the proposal implements Ramsey's well known optimal taxation criterion whereby tax rates should be inversely proportional to the labour supply elasticity of the taxpayer. Insofar as women's labour

[15] We refer here to interruptions other than periods on leave counted towards employment.

supply is more elastic than that of men (see Chapter 2), re-balancing the tax rate structure in favour of women is thus believed to lead to increases in female and total employment even if the overall tax revenue is kept constant.

According to its proponents, gender equity would be enhanced on two further counts. Lower tax rates for women would increase the opportunity cost of unpaid work for them while lowering that for men, which in turn would exert pressure for a more equal sharing of unpaid work. In parallel, higher employment and higher earnings would empower women within and outside households.

Supporters of gender equality may find the proposal seductive because it is simple and yet radical: according to preliminary calculations by Ichino and Alesina for Italy, the (average) rate for women could be around 30% against 70% for men.

Yet gender-based taxation has been strongly objected against on grounds of both equity and efficiency. Possible losses in equity are obvious. For example, a single, low paid male worker may end up being taxed more in proportion to earnings that a well-paid female professional (Saint-Paul 2008; Saraceno 2007, among others). In light of the findings on elasticities in Chapter 2, moreover, imposing a more or less uniform differential in tax rates would not conform to Ramsey's optimal taxation rule, with a consequent loss of efficiency. Differences in labour supply elasticities among women are large - e.g. for married versus single women, or low versus high earnings women– sometimes as large as the average difference between men and women (Boeri and Del Boca 2007, among others). Compliance with the Ramsey principle would thus require a considerable nuancing of the gender tax gap, depending on the income bracket and other personal characteristics. This gives rise to computational difficulties and increases the likelihood of nil or perverse incentives. As seen in Chapter 2, the estimated values of elasticities vary according to the methodology and the data set used, and this kind of uncertainty makes relying on a precise set of values in order to re-design the tax rate structure problematic.

In sum, reactions to gender-based taxation among (sympathetic) scholars and experts can be summarised as 'interesting idea but too difficult to implement' (Perivier 2008). Among the public at large – even the kind of sophisticated public that visits the websites where the proposal has circulated so far – the latter frequently causes concern because it challenges widely-held notions on equity and gender relations. Finally, the debate has not yet fully involved policy

circles, despite the interest shown by parts of the specialized press (the Financial Times: 17 April 2007).

Concluding summary

Based on the reviews by the country's experts, this chapter has provided a brief overview of recent developments in tax and benefit policy, asking questions about their actual impact on labour market outcomes for men and women and about awareness of such impact in policy circles and in society.

The national reports suggest that such awareness is generally low among policy markers but also in the population at large. A case in point is mixed interest in addressing joint taxation in countries where this option is still mandatory or default – France, Germany, Ireland, Liechtenstein, Luxembourg, Portugal. The most frequent reason adduced for reluctance to move away from joint taxation is the risk of unfair treatment of one-earner couples, but there is no indication that counter-arguments such as those advanced in previous chapters (Chapter 1 in particular) have been adequately evaluated in recent discussions.

Public debates accompanying the radical tax reforms in Eastern European countries are another case in point. Flat or quasi-flat taxation systems have been recently implemented in Bulgaria, the Czech Republic, Slovakia, Romania and Lithuania, while Hungary and Slovenia have opted out. Reportedly, public attention was monopolized by concerns over equity or fairness, with no clearly perceived gender dimension. Yet the reforms devised for these countries highlight a potential asymmetry that is central to women's labour market position. If the new systems fail to increase fiscal revenue (since tax compliance is expected to increase following flatter and lighter schedules) women may not gain as much as men because they are disproportionately represented among low earners, who receive a more favourable treatment in progressive systems. On the expenditure side, they stand to lose more because of the cuts in services that fiscal revenue produces. However, the evidence reported is too limited for conclusive assessment to be made on this point. Hence more research is required on this important topic.

As for Western countries, poor targeting or monitoring is a sign of the scant attention paid to gender issues. According to national reports, about three fourths of the Member States have

lowered tax rates or increased allowances, widened income bands, lowered social security contributions or combined more than one such measure. Cuts have generally been moderate, but the reduction has often been across the board. With the exceptions of Iceland, Italy and the UK, taxes or social security rates have been reduced by less than 5 percentage points. Only in France have reductions been targeted on low earners, and in Sweden reductions are officially credited with benefitting middle to low earners. For many of the countries for which some evidence exists, gains in employment have reportedly been modest, an outcome to which poor targeting has probably contributed. However, this finding could also be due to a selection bias in the monitoring of the effect of reforms: impact assessment is primarily available for Northern and Continental countries, where employment responsiveness to fiscal incentives tends to be lower than elsewhere, even among women (Chapter 3).

In policy circles, limited attention to targeting in the reforms lowering taxes may reflect electoral calculations and not just scant attention to differential impact on labour market groups. This is not so in the population at large, where poor awareness reflects inadequate familiarity with economic issues and is a problem in its own right which warrants policy-maker attention.

In this respect, the picture is brighter for specialized areas of fiscal policy, such as in-work benefits and child-related benefits where the specific needs and problems of female workers are more immediately visible. About three fourth of the countries report that child-related benefits have been topped up or newly introduced, underscoring the fact that the cost of children is now higher in the policy agenda of Member States. However, the risk that more generous benefits in cash end up replacing provisions in services or in leave time has raised concerns in more than one country – Austria and Sweden in particular. Also, despite more generous cash provisions, the net disincentive effect of childcare costs remains strong for low earners, as shown by the simulations in the previous chapter.

Disregard for childcare-related expenses, may, in fact jeopardize the efficacy of in-work benefits. To date, these benefits have been primarily targeted on disadvantaged groups – lone parents in particular – but their use is spreading to other countries and groups, such as returnees from unemployment and non-activity or parents combining work and care. Member States with sizeable in-work benefits and for which some information is available – the UK, France and the Netherlands – consistently report important employment gains for the groups targeted. However, the quality of employment being created is controversial since part-time tends to predominate.

Partial compensation for child-care or partial individualization of benefits (e.g. because of means testing on family income in the UK) are alleged to be among the reasons.

The workfare approach has fostered both the introduction of in-work benefits and the revision of unemployment benefits. Reforms of unemployment benefits inspired by the approach combine tighter benefits with measures of activation, and they have been enforced in countries with comparatively generous provisions in the recent past – such as Germany, France, Austria or Sweden. Other countries, however, are joining the trend, within Eastern and Western Europe.

The positive side of workfare is that it is a step towards individualization of social entitlements and of benefits in particular. Arguably, however, payment and eligibility are still predicated on the life-long continuous male breadwinner model, despite the fact that the latter no longer represents the vast majority of couples (Table 1) or the typical life-cycle profile of younger generations of workers. Tighter unemployment benefits have not removed the male breadwinner bias because tightening has often meant further restriction of access for individuals with less 'standard' or continuous work histories, such as women or younger workers massively exposed to temporary contracts. Activation, moreover, has often translated into costly demands on the time of parents with care responsibilities. In Hungary however, tighter conditions for recipients of benefits have been compensated by the introduction of unemployment assistance and have considerably risen the share of the unemployed actively looking for a job among women and men.

If we look at trends rather than actual levels of unemployment benefits or the extent of coverage, countries in the South of Europe – Italy, Greece and Portugal – show some encouraging developments. In the attempt to catch up with the Member States with more generous or universal provisions, not only are these countries standardizing some benefit payments across different groups of workers – e.g. employees of large and small firms – but they are also widening eligibility or considering this option. In Portugal, for example, two of the groups for which future inclusion in the system is being debated are the self-employed (including entrepreneurs) and domestic workers. Among the latter, in particular, the number of migrants is growing apace throughout Southern Europe owing to increasing demand for home-based child and elderly care.

Individualization of benefits in the guise of workfare has shown its limitations for working women with care responsibilities. More in general, plentiful, but often piecemeal and narrow-focused, changes in taxes and benefits over the last ten years have not really altered the basic characteristics of the current system in most (Western) Member States. In view of these limitations, can individualization of all benefits be a vision for fiscal policies in the future?

Critics of the full individualization of social entitlements object that the approach is predicated on an adult worker household when both members of the couple are employed, and care work is entirely outsourced. Insofar as at least some care work cannot be bought or sold, it still matters who has the main care responsibility. If individualization means ignoring this responsibility, women may actually be put at a disadvantage. Individualization may thus offer an approach rich in vision for fiscal policy in the future provided that satisfactory answers can be found to the above criticism.

Another ambitious approach currently under discussion – gender-based taxation – goes beyond individualization and proposes introducing a bias in favour of women by lowering their rates in comparison to men's. This is a daring proposal, which is arising considerable interest within academia and in the specialised media. However, the prospect of lowering rates for all women versus all men runs into difficulties because differences in employment responsiveness exist not only between men and women but also, and more importantly, among women (and among men: Chapter 2). While offering good 'food for thought', therefore, the proposal still raises some unresolved issues of feasibility.

Appendix of Tables

Table A. Summary of studies on elasticities of labour supply

A1. Own wage elasticity

Country	Author (year)	Data Series	Characteristics of the sample			Own wage elasticity			
						Women		Men	
			Characteristics of the sample	Characteristics of earnings	Number of observations	Participation	Hours	Participation	Hours
AT	Wernhart and Winter - Ebmer (2008)	Micro-Census, Statistik Austria 1987-1999	Married and never-married women aged 25-59, men aged 25-64	Annual income	-	*Single* 0.13-0.25 *Married* 0.38-0.73	*Single* 0.15-0.38 *Married* 0.14-0.2	*All* 0.05-0.1	*All* 0.09-0.02
	Wernhart and Neuwirth (2007)	EU-SILC 2004 Eurostat	Women with children under 15	Annual income	-	children <6: 0.75 children 6-15: 0.27 children <15: 0.51	-	-	-
BE	Orsini (2008)	Panel Survey of Households 2001	Couples	Hourly wage	2271 women and 2194 men	*All* 0.15	*All* 0.23	*All* 0.10	*All* 0.12
	Decoster and Orsini (2007)	Household Budget Survey 2001	Couples and singles	Hourly gross wage	-	*Single* Total: 0.30, Q 1: 2.66, Q2: 0.22 Q3: 0.00, Q4: 0.00 *Married* Total: 0.27, Q 1: 1.74, Q2: 0.25 Q3: 0.09, Q4: 0.08	*Single* Total: 0.27, Q1:4.53, Q2: 0.23 Q3: -0.02, Q4: -0.18 *Married* Total: 0.30, Q1: 2.13, Q2: 0.30 Q3: 0.14, Q4: 0.10	*Single* Total: 0.27, Q1: 2.58, Q2:0.09 Q3: 0.02, Q4:0.00 *Married* Total: 0.07, Q1:0.26,Q2:0.02 Q3: 0.03, Q4:0.00	*Single* Total: 0.29, Q1:3.56, Q2: 0.08 Q3: 0.03, Q4:0.00 *Married* Total: 0.08, Q1:0.29, Q2: 0.03 Q3: 0.04, Q4: 0.01
CZ	Bičáková, Slačálek and Slavík (2008)	Household Income Survey, Micro-census 2002, Czech Statistical Office	Individuals aged 25-54. Students, self-employed, women/men on maternity leave, and disabled are excluded	Gross monthly wage	4340 households, 6381 individuals, 3094 men and 3287 women	*All* 0.55		*All* 0.18	
DK	Frederiksen, Graversen and Smith (2001)	Survey merged with data from Danish registers	Persons aged 18-59 Students, disabled, self-employed and assisting wives are excluded	Hourly gross wage rate	1150		*All* 0.36		*All* 0.27
EE	Siliverstovs and Koulikov (2003)	Labour Force Survey (LFS)1998	Married females	Hourly wage	2185		*Married* 0.53		
	Alloja (2005)	LFS 2001	Females and males	Hourly wage	16280	*All* 0.34	*All* 0.67	*All* 0.38	*All* 0.18
FI	Laine and	Income	Persons aged 15-64	Annual	10000		*All* 0.19		*All* 0.03

	Uusitalo (2001)	distribution data of Statistics Finland for 1996 and 1998	years, excluding conscripts, mothers with children <1 y.o., disabled, students	earnings; marginal earnings	households, 25000 persons				
FR	Laroque and Salanié (2003)	Enquête emploi, Insee, 1999	Women aged 25-49, in all family situations	Monthly net wage	32978 women of the survey		*All* 0.82 *Single* 0.36 *Married* 0.92		
	Fugazza, Le Minez and Pucci (2003)	Model of microsimulation Ines (Dress – Insee) – Enquête Revenus fiscaux 1997-1998	Households whose reference person or their partner is a woman under 60 y.o., neither a civil servant nor a pensioner		15730 households including 12376 coupled women and 2876 lone women of whom 2/3 are employees		*Single* 0.3 *Married* 0.8		
DE	Steiner and Wrohlich (2007)	German Socio Economic Panel 2003	Married couples and single mothers aged 20-65, excluding, self-employed, pensioners, students in full-time education and women on maternity leave	Calculated gross hourly wages for dependant employees	3888 households	*Single* 0.06 *Married* 0.11	*Single* 0.18 *Married* 0.35	*Married* 0.15	*Married* 0.23
EL	Nikolitsa (2006)	ECHP 2001, Eurostat	Women aged 18-59	Log of gross hourly wage	1202		*All* 1.035		
	Daouli, Demoussis and Gianna-kopoulos (2004)	Family Expenditure Survey 1998/1999, National Statistical Service of Greece	Married women aged 15-64 with working husband	Hourly wage	1460		*Married* 0.83		
IR	Callan, van Soest and Walsh (2007)	1994 Living in Ireland Panel Survey	1296 married couples in the age group 18-65	Gross hourly wages	4048		*Married* 0.83		Married 0.25
	Doris (2001)	1998 Living in Ireland Survey	Individuals aged 22+	Gross hourly wages	2729 households, 6321 individuals		*All* 0.93 *Qualified* 0.58 *Unqualified* 2.80		*All* 0.19 *Qualified* 0.06 *Unqualified* 0.68
IT	Aaberge, Colombino and Strom (1999)	Survey on House-hold Income and Wealth (SHIW 1987), Central Bank of Italy	Married couples, age 20-68. Couples with income from self-employment exceeding 20% of gross household	Calculated gross hourly wage rates	2953 households	*Married* Total: 0.65 QI: 2.84, QII: 0.74, QIII: 0.03	*Married* Total: 0.08 QI: 0.47, QII: 0.10, QIII: 0.01	*Married* Total: 0.05 QI: 0.05, QII: 0.05, QIII: -0.01	*Married* Total: 0.01 QI: 0.02, QII: 0.01, QIII: -0.03

			income were excluded						
	Aaberge, Colombino and Wennemo (2002)	SHIW 1993	Age 18-54	-	-	*Single* Total: 0.06, QI: 0.71, QII: 0.22, QIII: 0.03, QIV: 0.00 QV: 0.00 *Married:* Total 0.51 QI: 2.40, QII: 1.35, QIII: 0.54, QIV: 0.16 QV: 0.10	*Single* Total: 0.04 QI: 1.81, QII: 0.24, QIII: 0.03, QIV: 0.02, QV: 0.00 *Married* Total 0.15 QI: 1.60, QII: 0.83, QIII: 0.18, QIV: 0.04, QV: 0.04	*Single* Total: 0.08 QI: 0.52, QII: 0.18, QIII: 0.03, QIV: 0.05, QV: 0.05 *Married:* Total 0.02 QI: 0.04, QII: 0.05, QIII: 0.01, QIV: 0.02, QV: 0.02	*Single* Total 0.03 QI: 0.28, QII: 0.11, QIII: 0.02, QIV:-0.02, QV: -0.01 *Married* Total 0.09 QI: 0.28, QII: 0.12, QIII: 0.08, QIV: 0.06, QV: 0.04
	Pacifico (2009)	SHIW 2002	21000 individuals, 8000 households. Excluding couples with any spouse being more than 60, self-employed, in a full-time education or serving in the Army	Gross hourly wages	-		*Married* Total 0.87 QI: 1.10, QII: 1.02, QIII: 1.00, QIV:1.00, QV: 0.97, QVI: 0.9, QVII: 0.84, QVIII:0.67 QIX: 0.66, QX: 0.49		*Married* Total 0.15 QI: 0.26, QII: 0.19, QIII:0.18,QIV:0.16, QV: 0.16, QVI:0.13, QVII: 0.13, QVIII: 0.12, QIX: 0.11, QX: 0.02
NL	Evers, De Mooij, Van Vuuren (2005)	Meta study based on previous estimates of labour supply elasticity. Data range: 1983-1995	Mixed	Hourly earnings	9 studies from the Netherlands	*All* 0.48	0.44	*All* 0.16	0.03
	Van Soest et al. (2002)	Dutch Socio-Economic Panel (SEP, May 1995)	Age 16-64, focus on married / cohabiting women	Calculated gross hourly wage rate	1794		*All* 1.16 *High education* 1.23 *Low education* 0.93		
	Euwals and Van Soest (1999)	Dutch Socio-Economic Panel (SEP, Oct. 1988)	Age 15-65. Single persons, lone parents, children living with their parents only	Hourly earnings	662 men, 806 women		*Single* 0.19 *Lone mothers* 0.43		*Single* 0.15 *Lone fathers* 0.18
NO	Dagsvik, Kornstad, Jia, and Thoresen (2008)	Labour Force Survey 2003	Wage earners aged 26-62	Calculated hourly wage rate	-	*All* 0.33	*All* 0.28		*All* 0.08

	Kornstad, T. & Thoresen, T.O. (2007)	Home Care Allowance Survey 1998	Married/cohabiting mothers with pre-school age children and a full-time working partner	Gross hourly wage	768	*Married* 0.35	*Married* 0.5		
PL	Puhani (1995)	Polish Labour Force Survey of February 1993	Cross sectional data on 7 903 wives aged 21-65; excluding self-employed and unpaid family workers	Wage rate and the net earnings of the husband	7 903		*Married* 0.66		
	Bragain, Morawski, Myck and Nicinska. (2007)	2005 Household Budget Survey	30 000 representative households, age 18-59, excluding those in full-time education and pensioners	Observed wage rates are calculated as earnings divided by work hours. Potential wage is estimated for non-participants.	2465 single women; 732 single men; 7412 couples with two active spouses; 3041 couples with fixed male labour supply; 4016 couples with fixed female labour supply	*All* 0.25 *Married* 0.26-0.44 *Lone mother* 0.31	*All* 0.29 *Married* 0.30-0.48 *Lone mother* 0.30	*Single* 0.12 *Married* 0.04-0.05	*Single* 0.2 *Married* 0.07
PT	Neves (1998)	Family Expenditure Survey 1970-1984	Married couples in households without children, or with children aged 6-10 or 11-18 years	NA	43.671		*Married no children:* 0.08-0.09 *children aged 6-10:* 0.13-0.29 *children aged 11-18:* 0.14-0.23		
ES	Labeaga and Sanz (2001)	ECHP 1994-96	Single men and women	Net marginal hourly wage	363 men; 284 women		*Single* 0.59		*Single* 0.34
	Fernández Val (2000)	ECHP 1994-1996	Couples where both work and do not have children <6 y.o.	Hourly wage	1278 households		*Married* 0.26-0.30		*Married* 0.09-0.13
	Ruiz-Ogarrio, (2009)	Encuesta Financiera de la Familias (Bank of Spain 2002)	Household where both partners are between 25-65 y.o. and none is self-employed	Hourly wage	1547 households		*Married* 0.34		
	Prieto, Rodríguez and Álvarez (2002)	ECHP 1994	Married couples, age no more than 65	Net hourly wage	3067 married couples		*Married* 0.70-1.11		*Married* 0.44-0.50
	Martínez-	LF S (EPA),	Married women aged	Real hourly	Depending on the		*Married*		

	Granado (2001)	Household Budget Survey, Auxiliary Survey on earnings and under-employment 1990	22-60 with working husband	wage before taxes	source: from 158 to 28,424		*without children* 0.1-0.15 *with children* 0.11-0.21		
SE	Aaberge and Flood (2008)	LINDA 2004	Single mothers	Hourly wage rate, hours of work; non-labour income	3600 individuals	*Total:* 0.30 I: 2.73; II: 0.67 III-VIII: 0.16; IX: 0.06: X: 0.12	*Total:* 0.10 I: 0.64; II: 0.30 III-VIII: 0.06; IX: -0.04: X: -0.04		
	Ericson, Flood and Wahlberg (2009)	LINDA 2006	8% of the Swedish population	Hourly wage, work hours	785,341 individuals		*Married* 0.16 *Single* 0.38 *Lone mothers* 0.21		*Married* 0.10 *Single* 0.05
UK	Arellano and Meghir (1992)	UK Family Expenditure Survey (FES 1983), LFS 1983	Age 20-59, married	Marginal wage rate; Consumption based other income'	11535 employed, 13200 non-employed		*All* 0.38 *Depending on age of women and child:* 0.29-0.71		
	Blundell, Duncan and Meghir (1998)	UK FES 1978-1992	Age 20-50, married/cohabiting		16781 employed, 7845 non-employed		*No children:* 0.14; Y*oungest child aged 0-2*: 0.21; *2-5:* 0.37; *5-10:* 0.13;*11+:*0.13		
	Blundell, Ham and Meghir (1987)	UK FES 1981	Aged 16-60 married to men 16-65	Marginal net wages; consumption-based other income	2011 married women, 1076 employed, 935 zero hours		*All* 0.04 *All* 0. 08		
	Brewer, Duncan, Shephard and Suárez (2005)	UK FES 1995-2002	Lone mothers aged 16-60, not disabled , not self-employed	W: Hourly wage; Y: Net income	13,458 lone mothers	*Lone mothers* 1.02			
	Ermisch and Wright (1991)	UK GHS 1973-1982	Lone mothers	W: Net Hourly Wage Y: Net Income	2062 lone mothers, of which 519 employed	*Lone mothers:* 1.7 *among them - eligible to in-work benefit:* 1.8 *- ineligible to in-work benefit:* 1.2			

	Meghir and Phillips (2008)	UK Family Resources Survey 1994-2004	Aged 22-59 men, excluding self-employed, disabled, in full-time education or living in Northern Ireland	In-work and out-of-work net incomes calculated using the IFS TAXBEN model	31,461 single men; 91,372 men with partners	*Married* 0.53		Single 0.27	

A2. Cross elasticity (for married individuals)

Country	Authors (year)	Cross elasticity (for married)			
		Female spouse		Male spouse	
		Participation	Hours	Participation	Hours
AT	Wernhart and Neuwirth (2007)	With children under 6: +0.119 With children aged 6-15: +0.001 With children under 15: +0.077			
FR	Laroque, Salanié (2003)		-0.11		
	Bourguignon, Magnac (1990)		-0,29		0,09
EL	Nikolitsa (2006)			-0.23	
	Daouli, Demoussis and Giannakopoulos (2004)				-1.115
IR	Callan, van Soest and Walsh (2007)		-0.35		-0.07
IT	Aaberge, Colombino and Strom (1999)	*Total: -0.357 QI: -1.089, QII: -0.356, QIII: -0.122*	*Total: 0.136, QI: -1.410, QII: -0.150, QIII: -0.060*	*Total: -0.081, QI: - 0.109, QII: -0.086, QIII: -0.013*	*Total: -0.035, QI: -0.017, QII: -0.045, QIII: -0.015*
	Aaberge, Colombino, Wennemo (2002)	Total: -0.16, QI: 0.26, QII: -0.19 QIII: -0.18, QIV: -0.16, QV: -0.15	Total: -0.04, QI: 0.55, QII: 0.05, QIII: -0.06, QIV: -0.04, QV: -0.02	Total: -0.01, QI: -0.02, QII: -0.02, QIII: -0.01, QIV: -0.01, QV: 0.00	Total: -0.01, QI: 0.09, QII: 0.02, QIII: -0.02, QIV: -0.02, QV: -0.02
	Pacifico (2009)		Total: -0.12; QI: -0.19, QII: -0.12, QIII: -0.04, QIV: -0.06, QV: -0.06, QVI: -0.08, QVII: -0.08, QVIII: -0.11, QIX: -0.15, QX: -0.28		Total: -0.01, QI: 0.00, QII: -0.01, QIII: 0.00, QIV: 0.00, QV: 0.00, QVI: -0.01, QVII: -0.01, QVIII: -0.01, QIX: -0.01, QX: -0.01
NL	Van Soest et. al. (2002)		All: -0.16, High-educated: -0.12 Low-educated: -0.06		
NO	Dagsvik., Kornstad, Jia and Thoresen (2008)	-0.141	-0.086		-0.015
PL	Bragain, Morawski, Myck, Nicinska (2007)	≈ 0	≈ 0	≈ 0	≈ 0
ES	Fernández Val (2000)		-0.04 to -0.12		-0.04 to -0.09
	Soria Ruiz-Ogarrio (2009)		-0.43		-0.18
	Prieto, Rodríguez and Álvarez (2002)		-0.32		-0.01

	Martínez-Granado (2001)		Without children: -0.01 to -0.13 With children: -0.05 to 0.10		
SE	Ericson, Flood and Wahlberg (2009)		-0.07		

Source: national reports

Table B. Reference earnings used in the simulation (average for the group, Euro 2007)

	No dependent children						*With dependent children*						
	Single		**One-earner couple**		**Two-earner couple where she earns less than 45% of joint income**		**Lone parent**		**One-earner couple**		**Two-earner couple where she earns less than 45% of joint income**		**OECD Average Wage**
Country	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**(AW)**
AT	32049	25938	37856	-	40180	17011	20218	18157	36929	-	39155	14142	37789
BE	32145	27360	37304	-	41133	19981	21082	23055	35949	-	43061	20326	39320
CY	26051	17369	23738	-	30553	11384	9466	16964	27776	-	30685	13499	22336
CZ	8286	6520	8034	-	10085	5247	6794	6118	10063	-	10831	4805	9091
DE	33233	26988	41418	-	43363	17235	21155	20161	44772	-	44054	12260	42935
DK	35043	32139	43349	-	52466	27156	24096	28144	47946	-	62056	30414	46493
EE	6766	5136	6206	-	9207	3985	3863	5324	10017	-	9787	3953	8694
EL	20251	18310	21706	-	22803	12106	15591	19072	23080	-	29056	13081	24426
ES	20628	18932	22084	-	24222	11097	16077	15148	22539	-	25370	10835	21896
FI	24510	19882	30185	-	41962	19057	14783	18519	36297	-	49657	20113	34656
FR	24597	21361	33361	-	31718	15086	23258	18290	30400	-	34735	15307	31902
HU	5721	6839	5039	-	8432	4024	4308	5459	6023	-	8335	3336	8578
IE	33494	33640	38980	-	50913	19948	21126	16712	55025	-	55365	18214	32747
IS	41213	36142	46737	-	59482	23011	21616	26799	70590	-	68298	25189	43271
IT	28371	20557	26918	-	32069	14822	21209	21115	26634	-	33934	14306	25216
LT	5801	5138	5213	-	8021	3514	4010	5055	6075	-	8136	3488	6322
LU	52082	44660	60605	-	54534	25468	35666	33794	57458	-	51050	20251	45284
LV	4944	4172	4166	-	6967	3219	4884	3969	5655	-	8181	3156	6691
NL	32292	26707	43403	-	46997	17953	16885	18720	50862	-	48844	16175	40966
NO	35257	28416	46983	-	59790	25988	31395	23695	55167	-	61971	25054	52506
PL	6733	7242	5998	-	9402	4220	5812	6259	6759	-	9930	4088	8535
PT	17647	14710	15268	-	19422	8993	14468	16061	12961	-	19545	8359	16144
SE	23008	21661	26888	-	40017	17829	19924	17923	30074	-	39638	17740	36412
SI	14251	19405	12936	-	20823	10368	3606	11141	14550	-	22614	10547	14625
SK	5985	5180	5081	-	6836	3381	1585	4428	5990	-	7263	3606	7285
UK	46040	31964	43555	-	48714	21694	27376	21503	55395	-	55292	19162	47718

Source: Authors' calculation using EU-SILC 2007

Appendix of Figures

Figure A. METR for a household with two small children and the woman earning less than 45% of the combined labour income of the couple, 26 European countries

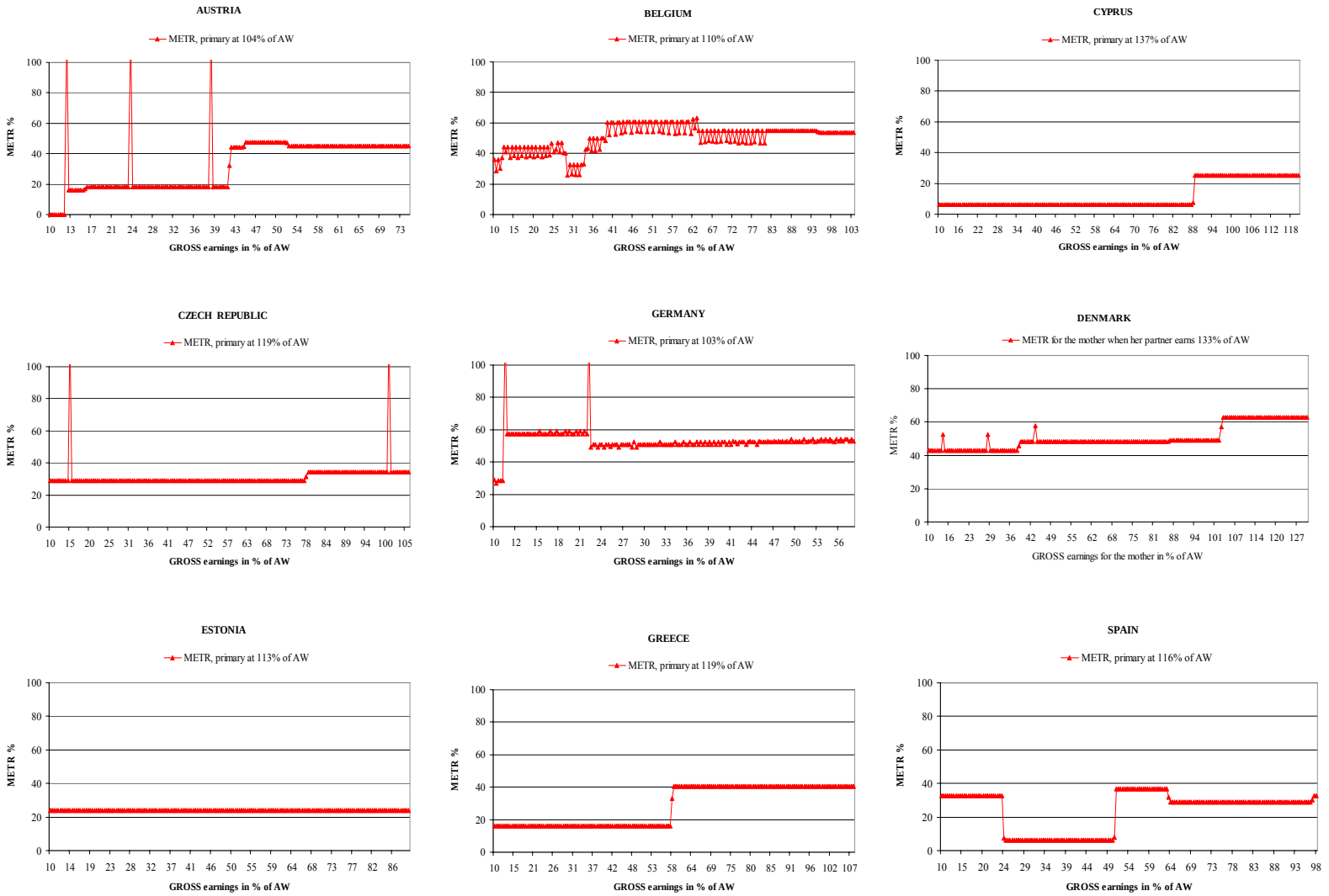


Figure A continued

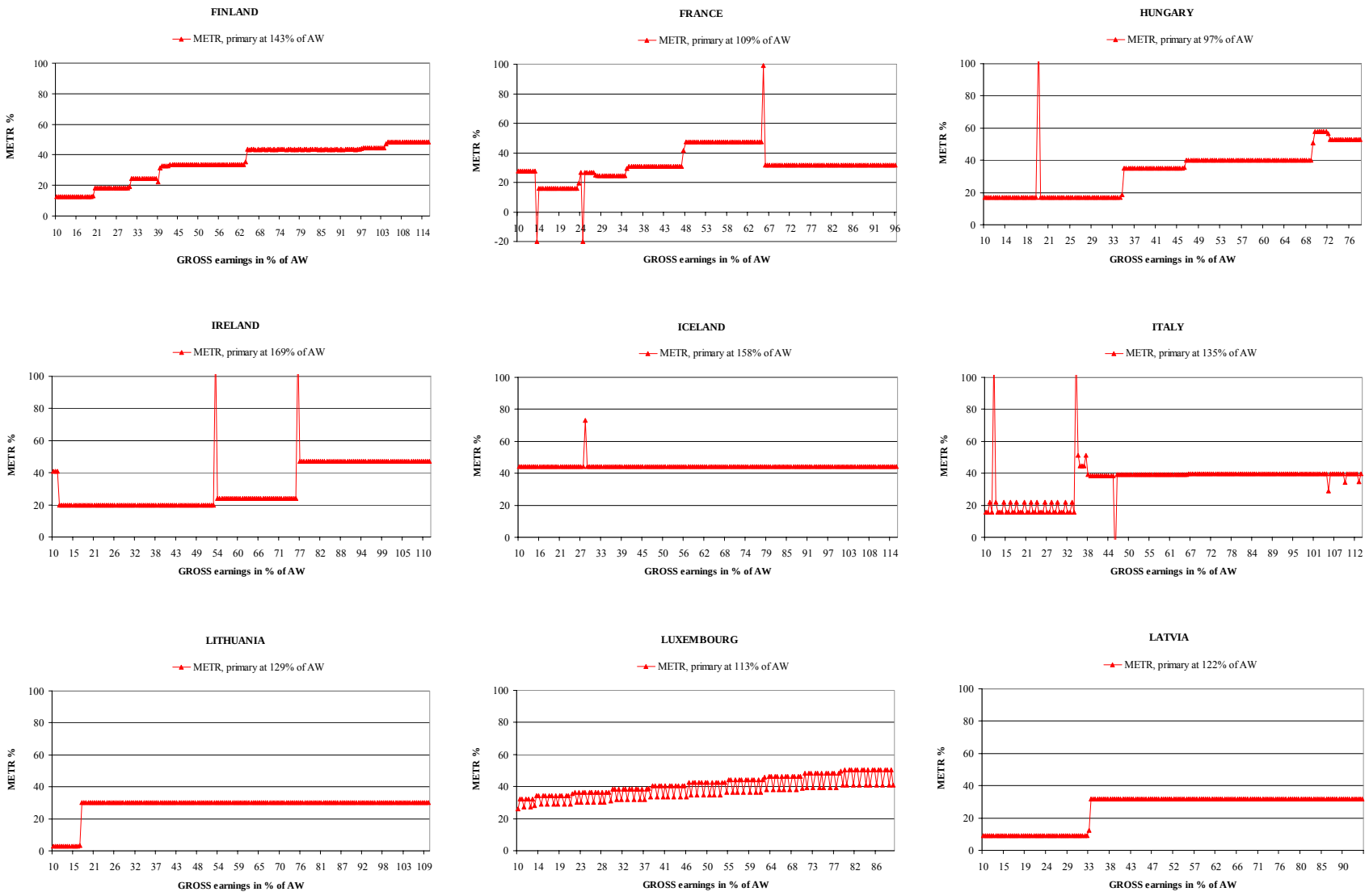
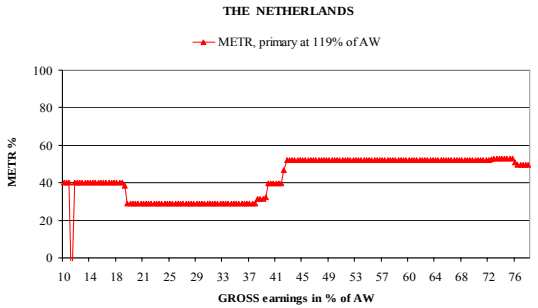
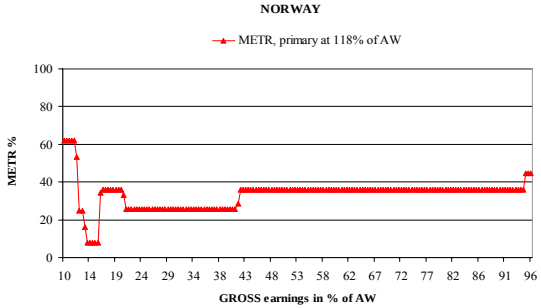
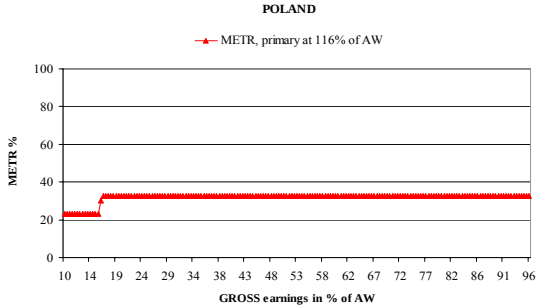
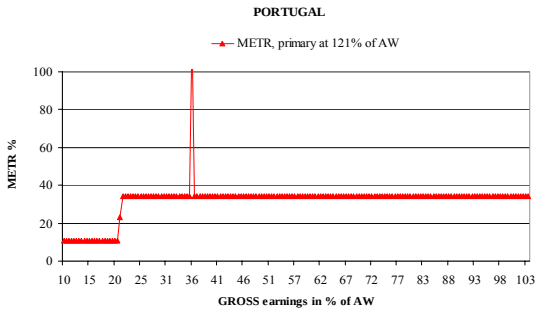


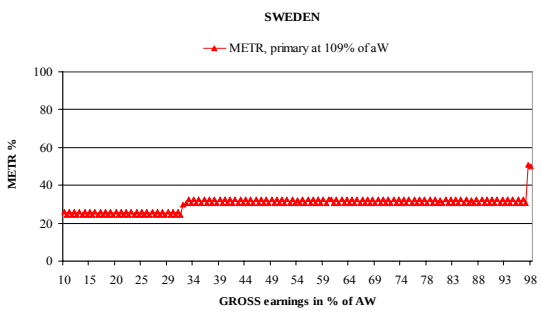
Figure A continued

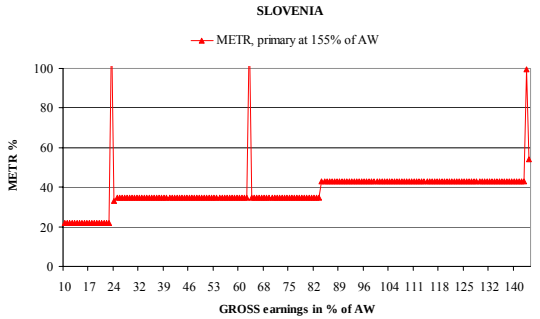


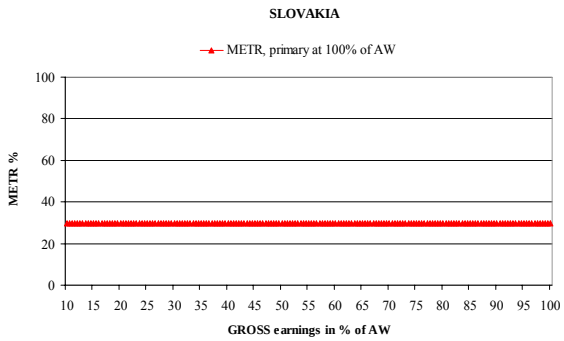


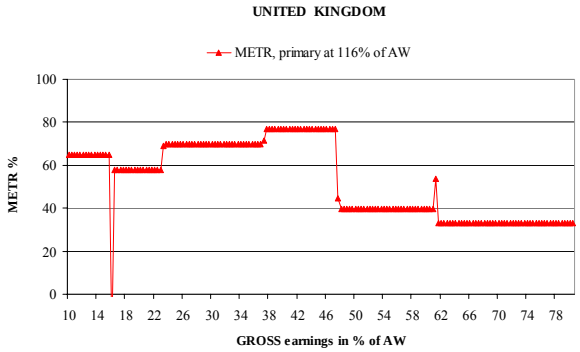






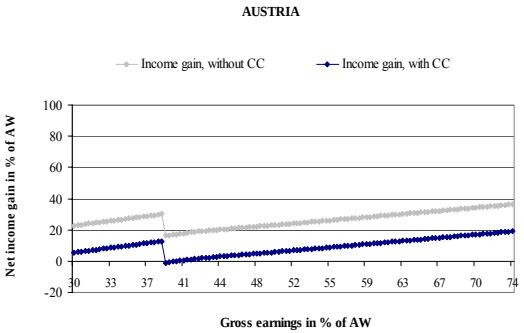


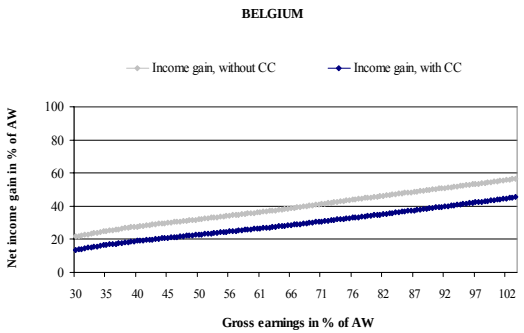


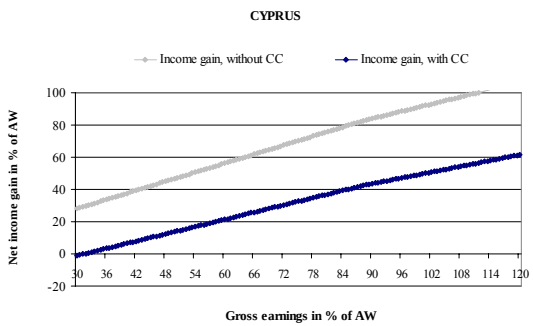


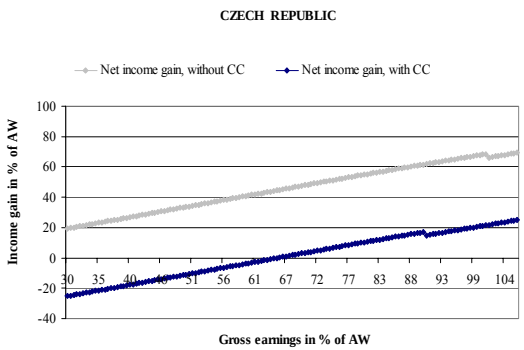
Note: Simulations assume average EU-SILC earnings as reported for men and women in Table B above. The male partner's earnings are actually reported in the chart and expressed in terms of the OECD average wage.
Source: Authors' calculation using OECD 2007 tax-benefit model

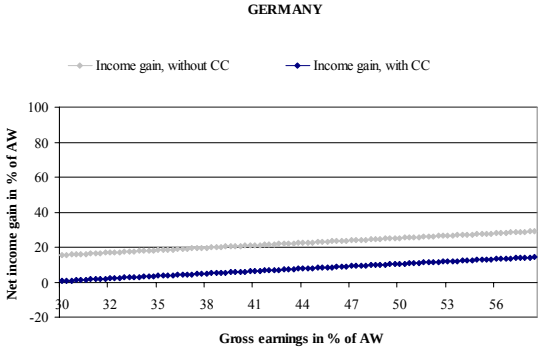
Figure B. Net Income Gain for a household with two small children and the woman earnings less than 45% of the combined labour income of the couple, 26 European countries

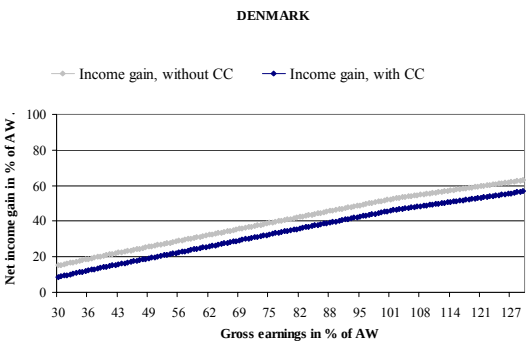


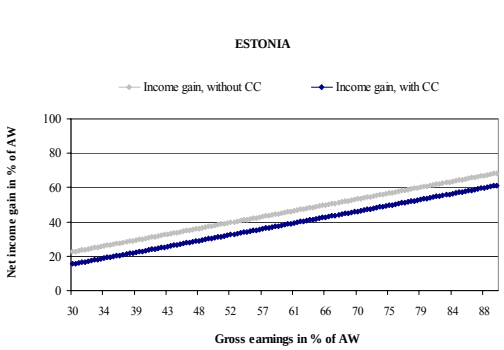


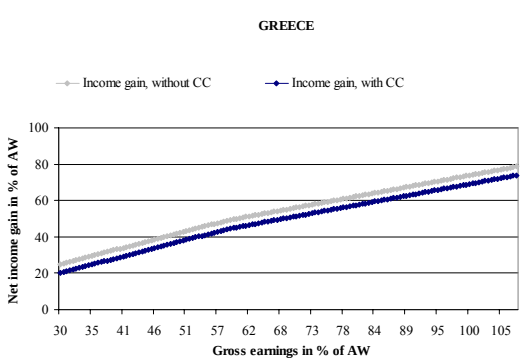












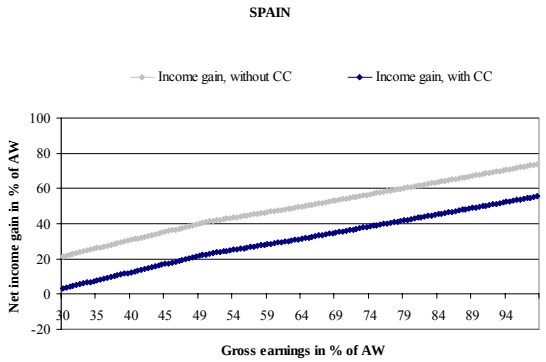
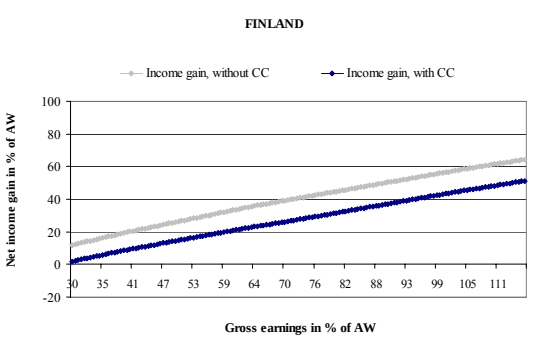
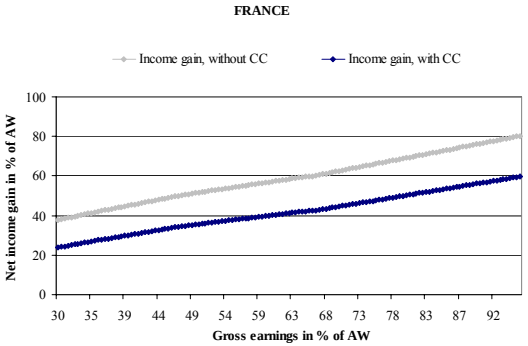
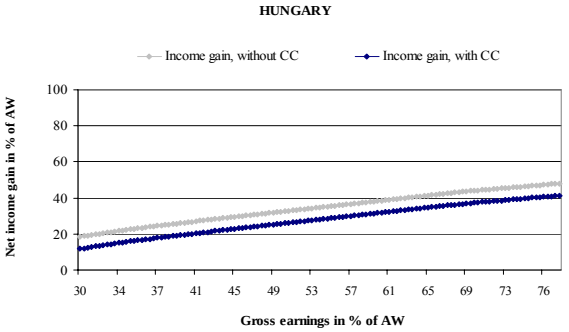
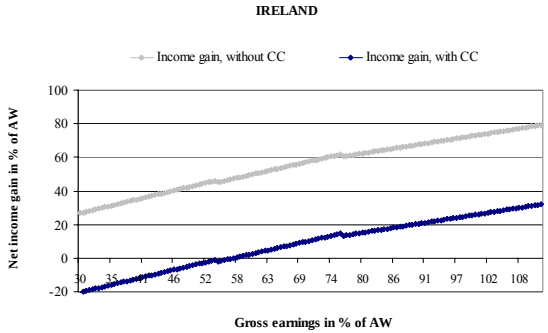


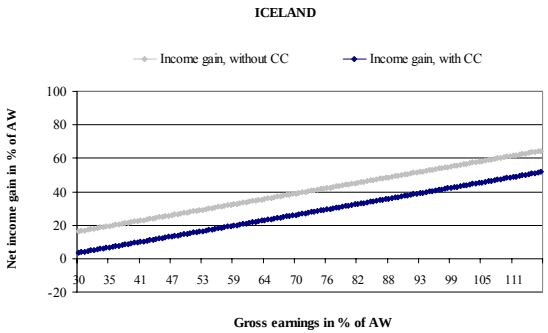
Figure B continued

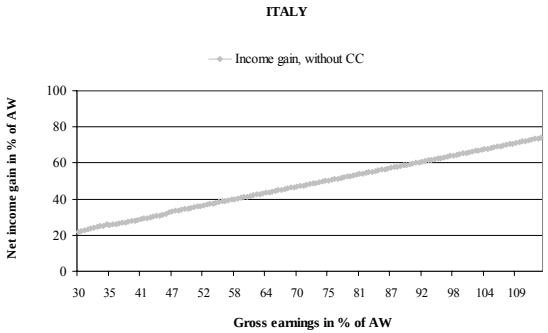




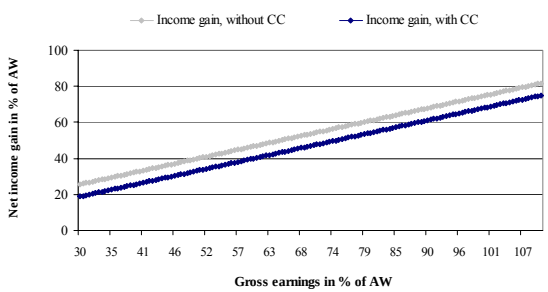




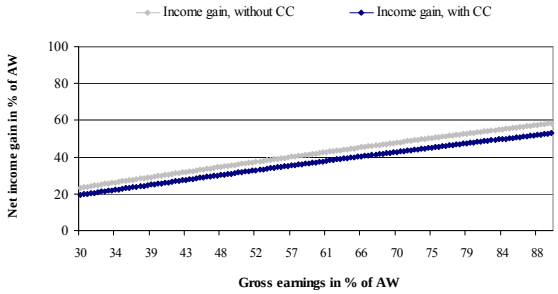




LITHUANIA



LUXEMBOURG



LATVIA

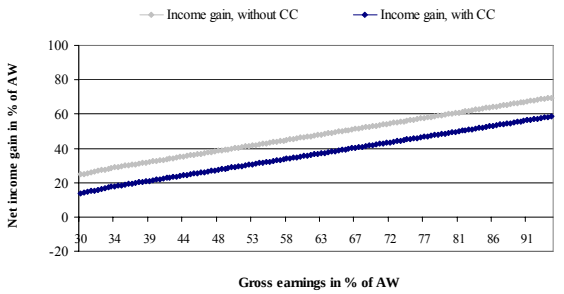
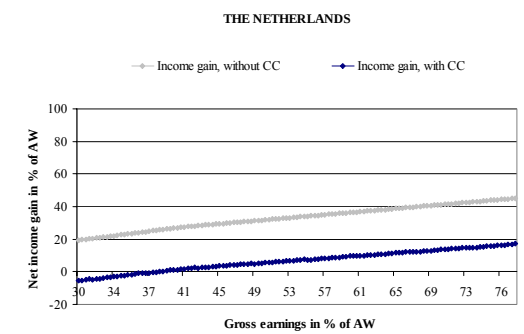
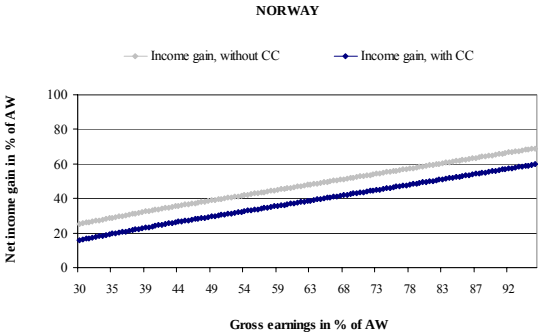
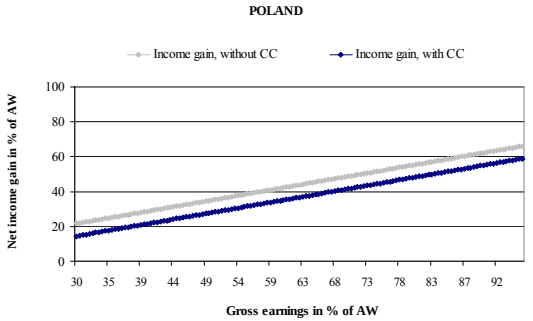
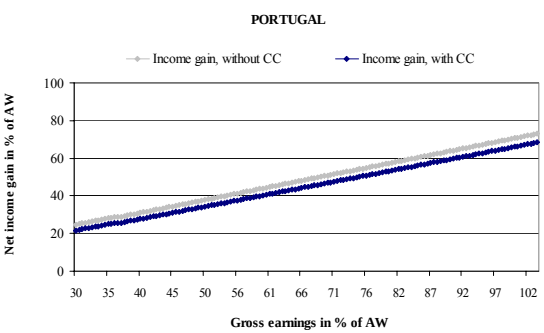


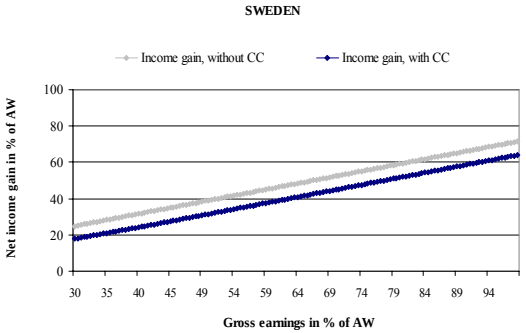
Figure B continued

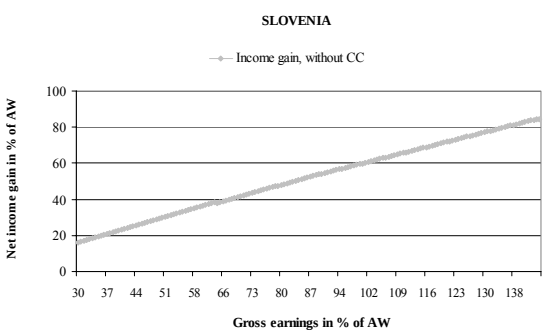


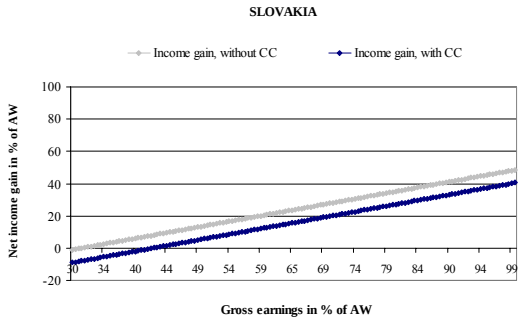


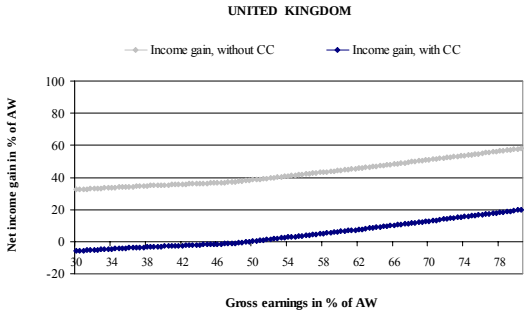






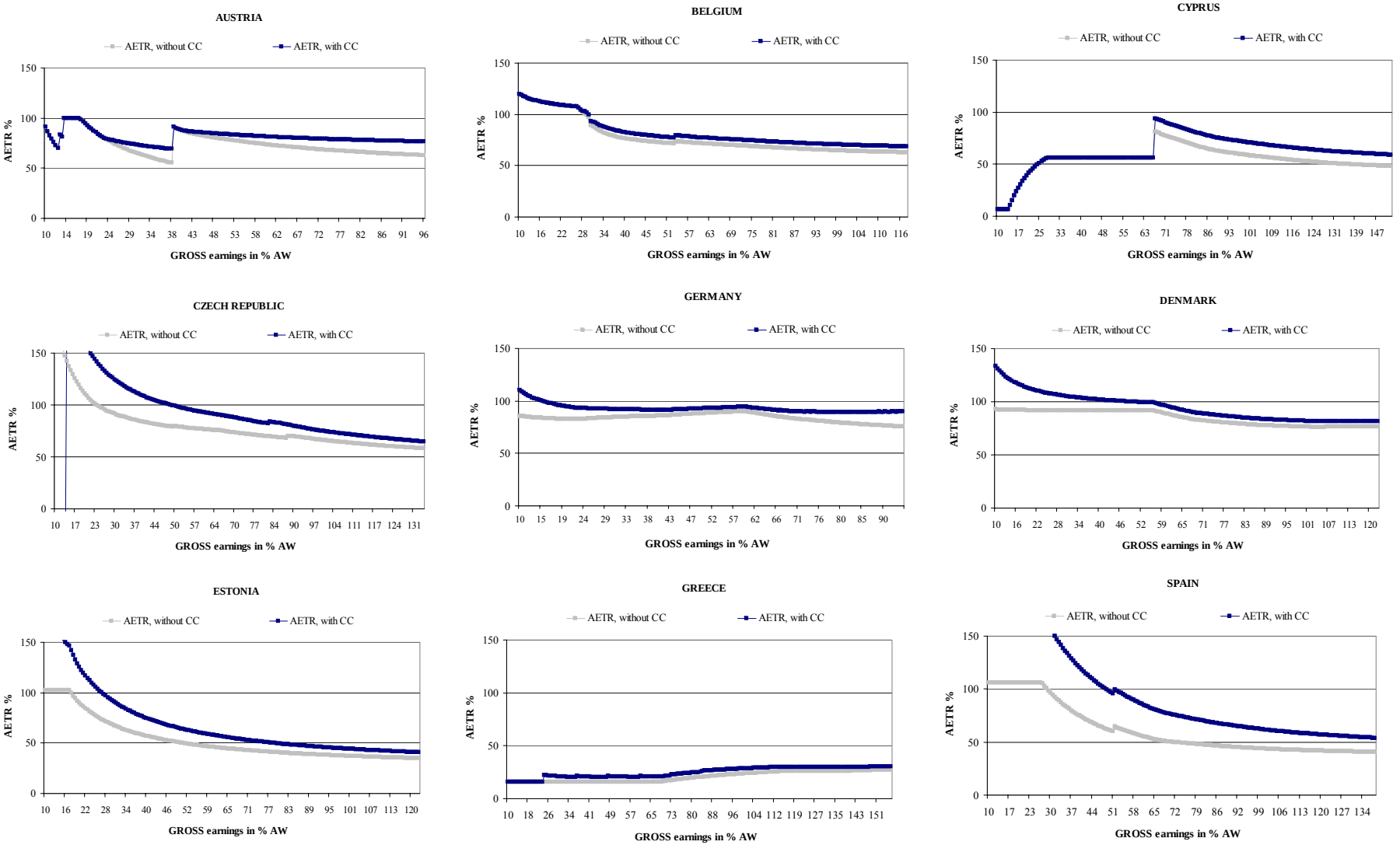




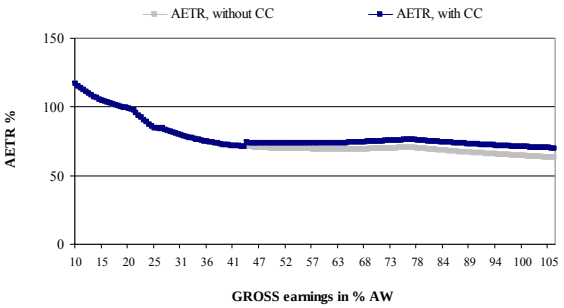


Note: 'CC' in the chart denotes childcare costs; Simulations assume average EU-SILC earnings as reported for men and women in Table B above.
Source: Authors' calculation using OECD 2007 tax-benefit model

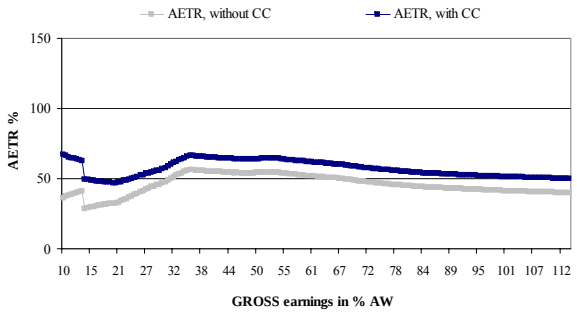
Figure C. AETR for lone mothers with two children aged 3 and 2 years old, with/out childcare costs, 26 European countries



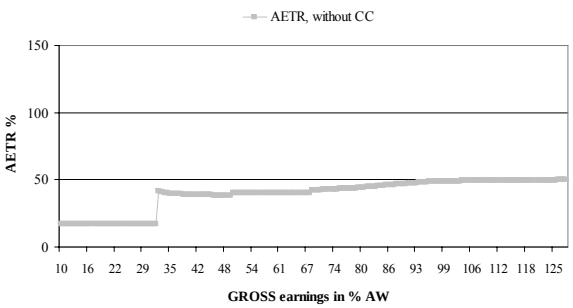
FINLAND



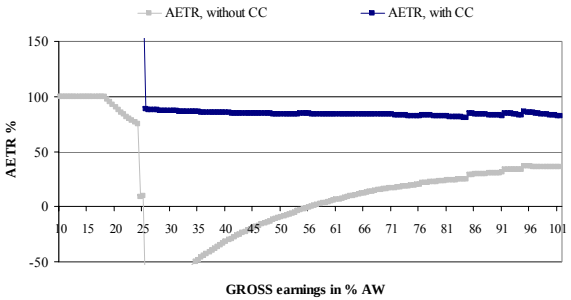
FRANCE



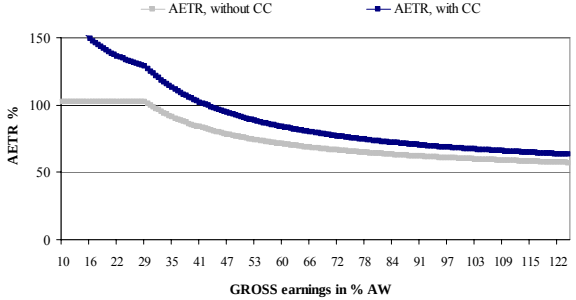
HUNGARY



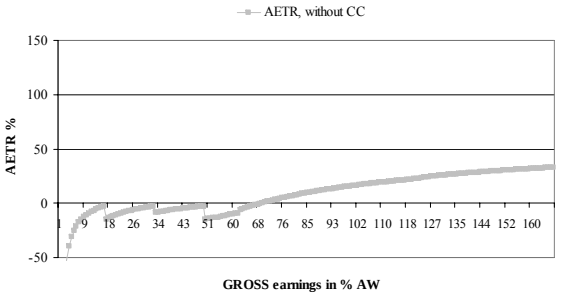
IRELAND



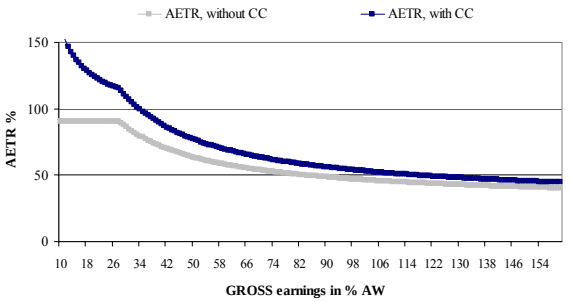
ICELAND



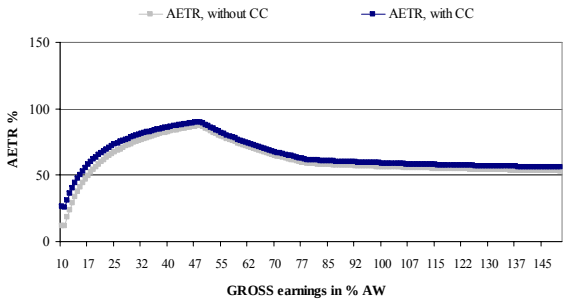
ITALY



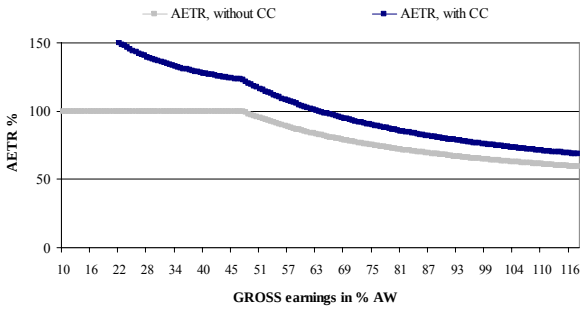
LITHUANIA

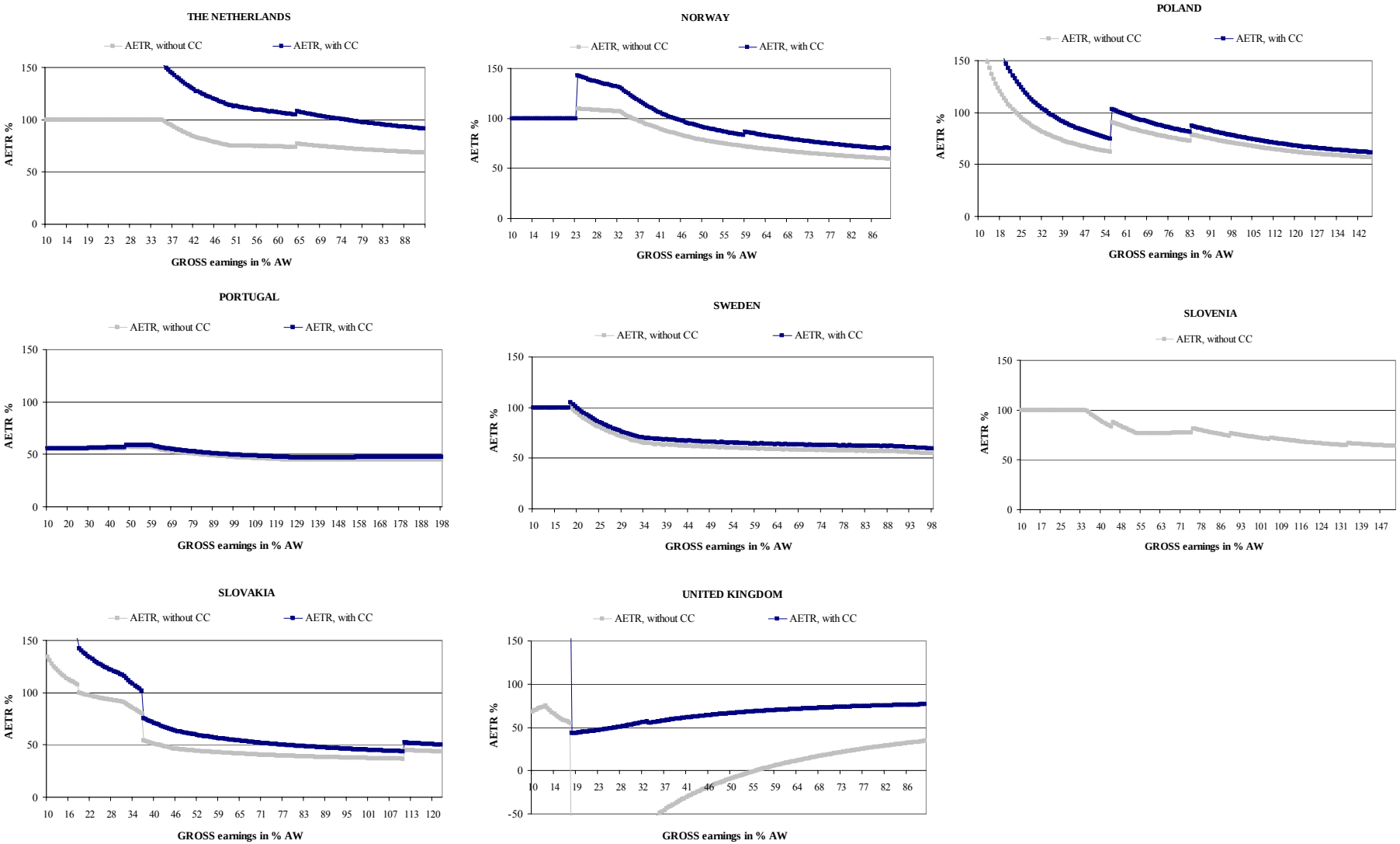


LUXEMBOURG



LATVIA





Note: 'CC' in the chart denotes childcare costs. For countries that do not report childcare fees only the before child care AETR is reported.
Simulations assume average EU-SILC earnings as reported for men and women in Table B above.
Source: Authors' calculation using OECD 2007 tax-benefit model

References

A. The national expert reports

Barry, U. (J. O'Connor research assistance) (2009) Fiscal system and female employment in Ireland. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Beleva, I. (2009) Fiscal system and female employment in Bulgaria. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Bettio, F. and Verashchagina, A. (2009a) Fiscal system and female employment in Italy. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Braziene, R. (2009) Fiscal system and female employment in Lithuania. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Camilleri-Cassar, F. (2009) Fiscal system and female employment in Malta. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Ellina, C. (2009) Fiscal system and female employment in Cyprus. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Ellingsæter, A.L. (2009) Fiscal system and female employment in Norway. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Emerek, R. (2009) Fiscal system and female employment in Denmark. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Fagan, C. (2009) Fiscal system and female employment in the UK. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Ferreira, V. (2009) Fiscal system and female employment in Portugal. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Frey, M. (2009) Fiscal system and female employment in Hungary. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

González Gago, E. (M. Calvo research assistance) (2009) Fiscal system and female employment in Spain. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Kanjuo Mrčela, A. (2009) Fiscal system and female employment in Slovenia. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Karamessini, M. (2009) Fiscal system and female employment in Greece. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Křížková, A. (2009) Fiscal system and female employment in the Czech Republic. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Leetmaa, R. and Karu, M. (2009) Fiscal system and female employment in Estonia. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Maier, F. and Carl, A.H. (2009) Fiscal system and female employment in Germany. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Mairhuber, I. (2009) Fiscal system and female employment in Austria. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Meulders, D. (S. O'Dorchai research assistance) (2009) Fiscal system and female employment in Belgium. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Mósesdóttir, L. (2009) Fiscal system and female employment in Iceland. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Nyberg, A. (2009) Fiscal system and female employment in Sweden. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Papouschek, U. (2009) Fiscal system and female employment in Liechtenstein. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Piscová, M. and Bahna, M. (2009) Fiscal system and female employment in Slovakia. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Plantenga, J. (E. Akgündüz research assistance) (2009) Fiscal system and female employment in The Netherlands. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Plasman, R. (T. T. Pham Nhu research assistance) (2009) Fiscal system and female employment in Luxembourg. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Plomien, A. (2009) Fiscal system and female employment in Poland. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Silvera, R. (2009) Fiscal system and female employment in France. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Sutela, H. (2009) Fiscal system and female employment in Finland. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

Zamfir, E. (2009) Fiscal system and female employment in Romania. External report commissioned by and presented to the European Commission Directorate-General for Employment, Social Affairs and Equal Opportunities, Unit G1 'Equality between women and men'.

B. Additional references

Aaberge, R. and Flood, L. (2008) Evaluation of an In-Work Tax Credit Reform in Sweden: Effects on Labor Supply and Welfare Participation of Single Mothers, IZA Discussion Paper No. 3736

Aaberge, R., Colombino, U. and Strom, S. (1999) 'Labour Supply in Italy: An Empirical Analysis of Joint Household Decisions, with Taxes and Quantity Constraints', Journal of Applied Econometrics, vol. 14, no. 4: 403-422

Aaberge, R., Colombino, U. and Wennemo, T. (2002) 'Heterogeneity in the Elasticity of Labor Supply in Italy and Some Policy Implications', ChilD n. 20/2002

Alesina, A. and Ichino, A. (2007) 'Gender based taxation', mimeo:
http://www2.dse.unibo.it/seminari/alesina_ichino.pdf
and a response to critics: http://www.voxeu.org/index.php?q=node/932

Alloja, J. (2005) "Tööjõupakkumine Eestis", Eesti Panga Toimetised nr.1, 2005 (In Estonian)
http://www.eestipank.info/pub/et/dokumendid/publikatsioonid/seeriad/uuringud/_2005/_1_2005/index.pdf

Antunes, A. (2006) 'Análise Económica do Sector Informal', Observatório do Emprego e Formação Profissional.

Apps, P. and Rees, R. (2007), The Taxation of Couples, IZA Discussion Paper No. 2910.

Apps, P. F. and Rees, R. (1999) 'Individual vs. Joint Taxation in Models with Household Production', Journal of Political Economy, 107: 393-403.

Arellano, M. and Meghir, C, (1992) "Female Labour Supply and On-the-Job Search: An Empirical Model Estimated Using Complementary Data Sets," Review of Economic Studies, Blackwell Publishing, vol. 59(3); 537-59.

BA (Bundesagentur für Arbeit) (2009), Analyse des Arbeitsmarktes für Frauen und Männer, Statistik der Bundesagentur für Arbeit, [http://www.pub.arbeitsagentur.de/hst/services/statistik/000200/html/analytik/gender-analytikreport_2009-03.pdf]

Bakos, P., Bíró, A., Elek, P. and Scharle, Á. (2008) 'The efficiency of the Hungarian Tax system', Working Papers in Public Finance, No.21, ELTE, Budapest, April

Barnett K. and Grown C. (2004) Gender Impacts of Government Revenue Collection: The Case of Taxation, Economic Paper Series, Commonwealth Secretariat

Barry, U., Catherine, C. and O' Connor, J. (2004) 'Making Work Pay - Irish Report to the Gender Employment and Social Inclusion Network', Dublin: UMIST - EU Equality.

Benedek, D. and Lelkes, O. (2005) A magyarországi jövedelem újraelosztás vizsgálata mikroszimulációs modellel, PM Kutatási Füzetek, 10. szám (in Hungarian)

Bettio, F. and Plantenga, J. (2004) 'Comparing Care Regimes in Europe', *Feminist Economics*, 10 (1).

Bettio, F. and Plantenga, J. (2008), 'Care regimes and the European employment rate', in L. Costabile (ed.), Institutions for social well being. Alternative for Europe, London: Palgrave Macmillan.

Bettio, F. and Verashchagina, A. (2009b) Gender segregation in the labour market: root causes, implications and policy responses in the EU, European Commission.

Bičáková, A, J. Slačálek, M. and Slavík (2008) "Labor Supply after Transition. Evidence from the Czech Republic." European Central Bank Working Paper Series No. 887/2008. Frankfurt a/M: European Central Bank.

Blundell, R., Duncan, A. and Meghir, C. (1998) Estimating Labor Supply Responses Using Tax Reforms, Econometrica, 66(4): 827-861.

Blundell, R., Ham, J. and Meghir, C. (1987) "Unemployment and Female Labour Supply," Economic Journal, Royal Economic Society, 97(388a): 44-64.

Boeri, T. and Del Boca (2007) Chi lavora in famiglia? Available at: http://www.lavoce.info/articoli/pagina2713.html

Bourguignon F, Magnac T, (1990), "Labor supply and Taxation in France », Journal of Human Resources, vol 25, n N°3

Bragain, O., Morawski, L., Myck, M. and Nicinska, A. (2007) Wpływ wybranych reform podatkowo-świadczeniowych na redystrybucję dochodów z uwzględnieniem decyzji o podaży pracy. Wydzial Nauk Ekonomicznych. Uniwersytet Warszawski. (In Polish)

Brewer, M., Duncan, A., Shephard, A. and Suárez, M-J. (2003) Did Working Families' Tax Credit work? The final evaluation of the impact of in-work support on parents' labour supply and take-up behaviour in the UK, IFS: London.

Callan, T., Van Soest, A. and Walsh, J.R. (2007) 'Tax Structure and Female Labour Market Participation: Evidence from Ireland', IZA Discussion Paper No. 3090.

Carone, G. et al. (2003) 'Indicators of unemployment and low-wage traps' (Marginal Effective Tax rates on Labour), Directorate General for Economic and Financial Affairs. Economic Paper Number 197, December 2003.

Carone, G. et al. (2004) 'Indicators of unemployment and low-wage traps' (Marginal Effective Tax rates on Labour), Directorate for Employment, Labour and Social Affairs. Employment, Labour and Social Affairs Committee. OECD Social, Employment and Migration Working Paper No. 18., 15 March.

Carone, G. et al. (2009) 'Recent reforms of the tax and benefit systems in the framework of flexicurity', Occasional paper, Directorate General for Economic and Financial Affairs.

CORI Justice (2008) 'Planning for Progress and Fairness', Socio-Economic Review 2008: 1-233. Dublin: CORI Justice.

Dagsvik, J.K., Kornstad, T., Jia, Z. and Thoresen, T.O. (2008) 'Tilbudsvirkninger ved skattereformer: Virkninger av utvalgte skattereformer simulert ved modellen LOTTE-Arbeid', Norsk Økonomisk Tidsskrift 122:1-19 (*In Norvegian*)

Daouli, J., Demoussis, M. and Giannakopoulos, N. (2004) 'Participation of Greek Married Women in Full-time Paid Employment', South Eastern Europe Journal of Economics, 2: 19-33.

De Mooij, R. (2007) Reinventing the Dutch tax-benefit system: Exploring the frontier of the equity efficiency trade-off. CPB Discussion Paper, 88.

Decoster A. and K. Orsini (2007) "Verdient een vlaktaks zichzelf terug?", Leuvense economische standpunten, n° 2007/117.

Doris, A. (2001) 'The Changing Responsiveness of Labour Supply during the 1990s' in D. McCoy, D. Duffy, J. Hore, & C. MacCoille (eds) Quarterly Economic Commentary December. Dublin: ESRI DWP 2003.

Echevin D. (2003) 'L'individualisation de l'impôt sur le revenu : équitable ou pas?', Economie et Prévision, n°160-161.

Elek, P., Scharle, Á., Szabó, B. and Szabó, P.A (2009) 'A bérekhez kapcsolódó adóeltitkolás Magyarországon', Közpénzügyi Füzetek. [In Hungarian].

Ericson, P., Flood, L. and Wahlberg, R. (2009) SWEtaxben: A Swedish Tax/benefit Micro Simulation Model and an Evaluation of a Swedish Tax Reform. Working Papers in Economics No. 346, Handelshögskolan, Göteborgs Universitet

Ermisch, J. and Wright, R. (1991) 'Employment Dynamics among British Single Mothers', Oxford Bulletin of Economics and Statistics, Department of Economics, University of Oxford, 53(2): 99-122.

European Commission (1985), Memorandum on Income Taxation and Equal Treatment for Men and Women, (COM(84)695 final), 14/12/1984.

European Commission (2008) Employment in Europe 2008.

European Commission (2009) Indicators for monitoring the Employment Guidelines including indicators for additional employment analysis. 2009 compendium. 22/04/2009.

Eurostat Statistics in Focus 99/2008: Employment gender gap in the EU is narrowing. Labour market trends 2000-2007.

Euwals, R. and van Soest, A. (1999) 'Desired and Actual Labour Supply of Unmarried Men and Women in the Netherlands', Labour Economics, 6 (1): 95-118.

Evers, M. De Mooij, R. and Van Vuuren D. (2005) 'What explains the variations in estimates of labour supply elasticities?', CPB Discussion Paper, 51.

Fagan, C., Grimshaw, D. and Rubery, J. (2006) 'The subordination of the gender equality objective: the National Reform Programmes and 'making work pay' policies', Industrial Relations Journal, 37 (6): 571–592.

Fagan, C. and Hebson, G.(2006) 'Making work pay' debates from a gender perspective. A comparative review of some recent policy reforms in thirty European countries', European Commission.

Fernández Val, I. (2000) 'Oferta de trabajo familiar: evidencia para el caso español', Tesina CEMFI No. 0004. Septiembre 2000.

Frederiksen, A., E.K.Graversen og N. Smith (2001): Overtime Work, Dual Job Holding and Taxation, IZA Discussion Paper Series, IZA DP No. 323.

Fugazza M., Le Minez, S. and Pucci, M. (2003) 'L'influence de la PPE sur l'activité des femmes en France : une estimation à partir du modèle Ines', Economie et Prévision, n°160-161.

Gregg, P. and Harkness, S. (2003) 'Welfare Reform and Lone Parents Employment in the UK', The Centre for Market and Public Organisation 03/072, Department of Economics, University of Bristol, UK.

Guerra, M.C. and Gannini, S. (2008) Ma il cuneo si e'ridotto [http://www.lavoce.info/articoli/pagina1000328.html]

Giullari, S and Lewis, J (2005) The adult Worker Model Family, Gender Equality and Care, United Nations Research Institute for Social Development, Geneva.

Hakim, C. (2004) Key issues in women's work : female diversity and the polarisation of women's employment. GlassHouse Press, London, UK.

Handler, J. 2004. Social Citizenship and Workfare in the US and Western Europe. Cambridge: Cambridge University Press. Europe. Cambridge: Cambridge University Press.

HM Treasury 2006: http://www.hm-treasury.gov.uk/

Hobson, B. (2004) The Individualised Worker, the Gender Participatory and the Gender Equity Models in Sweden. Social Policy and Society, 3(1): 75-83.

Honkanen Pertti & Jäntti, Markus & Pirttilä, Jukka (2007b) Alleviating unemployment traps in Finland: Can the efficiency-equity trade off be avoided? Discussion paper 24. Aboa Centre for Economics.

Immervoll, H. and Barber, D. (2006) Can Parents Afford to Work? Childcare Costs, Tx-Benefit Policies and Work Incentives, IZA DP No. 1932.

Immervoll, H. et al. (2008), Taxation of Couples in European Countries, paper prepared for CESifo Area Conference: Public Sector Economics, 26-27 April 2008. Available at: http://www.cesifo-group.de/link/pse08_kreiner.pdf

Jaumotte, F. Burniaux, J-M. and Duval, R. (2004), Coping with ageing: a dynamic approach to quantifiy the impact of alternative policy option on future labour supply in OECD countries, OECD Economics Department Working Papers, 371.

Kertesi, G. and Köllő, J. (2002) 'Labour Demand with Heterogeneous Labour Inputs after the Transition in Hungary, 1992-1999 – and the Potential Consequences of the Increase of Minimum Wage in 2001 and 2002', Budapest Working Papers on the Labour Market No. 2002/5, Hungarian Academy of Science

Korkeamäki, O. and Uusitalo, R. (2006) 'Employment Effects of a Payroll-Tax Cut: Evidence from a Regional Tax Exemption Experiment', IFAU working paper no. 2006:10.

Kornstad, T. and Thoresen, T.O. (2006) Effects of Family Policy Reforms in Norway: Results from a Joint Labour Supply and Childcare Choice Microsimulation Analysis', Fiscal Studies, 27(3): 339-371.

Kornstad, T. and Thoresen, T.O. (2007) 'A Discrete Choice Model for Labour Supply and Child Care', Journal of Population Economics, 20:781-804.

Krekó, J., P. Kiss, G., 2007.: Adóelkerülés és a magyar adórendszer, MNB-tanulmányok 65. (*In Hungarian*)

Kriz, K., J. Meriküll, A. Paulus, and Staehr, K. (2008) 'Why do Individuals Evade Payroll and Income Taxation in Estonia', in M. Pickhardt, E. Shinninc (eds) The Shadow Economy, Corruption and Governance, Edward Elgar, pp.240-264.

Labeaga, J.M. and Sanz J.F. (2001) 'Oferta de trabajo y fiscalidad en España. Hechos recientes y tendencias tras el nuevo IRPF' (In Spanish).

Laroque G. and Salanié B. (2003) 'Institutions et emploi : les femmes et le marché du travail en France', Economica.

Laine, V. and Uusitalo, R. (2001) Kannustinloukku-uudistuksen vaikutuksent työvoiman tajrontaan. (Labour supply effects of the work incentive reforms). VATT Research reports 74. The Government Institute for economic Research. *(In FInish)*

Lelkes, O. and Sutherland, H. (eds) (2009) Tax and Benefit Policies in the Enlarged Europe: Assesing the Impact with Microsimulation Models. European Center Vienna, Ashgate.

Martínez-Granado, M. (2001): "Oferta de trabajo femenina en España: un modelo empírico aplicado a mujeres casadas". Cuadernos económicos del I.C.E. nº 66.

McCaffery, E.J. (2008) Where's the Sex in Fiscal Sociology? Taxation and Gender in Comparative Perspective. University of Southern California Law School, Law and Economics Working Paper Series, paper no. 70.

McCaffery, E.J. (2008) Where's the Sex in Fiscal Sociology? Taxation and Gender in Comparative Perspective

McGee, R.W. and Gelman W. (2008) 'Opinions on the Ethics of Tax Evasion: A Comparative Study of Ten Transition Economies' in R.W. McGee (ed.) Accounting reform in Transition and Developing Economics, Springer.

McLaughlin, E., Yeates, N. and Kelly, G. (2002), Social Protection and Units of Assessment, London: Trades Union Congress.

Meghir, C. and Phillips, D. (2008) Labour Supply and Taxes. The Institute for Fiscal Studies, WP08/04.

Meulders, D. and O'Dorchai, S. (2004) " The role of welfare state typologies in analysing motherhood", Transfer, vol.10, no. 1.

Millar, J. (2004) 'Squaring the circle? Means Testing and Individualisation in the UK and Australia', Social Policy and Society, 3(1): 67-74.

Nelson, Julie (1996). 'Feminist theory and the income tax'. In Feminism, Objectivity, and Economics. New York: Routledge.

Neves, Pedro Duarte (1998) 'Female labour supply over the life-cycle', Applied Economics Letters,5:9,569 – 572 (available at: http://dx.doi.org/10.1080/758529501).

Nikolitsa D. (2006), "Women's participation in the labour market: developments and determinants", Economic Bulletin of the Bank of Greece, no 26, pp. 7-39.

OECD (2007a) Benefits and Wages.

OECD (2007b) Taxing Wages 2006-2007. Special Feature: Tax Reforms and Tax Burdens.

OECD (2008) Family Database, PF4: Neutrality of tax/benefit systems.

Orsini K. (2008) "Making Work Pay: Insights from Microsimulation and Random Utility Models", Katholieke Universiteit Leuven, Ph.D. thesis in economics, May, 238 p.

Pacifico, D. (2009) 'A behavioural microsimulation model with discrete labour supply for Italian couples', MPRA Paper No. 14198 [http://mpra.ub.uni-muenchen.de/14198/]

Palme, J. (2008), How can tax and benefit systems promote women's participation in labour markets?, Presentation at Brussels Tax Forum, 7-8 April 2008.

Perivier, H. (2008) 'L'impôt doit-il avoir un sexe?'. Available at: http://www.ofce.sciences-po.fr/clair&net/clair&net-45.htm

Piekkola Hannu (2006) Tax cuts and employment: evidence from Finnish linked employer-employee data. Discussion papers no. 1041. The Research Institute of the Finnish Economy.

Plantenga, J. and Remery, C. (2005) *Reconciliation of work and private life. A comparative review of thirty European Countries*, European Commission.

Plantenga, J. and Remery, Ch. (2006) *The gender pay gap — Origins and policy responses. A comparative review of 30 European countries.* European Commission.

Plantenga, J. and Remery, C. (2009) *The Provision of Childcare Services. A Comparative Review of Thirty European Countries*, European Commission.

Prieto Rodríguez, J. and S. Álvarez García (2002): "Incidencia de la reforma del IRPF sobre la oferta laboral y el bienestar de la familia española". Hacienda Pública Española / Revista de Economía Pública, 160-(1/2002): 121-143.

Puhani, P. (1995) Labour Supply of Married Women in Poland. A Microeconometric Study Based on the Polish Labour Force Survey. ZEW Discussion Paper No. 95-12 Available at: http://www.alexandria.unisg.ch/Publikationen/einfache-Suche/15543

Purju, A., Lauba, A. and Sisask, E. (2004) Informal Economy/Undeclared Work. Country report: Estonia. Mimeo.

Redriguez de la Heras, M. (2003) 'Unemployment Insurance in France and Spain', Unédic, France. Available at: http://www.assedic.fr/assurance-chomage/file/noheto/anglais-200311.pdf

Rõõm, T. (2003) Tootmistegurite maksustamine ja tööpuudus Eestis, Kroon ja Majandus , Nr 1, Eesti Pank. (In Estonian)

Rossmann, Bruno (2009): Hearing Steuerreform 2009, unveröffentlichtes Manuskript, Vienna

Rubery, J. (2002) 'Gender Mainstreaming and Gender Equality in the EU: the impact of the EU employment strategy', *Industrial Relations Journal* , Vol.33, 500-522

Rubery, J., Smith, M., Grimshaw, D., Figueiredo, H. and Fagan C (2003) 'Gender Equality Still on the European Agenda - But For How Long?', *Industrial Relations Journal* , Vol.34, 5, 477-497

Rubery, J., Figueiredo, H., Smith, M. and Grimshaw, D. (2004) 'The Ups and Downs of European Gender Equality Policy', Industrial Relations Journal , Vol.35(6), 603-628, 1468-2338

Soria Ruiz-Ogarrio, C. (2009) 'La elasticidad micro y macro de la oferta laboral familiar: evidencia para España', Tesis de Máster CEMFI No. 0903.

Saint-Paul, G. (2008) 'Against gender based taxation: Abolishing equality before the law is wrong and dangerous'. Available at: www.voxeu.org

Saraceno, Ch. (2007) Dar credito alle donne. Available at: http://www.lavoce.info/articoli/pagina2713.html

Siliverstovs, B. and D. Koulikov (2003) 'Labor Supply of Married Females in Estonia', DIW Berlin, German Institute for Economic Research, DP no. 321.Available at: http://www.diw.de/documents/publikationen/73/40156/dp321.pdf

Staehr K. (2008) "Estimates of employment and welfare effects of labour income taxation in a flat-tax country: the case of Estonia", Bank of Estonia, Working Paper No 3/2008. Available at: http://www.eestipank.info/pub/en/dokumendid/publikatsioonid/seeriad/uuringud/_2008/_3_2008/_wp_308.pdf

Siim, B. (2001) How to Achieve Gender Equality? Conference Social Policy, Marginalisation and Citizenship, Aalborg University, Denmark, 2-4 November, 2001. Keynote speech Session III A Positive Outlook

Statistics in Focus 5/2004: Household formation in the EU – Lone parents.

Statistics in Focus 5/2005: In-work poverty. New commonly agreed indicators at the EU level

Steiner, V. and Wrohlich, K. (2004) 'Household Taxation, Income Splitting and Labour Supply Incentives – A Microsimulation Study for Germany', DIW Berlin, Discussion Papers No. 421. Available at : http://www.diw.de/documents/publikationen/73/41669/dp421.pdf

Steiner, V. and Wrohlich, K. (2007) Introducing Family Tax Splitting in Germany: How would it affect the income distribution, work incentives and household welfare? DIW Berlin, SOEPpapers on Multidisciplinary Panel Data Research, No. 44. Available at: http://diw.de/documents/publikationen/73/63391/diw_sp0044.pdf

Sterdyniak, H. (2004) 'Contre l'individualisation', La revue de l'OFCE, n°90.

Smith M. (2009) 'Gender Equality and Recession', Analysis Note for the European Commission, Expert Group on Gender and Employment

Stotsky (1997) How Tax Systems Treat Men and Women Differently, Finance&Development/ March 1997.

Taylor, M (2008) 'The labour market: transitions and persistence' in R. Berthoud and J. Burton (eds.) In Praise of Panel Surveys, Institute for Social and Economic Research

Tóth, I. J. (2006) 'A kormányzat hatása a rejtett gazdaságra, MKIK GVI, Budapest, február' (*In Hungarian*)

Tzvetkov, S. and Vasilev, D. (2005) 'Analysis of the implementation of the flat rate income tax on the governmental expenditure policy', AEAP 2005.

Van Soest, A. Das, M. Gong, X. (2002) A structural labour supply model with flexible preferences. Journal of Econometrics 107: 345-377.

Villa. P. and Smith, M. (2009) "The National Reform Programme 2009 and the gender aspects of the European Employment Strategy" The co-ordinators' synthesis report prepared for the Equality Unit, Network of Experts 'Employment and Gender Equality Issues', European Commission (forthcoming)

Wernhart, G. And Neuwirth, N. (2007) 'Haushaltseinkommen und Einkommenselastizität der Erwerbsbeteiligung von Müttern', Ergebnisse aus dem EU-SILC 2004, ÖIF working paper 63/2007, Vienna

Wernhart, G. and Winter-Ebmer, R. (2008) 'Do Austrian Men and Women Become More Equale? At Least in Terms of Labour Supply!' ÖIF working papers 71/2008.